Journal of World-Systems Research

Volume XVII, Number 1, 2011

A Journal of the Political Economy of the World-Systems Section of the American Sociological Association

BOARDS AND STAFF

EDITORS
Andrew Jorgenson—University of Utah
Edward Kick—North Carolina State University

FOUNDING AND FORMER EDITORS
Chris Chase-Dunn (founding and former editor)—University of California Riverside
Wally Goldfrank (former editor)—University of California Santa Cruz

BOOK REVIEW EDITOR
Tom Hall—Depauw University

MANAGING EDITOR
Laura McKinney—North Carolina State University

TECHNICAL EDITOR
Gregory Fulkerson— State University of New York, Oneonta

EDITORIAL BOARD
Janet Abu-Lughod—New School of Social Research
Syed Farid Alatas—National University of Singapore
Salvatore Babones—University of Pittsburgh
Jennifer Bair—University of Colorado, Boulder
Kenneth Barr—Institute for Research on World-Systems
Jason Beckfield—Harvard University
Manuela Boatca—Catholic University of Eichstätt-Ingolstadt
Patrick Bond—University of Kwazulu-Natal
Tom Burns—University of Oklahoma
Beth Caniglia—Oklahoma State University
Bill Caroll—University of British Columbia
Brett Clark—North Carolina State University
Wilma Dunaway—Virginia Polytechnic Institute & State University
James Fenelon—California State University, San Bernardino
Paul Gellert—University of Tennessee, Knoxville
Vincentas Giedraitis—Vilnius University
John Gulick—Hanyang University
Alf Hornborg—University of Lund
Asafa Jalata—University of Tennessee, Knoxville
Marina Karides—Florida Atlantic University
Jeffrey Kentor—University of Utah
Su Hoon Lee—Kyungnam University
April Linton—University of California, San Diego
Omar Lizardo—University of Notre Dame
Bruce London—Clark University
Matthew Mahutga—University of California, Riverside
Bill Martin—State University of New York, Binghamton
Jason Moore— University of Lund
Timothy Patrick Moran—State University of New York, Stony Brook
Alejandro Portes—Princeton University
Thomas Reifer—University of San Diego

James Rice—New Mexico State University
Timmons Roberts—College of William and Mary
Stephen J. Scanlan—Ohio University
John Shandra—State University of New York, Stony Brook
Leslie Sklair—London School of Economics and Political Science
Jon Shefner—University of Tennessee, Knoxville
Jackie Smith—University of Notre Dame
William R. Thompson—Indiana University
Michael Timberlake—University of Utah
David Wilkinson—University of California, Los Angeles
Richard York—University of Oregon

ASSOCIATE EDITORS
Richard Appelbaum—University of California, Santa Barbara
Albert Bergesen—University of Arizona
Volker Bornschier—University of Zurich
Chris Chase-Dunn—University of California, Riverside
Peter Evans—University of California, Berkeley
Shelley Feldman—Cornell University
Scott Frey—University of Tennessee
Jonathan Friedman—University of Lund
Harriet Friedmann—University of Toronto
Gary Gereffi—Duke University
Wally Goldfrank—University of California, Santa Cruz
Patrick McGowan—Arizona State University
Phil McMichael—Cornell University
John Meyer—Stanford University
Bill Robinson—University of California, Santa Barbara
Robert Ross—Clark University
Saskia Sassen—Columbia University
Beverly Silver—Johns Hopkins University
David Smith—University of California, Irvine
Alvin So—Hong Kong University of Science and Technology
Peter Taylor—Loughborough University
Immanuel Wallerstein—Yale University

TABLE OF CONTENTS

SPECIAL SECTION: "THE WORLD-HISTORICAL IMAGINATION: GIOVANNI ARRIGHI'S *THE LONG TWENTIETH CENTURY* IN PROSPECT AND RETROSPECT"

guest edited by Jason W. Moore

ARTICLES

1 Introduction: The World-Historical Imagination
Jason W. Moore

4 *The Long Twentieth Century* and Barriers to China's Hegemonic Accession
John Gulick

39 *The Long Twentieth Century* & the Cultural Turn: World-Historical Origins of the Cultural Economy
Benjamin D. Brewer

58 The Coffee Commodity Chain in the World-Economy: Arrighi's Systemic Cycles and Braudel's Layers of Analysis
John M. Talbot

89 Cutting the Gordian Knot of World History: Giovanni Arrighi's Model of The Great Divergence and Convergence
Jan-Frederik Abbeloos and Eric Vanhaute

107 Ecology, Capital, and the Nature of our Times: Accumulation & Crisis in the Capitalist World-Ecology
Jason W. Moore

REGULAR SECTION

ARTICLES

147 Women's Status and World-System Position: An Exploratory Analysis
Richard York and Christina Ergas

165 Externality and Incorporation in the World-System: Abyssinia – Anomaly or Palimpsest?
Jon D. Carlson

199 Five Centuries of Regional Development in Northwest Germany and the Netherlands
Kees Terlouw

218 Hydropolitical Complexes and Asymmetrical Power: Conflict, Cooperation, and Governance of International River Systems
Jenny R. Kehl

BOOK REVIEW ESSAY

236 Review Essay: Understanding Latin America in the Era of Globalization
Glen David Kuecker

BOOK REVIEWS

244 The Environment and World History
Burke, Edmund, III and Kenneth Pomeranz (eds.)
Reviewed by: Mark D. Whitaker

249 Secular Cycles
Turchin, Peter, and Sergey A. Nefedov
Reviewed by: Salvatore Babones

251 Empires of the Silk Road: A History of Central Eurasia from the Bronze Age to the Present
Beckwith, Christopher I.
Reviewed by: Sing C. Chew

253 Developing Partnerships: Gender, Sexuality and the Reformed World Bank
Bedford, Kate
Reviewed by: Claire Laurier Decoteau

256 Caribbean Migration to Western Europe and the United States: Essays on Incorporation, Identity, and Citizenship
Cervantes-Rodríguez, Margarita, Ramón Grosfoguel, and Eric Mielants (eds.)
Reviewed by: Maureen A. Eger

259 Between Winds and Clouds: The Making of Yunnan Second Century BCE to Twentieth Century CE
Yang, Bin
Reviewed by: Thomas D. Hall

263 China and the Transformation of Global Capitalism
Hung, Ho-fung (ed.)
Reviewed by: Edward Friedman

266 How Taiwan Became Chinese: Dutch, Spanish, and Han Colonization in the Seventh Century
Tonio Andrade
Reviewed by: Huei-Ying Kuo

268 Globalization and Social Movements: Islamism, Feminism, and the Global Justice Movement
Moghadam, Valentine
Reviewed by: Gina Marie Longo

270 The International Structure of Income: Its Implications for Economic Growth
Salvatore Babones
Reviewed by: Matthew Mahutga

273 Civic Foundations of Fascism in Europe: Italy, Spain and Romania, 1870-1945
Dylan, Riley
Reviewed by: Brendan McQuade

277 Why America is Not a New Rome
Smil, Vaclav
Reviewed by: Elizabeth Seale

INTRODUCTION: THE WORLD-HISTORICAL IMAGINATION

Jason W. Moore
Umeå Studies in Science, Technology, and Environment
Department of Historical, Philosophical, and Religious Studies
Umeå University
jasonwsmoore@gmail.com
http://www.jasonwmoore.com

The Long Twentieth Century is one of those classics that one "reads *at*" rather more than one "reads *through*." It is a book that one never really finishes reading. The present collection of essays is testament to this. Giovanni Arrighi always sought to answer the big questions of modernity – of civilizations, of world power, of class struggles, of capital – and he always sought to pose more questions than any single text, indeed any one scholar, could ever answer. Not for nothing did the subtitle of his greatest work immodestly read: *money, power, and the origins of our times.* "We cannot do everything at once," he observes in the opening of the *Long Twentieth Century* (1994:25). Far from a banal statement, Arrighi's powerful contention is that rigorous and sophisticated world-historical research involves constructing partial totalities that necessarily lop off important aspects of reality. Reviews of *The Long Twentieth Century* often zeroed in on these apparent omissions (Moore 1997), noting especially the book's relative neglect of class struggles and core-periphery inequalities. Arrighi of course knew what he was doing. An earlier plan for *The Long Twentieth Century* was a three-part structure of world power, capital accumulation, and class struggles. And yet, it was impossible to move in all directions at once. If Arrighi was often criticized for important omissions, I slowly arrived at the opposite conclusion, won gradually over subsequent years of reading at *The Long Twentieth Century*. Far from obscuring class struggle, imperialism, and other dynamics, Arrighi's model (itself a partial totality) in fact created new possibilities for a holistic analysis of capitalism's dynamic contradictions.

Arrighi's great contribution was to direct our attention to the inner dynamics of accumulation and world power in a way that opened new vistas, in at least two major directions. The first new vista allowed fresh analyses of the history of antisystemic movements, civilizational conflicts, culture change, commodity chains, and yes, even environmental transformation. These, and many others, could now be investigated in greater geographical breadth, and greater temporal depth, in relation to the cumulative, cyclical, and novel features of successive "long centuries" of capitalism. Arrighi is rightly known as an eclectic thinker, who never saw a great idea he didn't appreciate. But his model of historical capitalism was a paragon of consistency, illuminating the decisive "stakes of the game" (Bourdieu 1990:110) in the great contests of states, capitals, and classes over the *longue durée*. All the more remarkable is that such consistency was achieved by *incorporating* contingency, the fruit of a world-historical method that understood historical capitalism as *structurally invariant* (Arrighi 2004; see also my contribution to this collection).

Early on in *The Long Twentieth Century*, Arrighi suggests a second research vista:

> Certainly, as our construction proceeds, what initially may appear to be mere historical contingency will begin to appear to reflect a structural logic.

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 1-3**
ISSN 1076-156X

> Nevertheless, the tension between the two kinds of appearances cannot be fully resolved within the limits of our research agenda. *A fully resolution of the tension – if that is possible – requires that we descend again to explore the lower layers of market economy and material life with the knowledge and questions brought back from the journey into the top layer which this book undertakes*" (1994:26, emphasis added).

It is a tribute to Arrighi's world-historical imagination that, more than fifteen years after *The Long Twentieth Century*'s publication, the present collection of essays is devoted to engaging this tension between Braudel's overlapping zones of capitalism (as world power and capital accumulation), market economy, and material life. As John Talbot powerfully observers, it is impossible to discern where one moment began, and the others left off, in the coffee houses of 18th century London, the pivot of the world coffee economy. Benjamin D. Brewer similarly questions the utility of any framework that views cultural change in late capitalism as somehow "immaterial," perceptively linking financialization, global commodity chains, and the commercialization of culture as symbolically and materially interrelated. In both instances, Arrighi's systemic cycles of accumulation approach, with its emphasis on alternating phases of material and financial expansion in modern world history, is viewed as an indispensable point of departure for connecting (and synthesizing) the structures of everyday life, commodity production and exchange, and world power and accumulation.

John Gulick approaches this problematic of linking Braudel's three layers of socio-historical reality through a *tour de force* analysis of the rise of China in recent decades. Where Brewer and Talbot are principally concerned with global commodity production and exchange, Gulick brings into focus a tension within East Asian geopolitics and the "socio-ecological constraints to global capitalist reproduction." Far from a critique that scores *The Long Twentieth Century* for neglecting socio-ecological factors, Gulick argues that Arrighi's subsequent analyses of East Asia faltered by de-emphasizing "his earlier belief that unprecedented ruptures in hegemonic succession might imperil the reproduction of the modern world-system." The focus on the rules of reproduction for the world-system are amongst *The Long Twentieth Century*'s "most stimulating" formulations. Gulick's appreciative critique therefore suggests that Arrighi's vision may be creatively extended in by demonstrating how the system's conditions of reproduction are grounded in material life and commodity production and exchange.

Abbeloos and Vanhaute focus on Arrighi's place in the debate over the "Great Divergence" (Pomeranz 2000) between "the West" and "the Rest." At the core of their critique, Abbeloos and Vanhaute contend that Arrighi, in *Adam Smith in Beijing* (2007), "assumes but never accounts for the survival" of East Asian market networks that might allow for a "commonwealth of civilizations" to succeed capitalism. Like Gulick, they see an unproductive drift away from the model of historical capitalism presented in *The Long Twentieth Century*.

In my contribution, I trace my evolution from the first of the research vistas opened by *The Long Twentieth Century* to the second. Where I initially formulated a "dual cycle" approach in which environmental transformation was a world-historical movement *complementary* to systemic cycles of accumulation (Moore 2000), a deeper engagement with *The Long Twentieth Century*'s led me towards a new synthesis. This is the theory of capitalism as world-ecology, which seeks a unified theory of world development that joins the accumulation of capital and the production of nature in dialectical unity.

Giovanni was a fearless intellectual who respected no orthodoxy, and never retreated from the challenges of the present conjuncture. His scholarship and teaching pulse through this collection of essays, which does not shy away from critique. What is so compelling, in my view, is the degree to which the contributors have engaged in precisely the kind of *reconstructive* critique that was Giovanni's hallmark. I think he that would be pleased with this collection's robust engagement with his work, that he would have agreed with some of it, and that he surely would have disagreed with much more. The enduring legacy of *The Long Twentieth Century*, and Arrighi's work as a whole, is its capacity to stimulate and to inspire new world-historical syntheses appropriate to the world realities they confront. We are all indebted to Giovanni for this (and so much more) and we miss him greatly.

ACKNOWLEDGEMENTS

I would like to extend my greatest appreciation to the contributors to this special issue, the anonymous referees, and to Andrew K. Jorgenson for his support in bringing this project to completion.

REFERENCES

Arrighi, Giovanni. 1994. *The Long Twentieth Century*. London: Verso.

_____ . 2004. "Spatial and Other 'Fixes' of Historical Capitalism." *Journal of World-Systems Research* 10(2):527-539.

_____ . 2007. *Adam Smith in Beijing*. London: Verso.

Bourdieu, Pierre. 1990. *In Other Words*. Stanford: Stanford University Press.

Moore, Jason W. 1997. "Capitalism over the *Longue Durée*." *Critical Sociology* 23(3):103-116.

_____ . 2000a. "Environmental Crises and the Metabolic Rift in World-Historical Perspective." *Organization & Environment* 13(2):123-158.

Pomeranz, Kenneth. 2000. *The Great Divergence*. Princeton: Princeton University Press.

THE LONG TWENTIETH CENTURY AND BARRIERS TO CHINA'S HEGEMONIC ACCESSION

John Gulick
Department of Sociology of Information Society
Hanyang University, ERICA Campus
jlawgulick@gmail.com

ABSTRACT

Giovanni Arrighi's The Long Twentieth Century is an almost unfathomably ambitious and complex work. Its monumentality derives from Arrighi's conviction that the best way to handicap the possible futures of the world capitalist geo-economy is to analyze the structural evolution of this global system, an evolution spanning more than five centuries; the genius of the work rests in the distinctive approach that Arrighi takes. At the core of his approach is the identification of those long-term trends and accreted characteristics – one might call them "systemic contradictions" – that promise to send the world capitalist geo-economy in a radically different developmental direction as US hegemony wanes. Arrighi's assessment of these contradictions compel him to make a provocative suggestion: in all likelihood, no singular concentration of state and economic power possesses the territorial scale or the organizational capacities required to lead the global system through another round of restructuring and expansion. Properly framed, this illuminating insight could serve as the starting point for a theoretical exploration of the socio-ecological constraints to global capitalist reproduction, but such is a journey (mostly) not taken by Arrighi in The Long Twentieth Century. In fact, to the degree that he subsequently contemplates the prospect of a China-centered reconstitution of the world geo-economy, Arrighi marginalizes the question of global systemic contradictions altogether.

INTRODUCTION

At its best, historical social science unlocks the subterranean meaning of the present by relating the present retrospectively, to established trends, and prospectively, to possible futures. For what it promises and what it delivers, Giovanni Arrighi's *The Long Twentieth Century* embodies this most delectable vocation of historical social science. As he completed the book more than 15 years ago, Arrighi was far from shy in assuming the unenviable job of soothsayer, a job required by the task of unveiling the significance of the geo-historical horizon surrounding him. On the very first page of *The Long Twentieth Century*, Arrighi plainly declares that his primary aim is to inspect previous bouts of modern world-system restructuring in order to better understand the conditions under which the "reconstitution of the capitalist world-economy on new and enlarged foundations… may occur, and, *if it does occur, what it may look like*" (Arrighi 1994:1, emphasis added).

Under the best of circumstances, it is risky to forecast the probable trajectories of the capitalist world-economy (including its possible dissolution). Given the sheer vastness of the

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 4-38**
ISSN 1076-156X

system, as well as the complex interactivity of its manifold parts, such an endeavor is fraught with many occupational hazards. This is so even when the forecasting is rooted in wide-ranging research, deft conceptualization, and educated imagination – and Arrighi's peers in these areas were few and far between. One of the mundane dangers of prognosticating on the magisterial scale of *The Long Twentieth Century* is that the object of investigation contains so many relevant data points that lurking "unknown unknowns" are bound to throw off predictions. Another is the inexact role of historical contingency. A more substantial danger involves basing forecasts on the "discovery" of heretofore unseen or unappreciated tendencies governing the modern world-system's evolution.[1] In *The Long Twentieth Century* Arrighi does indeed make some very instructive discoveries – for example, his finding that there is a deep correspondence between the hegemonic cycle and financial expansions – but the hazard remains that there may be equally unseen or unappreciated tendencies that go undetected.

My purpose here is not to register a methodological critique of *The Long Twentieth Century*. Rather, my referencing these dangers serves as a touchstone for my main lines of argument. I argue that the most stimulating formulations in *The Long Twentieth Century* relate to the aggregating structural contradictions to world-systemic reproduction, rooted in the widening chasm between military power and economic dynamism in an increasingly polycentric world-system. These formulations yield Arrighi's breakthrough conclusion that the next systemic cycle of accumulation – if there is to be one at all – will be led by an agent that bursts asunder the traditional form of the militarily potent sovereign state. But I also contend that the revolutionary potential of these formulations can only be fully realized if they are divested of their irredeemably "social determinist" perspective and retooled with socio-*ecological* theoretical substance; a germane test of the analytic worth of these retooled concepts is their ability to advance our understanding of the institutional *and* biospheric limits to the very continuation of the world-system itself.

In writings of more recent vintage – most of them collated in *Adam Smith in Beijing* (Arrighi 2007) – Arrighi analyzes the intertwining dialectic of US decline and China's ascent with aplomb. But in so doing, he downplays his earlier belief that unprecedented ruptures in hegemonic succession might imperil the reproduction of the modern world-system, careening it into irreversible flux.[2] While Arrighi continued to maintain before his death that there is a chance the system will morph into something drastically different than what came before (Arrighi 2010; Arrighi 2007:7), there is little doubt that the occasion of a Chinese succession became the motif garnering the brunt of his attention.[3] In taking his focus off the mounting barriers to hegemonic succession, Arrighi also effectively marginalizes the theoretical concepts in *The Long Twentieth Century* that at least possess the potential for strengthening our comprehension of emerging geo-

---

[1] I set the word "discovering" in scare quotes only to underscore what should be already be clear to seasoned world-systems scholars: Arrighi's pathbreaking claims in *The Long Twentieth Century* stem in large part from his creative syntheses of theoretical and empirical work performed by others, including scholars unaffiliated with world-systems analysis – as Arrighi himself would be the first to admit.

[2] These thematic accents are still evident in *Chaos and Governance in the Modern World System* (Arrighi and Silver et al. 1999).

[3] For example, in the postscript to the second edition of *The Long Twentieth Century* published in 2010, Arrighi writes, "…an East Asian-centered world market society appears today a far more likely outcome of present transformations of the global political economy than it did fifteen years ago… China has emerged as an increasingly credible alternative to US leadership in the US region and beyond" (Arrighi 2010).

economic and socio-ecological constraints to capitalist expansion on a world scale. Arrighi sidelines these concepts while exploring a subject, the putative transfer of systemic leadership from the US to China, which strenuously warrants their rehabilitation and extension. My exegesis and critical reconstruction of *The Long Twentieth Century*, then, will be highlighted by an unhappy inconvenience: in part, I will be foregrounding the most promising theoretical strides made in *The Long Twentieth Century* by way of exclaiming their virtual absence in Arrighi's more recent work.

EAST ASIAN GEO-ECONOMICS IN THE LATE "LONG TWENTIETH CENTURY"

Japanese Production Networks and the Ascendant Chinese Mainland

No matter how solid their models of social systemic development or perspicacious their powers of historical interpretation, all historical social scientists can fall prey to assigning more importance to particular actors than later turns out to be warranted. Arrighi erred in *The Long Twentieth Century* when presuming that manufacturing and sourcing networks anchored by Japan-based transnational corporations would, for the foreseeable future, remain the straws stirring the drink in the recentering of global capital accumulation processes in East Asia. In the wake of Japan's prolonged stagnation precipitated by the collapse of the Tokyo real estate market and the crash of the Nikkei index nearly 20 years ago, it now seems quaint to think of the keiretsu as unsurpassed colossi bestriding East Asia. The keiretsu's fading preeminence is all the more evident when they are lined up next to the largest of China's companies, from state-owned behemoths such as the oil majors (Sinopec, China National Petroleum Company, and China National Offshore Oil Company), the steelmakers (Baosteel), and the telecommunications giants (China Mobile, China Netcom, and China Telecom), to partially or completely private concerns such as Legend Holdings, Huawei Technologies, and TCL. These firms have become major foreign investors, and in some cases high-ranking Global Fortune 500 members, in their own right (Harris 2005:12-13; Tabb 2008:23).[4] The impression that Japanese TNC's and their far-flung production and procurement networks no longer constitute the vanguard of East Asian accumulation processes is only reinforced by the fact that the Japanese developmental state, which once served as the launching pad for the outward thrusts of the Japanese TNC's, has been

[4] In *Chaos and Governance in the Modern World-System*, Arrighi, Beverly Silver, and their collaborators adapt their analysis of which economic actors are reconfiguring the East Asian production and sourcing system and thus the East Asian and global political economies, augmenting their prior focus on Japanese *kereitsu* with a focus on diasporic Chinese business networks (Arrighi and Silver et al.1999:280). By the time *Adam Smith in Beijing* is written and published, Arrighi's spotlight on both "state-like business networks" has diminished and Chinese government-owned and/or sponsored corporations play a more prominent role in the narrative.

considerably deconstructed and remade in the image of "Anglo-Saxon" shareholder capitalism (Dore 2006).[5]

True, by the early-to-mid 2000's Japan's economy had finally shaken off its sustained deflationary hangover, and more to the point, Japanese TNC's continued to make integral contributions to East Asian economic expansion through direct investment in China and their servicing of China's voracious demand for high-tech components and equipment (Bello 2009; Harris 2005:11). Yet it was precisely China's demand for such capital and imports that renewed the profitability of Japanese TNC's and drove Japan's long overdue recovery (Bello 2009; Harris 2005:11; Tucker 2009).[6] The engine of this locomotive was China's robust growth and its emergence as East Asia's primary export platform to the world market, not product flows orchestrated through and by Japanese manufacturing and sourcing networks (Hung 2009:16). The proof in the pudding showed itself during East Asia's "sharp V-shaped" slump of 2008-2009, triggered by the crash of structured debt products issued on Wall Street and in the City of London. As the global economic crisis slowed Chinese growth, Japanese capital goods exports to China plunged, laying waste to the Japanese accumulation process and threatening to thrust Japan's banking system once again into turmoil (Bello 2009; Hung 2009:16; Tabuchi 2009).

For his failure to foresee just how quickly and how fully Japanese production and sourcing networks would become absorbed into the input and output markets of the Chinese mainland and hence subject to the rhythms of the Chinese economy, one might extend Arrighi the benefit of the doubt, graciously allowing that an error of this sort will invariably happen in a work of such impressive ambition.[7] More rigorously, one might note that *The Long Twentieth Century* was published just a scant few years after the post-Tiananmen embargo was relaxed, Deng Xiaoping signaled the acceleration of capitalist reform with his famous "southern tour," and foreign direct investment from the Triad powers really began pouring into China. But Arrighi's lack of foresight as to China's prominence – ironic, given his eventual admiration for how China navigated its sequenced reforms towards rapid ascent – may also have more profound methodological roots. Arrighi's theory of historical capitalism, with its Braudelian emphasis on the commanding heights of concentrated money and military power and the dynamic synergy between the two, might have obscured his vision. More precisely, Arrighi's Braudelian bias may have led him to disproportionately ponder the paradoxical relationships between Japan's masses of money capital and the US' aggressive rearmament during the "second Cold War," while relatively ignoring how a country with the locational, size, and sovereignty attributes of China might be able to parlay the ultimate contradictions of the US-Japan relationship to its own

[5] A case in point is the ruthless way in which large Japanese employers (NEC, Nissan, Panasonic, etc.) responded to the world economic squeeze of 2008-2009, shedding workers by the tens of thousands in a manner similar to their US counterparts (Tabuchi 2009).

[6] In an ironic twist of sorts, China's vigorous expansion also helped make possible the partial neo-liberal streamlining of Japan's political economy. The restoration to health of Japan's banks was aided by the return to profitability of Japan's China-oriented TNC's; no longer paralyzed by bad balance sheets, Japanese banks finally enjoyed the financial leverage to write off big chunks of their substantial load of non-performing loans, ridding Japan's productive sector of much of its inefficient excess capacity (*The Economist* 2005:24).

[7] In the postscript to the second edition of *The Long Twentieth Century*, Arrighi owns up to his earlier oversights: "When I wrote *The Long Twentieth Century* I was not fully aware of the extent and implications of the resurgence of China at the center of the East Asian political economy" (Arrighi 2010).

advantage. As R. Taggart Murphy (2006) and Kees van der Pijl (2006) have demonstrated, the way in which the strange alignment between Japanese money and US might was temporarily resolved was the 1985 Plaza Accord. By adjusting upward the value of the yen relative to the dollar, the Accord made it politically feasible for Japan to continue exporting manufactures to the US and underwriting US spending (including Reagan's outsized Pentagon budgets) without provoking a protectionist reaction harsh enough to unsettle the entire US-Japan relationship (van der Pijl 2006:309-310). But the value of the yen soared to heights unforeseen by all parties. One consequence of this was an acceleration in the pace at which Japanese (and other Northeast Asian) transnational corporations shifted the lower end of their supply chains to the dollar-linked Southeast Asian economies (Bello 2009; Tabb 1996:257; van der Pijl 2006:309-310). An unintended knock-on effect was a bidding up of the prices of Southeast Asian factors of production, with a concomitant hastening in the movement of cheap labor-seeking foreign investment to the export platforms of the urban coastal Chinese mainland (Lo 1999:17; van der Pijl 2006:309).

Sino-Japanese Tensions and the Limits to Regional Cooperation

To be fair, in *The Long Twentieth Century* Arrighi did stress how a centripetal intra-regional process – namely the spinning off of metropolitan productive capital to less expensive land and labor in the hinterland – was a leading animator of East Asia's becoming a locus of world accumulation (Arrighi 1994:344-349). He notes that the latest stage of this "flying geese" pattern was the quest by Japanese, South Korean, and Taiwanese transnational companies and middleman contractors to access cheaper land and lower cost workers in post-Maoist China (and doi moi Vietnam as well) (Arrighi 1994:347). But herein lies another flaw with Arrighi's outlook, one bedeviling not only *The Long Twentieth Century* but also his subsequent efforts. Like other surveyors of the trans-Pacific scene (Balakrishnan 2009:16; Beeson 2009; Hung 2009:6-7; Palat 2004), Arrighi keenly understands that the post-1945 surge of East Asian economic potency is inexplicable outside the context of US Cold War geo-strategy and the various ways in which that geo-strategy boosted the dynamic growth of the region's "capitalist archipelago" (Arrighi 1994:338-342). But when he considers the trajectory of East Asian development, Arrighi oddly discards this conceptual framework and the apposite geopolitical questions melt away. When it comes to looking toward the future, Arrighi holds fast to the view that despite the surficial incursions of the US hegemonic order since World War II, an underlying East Asian civilizational continuity persists.[8] Considering that until recently Japan's elected leaders spent the better part of a decade spurning an Asian identity – and minimizing the seamier sides of its Asian history – in favor of a "special relationship" with the US (Kingston 2007; Selden 2009b), Arrighi's view is quite cheeky indeed.

[8] A view propounded at some length in Arrighi 2002a, and one which he continued to uphold until the final year of his life. To quote from an interview published in 2009 (Arrighi 2009:89-90): "What is most interesting about East Asia is how, in the end, the economy is determinant of states' dispositions and policies towards one another, in spite of their nationalisms... It was striking that the nationalist resurgence in Japan, under the Koizumi government, was suddenly checked when it became clear that Japanese business was interested in doing business with China. In China, too, there was a big wave of anti-Japanese demonstrations, but then they stopped. The general picture in East Asia is that there are deep nationalist dispositions, but at the same time they tend to be superseded by economic interests."

In essence, Arrighi suggests that whatever many-sided interstate frictions currently plague the region, in the medium- to long-run the resurgent forces of de facto regional economic integration will by necessity triumph over these frictions, thus rendering their analysis relatively trivial. Consequently he gives short shrift to the multiple potential pathways through which closer and deeper economic links in East Asia will not translate into the region's emergence as an autonomous power center. Arrighi seriously entertains neither the possibility that even a weakened US will enjoy continued success playing its "offshore balancing" games in the region, nor the more ominous possibility that a lower or non-existent US security profile in the region will actually aggravate long-standing tensions that (despite the illusions of some) have a deep-seated existence independent of US imperial intriguing (Calder 2006; Selden 2009b).[9] These possibilities are not mutually exclusive and they rest upon a reality that Arrighi plays down: the ongoing geopolitical schism between Japan and China is a fact of world-historic consequence equal to any synchronic tendency toward Sino-Japanese economic integration (Gulick 2004a:511-512).

The practice of Japanese transnationals relocating production operations to China, importing capital goods and high-tech parts and components from Japan, and exporting intermediate materials and completed manufactures back to Japan (as well as to the world market) is indeed well-ensconced (van der Pijl 2006:318). This is so much the case that by 2004 Japan and China were one another's top trading partners for the first time since the US initially darkened East Asia with its Cold War shadow (Shorrock 2005). Some scholars suggest that successively greater levels of Sino-Japanese commercial exchange will spur Japanese and Chinese ruling elites not only to repair their bilateral relationship, but also to jointly build pan-East Asian institutions with a mandate to address regional issues (air pollution, financial instability, maladjusted currencies, nuclear proliferation, renewable energy, *etc.*) free of US mediation (e.g. Beeson 2009).[10] But on the question of Sino-Japanese bilateral amity, the necessary anchor of independent regional cooperation, the echoes of the unresolved past, and the political inertia of the present, may prove more compelling than the mere thickening of economic links (Pei and Swaine 2005; van der Pijl 2006:326, 328; Selden 2009b).

The decade-long ascendancy of the neo-nationalist right in Japan's ruling Liberal Democratic Party (LDP), and the serial affronts Japanese heads of state and top LDP officials have displayed toward sensitive Chinese memories of Japanese war crimes, are well-known

---

[9] In *Adam Smith in Beijing*, Arrighi acknowledges that through the extension of its security partnership with the US, Japan has been re-harnessed to US strategic goals in East Asia, and in a way specifically arrayed against China's ascent (Arrighi 2007:281-282, 288, 294, 299-300). But he seems to associate Japan's willingness to serve as the US' "Britain in Asia" more with the policy disposition of the Koizumi Prime Ministership rather than with the deep structure of the contemporary Japanese polity (see my argument later in this article). Moreover, in his discussion of the possibility that the US might draw down its imperial legions stationed in East Asia (Arrighi 2007:301), it becomes clear that Arrighi significantly overestimates the extent to which Sino-Japanese enmity is a byproduct of Japan's vassalage to the US. Survey research shows that popular Chinese attitudes about the US are considerably more favorable than those about Japan (Committee of 100:2008).

[10] Palat (2005) limns a nuanced version of this argument, maintaining that China's rise as an East Asian economic power attenuates regional fears of recrudescent Japanese imperialism; thus overlapping and complementary Japanese and Chinese trade and investment networks in East Asia as a whole boost the possibilities of autochthonous regional monetary and even security cooperation.

thorns in the side of the bilateral relationship (Feffer 2009; McCormack 2007). The more notable of these symbolically upsetting acts include Junichiro Koizumi's infamous "private" visits to Yasukuni Shrine (where fourteen "Class A" criminals of Japan's Asian wars receive honorary burial) and Taro Aso's abortive appointment of a Nanjing Massacre denier to his cabinet (*Economist.com* 2008; Hughes 2009:842). These sorts of gestures represent danger to the Sino-Japanese relationship not so much because they betray revanchist intentions that the Japanese power elite wants to act upon, much less is capable of acting upon (Overholt 2007:137-138). Rather, they represent danger because they push the top echelons of the Chinese Communist Party (CCP) to up the ante with strident rhetoric, lest the regime lose credibility with a populace that has been fed a steady diet of legitimating nationalist ideology in the post-socialist era (van der Pijl 2006:328; So 2009:58). When it comes to satiating nationalist passions, the CCP is most concerned with members of the new middle class who associate China's upward mobility with their own prosperity and insist that China be treated with respect in international discourse – *especially* by the Japanese (Shorrock 2005; Shirk 2007:11). In fact, in tandem with its growing more comfortable and confident, China's new middle class is growing more aggrieved about the depredations China suffered under Japanese occupation, evidenced by the stunning popularity of the 2009 film *City of Life and Death*, which spectacularly depicts the brutalities of the Nanjing Massacre (Tsai 2009). Be they expressed by ordinary people or by party-state spokespeople, vehement Chinese responses to Japanese government provocations exacerbate the downward spiral of distrust and fear, as large numbers of the poorly informed Japanese population mistake such vehemence for surefire evidence of China's malevolent intentions (Overholt 2007:37). In a reversal of the situation prevailing during the 1970's and 1980's "peace and friendship paradigm" (Hughes 2009:839-840; Pei and Swaine 2005:2), around 70 percent of Japanese respondents to a 2006 survey declared that their feelings toward China were "not positive" (Hughes 2009:842-843). These lukewarm or hostile feelings translate into foreign policy preferences: the majority of respondents in a 2008 survey professed their support for a harder line toward China (Chan 2008). Most ominously for the future of Sino-Japanese relations, the belief that Japan must take aggressive measures to guard against China's rise is most salient among the young. 63 percent of 20-to-30 year-olds surveyed in 2004 favored casting off Japan's post-war "peace constitution" (van der Pijl 2006:326).[11] Under such politically delicate and potentially explosive tit-for-tat conditions, serious and lasting Sino-Japanese cooperation is a fraught affair.

To contend that these types of insults and reciprocal recriminations are at the core of Sino-Japanese tensions is to make a serious mistake, however. After all, the vast majority of prominent Japanese politicians refrain from gestures that force the CCP to manage potentially explosive anti-Japanese outrage. The neo-nationalist "revisionists" in the LDP represent only one geopolitical tendency in Japan, one without the solid backing of Japanese big business or its exponents in the state bureaucracy – or even a unanimous following in its own party (Calder

[11] In addition, the peculiar recipe of economic policies favored by the Japanese political establishment during the last decade or so ensures that a wide section of the Japanese populace will continue to be susceptible to reactionary ideologies, easily purposed into anti-Chinese sentiment. Declassed single males and stressed out salarymen, exposed to a poisonous mixture of increasing doses of historical revisionism in public school curricula and other venues (McCormack 2007:140-154; York 2007), decreasing amounts of employment security (Kunitomi 2007), and blasé tolerance of disturbingly violent ultra-nationalist extremism, seem especially fertile ground for such ideological appeals (McCormack 2007:20-28; York 2007).

2006; Hughes 2009:843; Sevastopulo 2006). And what is more, in August 2009 the Japanese electorate effectively rejected the rightward lurch in their country's China policy by putting into office a new Prime Minister (Yukio Hatoyama) from the opposition Democratic Party of Japan (DPJ). Hatoyama vowed to dedicate Japanese diplomatic efforts toward the building of regional institutions, signaling a repudiation of the LDP hawks' program to confront China's rise by means of domestic re-militarization and ringing China with security alliances (Hatoyama 2009; Kambayashi 2009).

But the impediments to East Asian institution formation, with Sino-Japanese cooperation at the very heart, are in fact deeply structural. The nationalist recrudescence of the LDP's "revisionist" faction may not be the face which many in the Japanese ruling elite wish to present to the world, or to Japan's Asian neighbors more specifically. Abrasive though it may be, however, it issues from a widespread concern in Japanese geostrategic circles, one adhered to by policy planners in both wings of the LDP and the DPJ alike. While Japanese moderates recognize that "Japan's deepening bilateral economic integration with China has been an important force for cooperation" (Hughes 2009:841), all sections of the Japanese ruling elite are gravely worried that China's rapid geo-economic ascent is beginning to generate serious power differentials between China and Japan, and that the coming of a relationship of "asymmetric interdependence" (Hughes 2009:841) spells the eventual eclipse of Japan's regional influence (Hughes 2009:840). Many in the elite embrace multilateral methods of East Asian problem-solving. But to the extent they advocate regional multilateralism, it is principally because they have witnessed Chinese-directed regional initiatives outflank Japanese-directed ones, and regard multilateralism as the best tool for keeping China from running further ahead of Japan and increasingly pulling the rest of East Asia into its orbit (Hughes 2009:847,855). For example, after China successfully negotiated a trade liberalization deal with the ASEAN grouping in 2002, formalizing the increasing gravitational pull of Chinese markets on Southeast Asian exporters, Japan countered in 2008 with an ASEAN economic integration agreement of its own, encompassing measures on trade, investment, and services (Hughes 2009:847).

And no section of the elite proposes that Japan rely exclusively, or even chiefly, on regional political integration as the instrument by which it will cope with China's rising power. All endorse continuing the security agreement with the US as a necessary means of guarding against China's growing regional footprint and force projection capabilities (Hughes 2009:855). As no less a figure than Hatoyama himself said on the campaign trail: "Of course, the Japan-US security pact will continue to be the cornerstone of Japanese diplomatic policy" (Hatoyama 2009). It is worth pointing out that the latest renewal of the pact in 2006 (the Defence Policy Review Initiative, or DPRI) reaffirms the doctrine that Japan's Self-Defense Forces (SDF) are allowed and encouraged to participate in so-called "peace-keeping missions" far from Japanese shores. The ostensible rationale is the geographical liberation of the SDF so that they can contribute logistical support to international campaigns against terrorist networks and their state sponsors (McCormack 2007:61-64). But another facet is the enlistment of SDF aerial and naval assets, under US guidance, in the co-policing of China's Pacific perimeter (Feffer 2009; Hughes 2009:845; Klare 2006). This opens the way for the SDF, once Japan's politico-military leadership is consulted, to assist US military units in responding to a Northeast Asian "crisis" – such as a putative Chinese strike against Taiwan (de la Castro 2000:214; Deng 2002:126-127; Klare 2006).

The Hatoyama Adminstration garnered a lot of international attention for its protest of the way in which the Pentagon is handling the planned closure of Futenma air base on Okinawa

island. Some observers suggested that this might be a watershed moment, when Japan finally refuses to set its geopolitical compass with US bearings (Feffer 2010). But nothing of the sort occurred; the Hatoyama Administration was merely wrangling with the Pentagon over the implementation of the DPRI, in which the US promised to reposition bases and reallocate assets away from politically sensitive locations (*The Economist* 2006; McCormack 2007:79). And in the end, on this singular difference the Japanese government bowed to Obama Administration pressure and agreed to a mutually acceptable compromise (Chan 2010a). Certainly a Japan more inclined toward regional multilateralism may on occasion spurn specific US initiatives and tactics. For example, the DPJ has long criticized the US for sidelining the UN when it cannot get the UN to fall in line with its predetermined geostrategic goals (McCormack 2007:132). But Japan still will not contest the US' overarching geopolitical prerogatives (Calder 2006; Kambayashi 2009; McCormack 2007:4-5; Selden 2009b; Yamaguchi 2007). Japan's ruling elite has consciously chosen to ape the US' dominant approach toward China – "(commercially) engage, but (militarily) hedge" (Barma, Ratner, and Weber 2007; Bhadrakumar 2007a, 2007b) – and to prosecute a secondary role in the military aspects of this joint approach, based on a cool calculus of Japan's security interests (van der Pijl 2006: 326). There has been no fundamental tack away from this approach, entrained by the Clinton-Hashimoto Joint Declaration of 1996, when Japan's policy planners concluded that China's intimidating military maneuvers in the Taiwan Straits betrayed the possibility that Chinese "expansionism" (sic) might go hand-in-hand with its hothouse economic ascent (Hughes 2009:841).

Japan's continued tying of its own East Asian geo-strategy to that of the US, and in a manner predisposed to instigating Chinese backlash, is wedded to the very process that is supposed to product the opposite result. That is, rather than reducing Japan's subordination to the US imperium, evolving Sino-Japanese economic interdependence may accentuate such subordination. Murphy (2006:58) succinctly explains:

> Japan's long postwar acquiescence to the status of an American protectorate is in part… due to the belief, held by much of Tokyo's political elite, that the alternative to American protection is incorporation into a new Chinese Empire as a tributary state. As Japan's economic dependence on China deepens, the rationale for an American counterweight becomes all the more obvious…

For Japan to play a commensurate role in a truly independent framework for coordinating East Asian affairs, it would have to decisively assert its autonomy from US superintendence. Such an assertion of autonomy would be an epochal rupture, not just for US global dominance but also for what Murphy dubs the "domestic power alignment" that has reigned over Japan ever since the American occupiers instituted the "reverse course" in the latter 1940's (Murphy 2006:44). 60 years of being a pliant vassal of US imperialism has thoroughly encoded the genetic structure of Japanese politics and society (McCormack 2007); the constellation of political forces willing and able to press for a radical break with the US is marginal to the point of virtual non-existence.[12]

[12] Moreover, to the extent a coalition of political forces ready to break with the US is present at all within Japan, it includes a far right fringe eagerly prepared to shake Japan loose of US imperial stewardship precisely so it may reclaim its special destiny as the selfless benefactor of inferior Asians (Feffer 2009; van

And to the inconsequential degree that the DPJ presents any such break, its own grip on the reins of the Japanese government is tenuous. Despite the Hatoyama campaign's harsh indictment of how neo-liberal globalism has destroyed the fabric of Japanese society (Hatoyama 2009), the economic crisis has forced the DPJ regime to renege on its promises to increase social spending and reduce regressive taxation (Chan 2010b). Meanwhile, the DPJ has held fast to its established policy of defunding rural public works projects, one of the key planks in the LDP old guard's patronage system (Chan 2010b; Hirai 2004); the Hatoyama Administration's approval rating plummeted to well less than 50 percent a mere four months after its inauguration (Chan 2010b).

Theoretical Implications of the Asymmetry Between (Asian) Wealth and (US) Force

In *The Long Twentieth Century* Arrighi may have misfired by reserving a special role for the Japanese keiretsu in the medium-run destiny of East Asian (and hence global) accumulation, failing to foresee just how soon China would become the driving force behind regional growth (and hence the pivot of the next systemic cycle), and breezing past the very real and very obdurate geopolitical chasm between China and Japan. But the theoretical concerns motivating him to train his sights on the phenomenon of Japanese transnational production and sourcing networks hit the mark squarely, then and now. In the wake of the collapse of the Soviet bloc, Arrighi could not help but notice a paradoxical situation that appeared to be truly novel in the long historical life of the capitalist world-economy. Arrighi captured the most salient characteristic of this situation, a twin set of mutually complementary asymmetries, thusly: "superiority of force and the capitalist accumulation of capital seemed to diverge geopolitically as never before" (Arrighi 1994:22).[13] Given its status as a hegemonic power that should have been entering its twilight decades as such, the US enjoyed an unparalleled quotient of nearly absolute politico-military predominance over hypothetical contenders for world-systemic primacy. But at the same time, the US was not prolonging its heyday by putting capital into the private sector shares and public sector debt of the fast rising core power destined for economic dominance, and then collecting rentier income from these investments. Rather, to an unprecedented degree the US ran year-on-year current account deficits with this power (Arrighi 1994:15). On the flip side of the coin, Japan's status as the spatial and organizational hub of highly productive accumulation circuits should have qualified it as a top candidate for ascent to world-systemic primacy. But Japan's near vassalage as a virtual military protectorate of the existing hegemonic power made it anomalously supine in the sphere of inter-state politics. Nor was Japan being graced with financial flows from an aging metropolitan center prepared to ease its decline by underwriting government and business entities in the world-system's foremost theater of capital accumulation. Instead, Japan quixotically paid tribute to that center by consistently purchasing far more of that center's (low-yielding) liquid assets than was the case in reverse (Arrighi 1994:15).

Arrighi made sense of this paradox by constructing theoretically informed comparisons of each and every hegemonic transition (Ibero-Genoese, Dutch, British, American) that has

---

der Pijl 2006: 326). In other words, there is zero assurance that the hypothetical ascent of such a coalition would dampen rather than heighten Sino-Japanese differences.

[13] In the second edition of *The Long Twentieth Century*, Arrighi informs readers several times that his discerning this "unprecedented bifurcation of financial and military power" is one of the key propositions of the original work (Arrighi 2010).

periodically punctuated the evolution of the world-system. This enterprise in turn yielded a bundle of big conceptual breakthroughs in historical social science.[14] Regardless of the fact that they originally emanated in part from a misapprehension of the eventual significance of Japanese transnational corporations in the development of the world-system, these breakthroughs remain equally if not more valid today, a decade into the Twenty-first Century. The crux of these innovations rests in the contradictory structural trends that accompany the maturation of the global capitalist order, as it goes through consecutive systemic cycles of accumulation (or hegemonies). As these contradictory trends mount, they increasingly threaten to explode the order's essential scaffolding and hence the order itself. Each successive systemic cycle harbors gathering tensions between 1) the increasing politico-military preponderance of the hegemonic leader relative to its lesser peers in the capitalist core (Arrighi 1994:32-33), 2) the increasing dispersal of the most dynamic nodes of capitalist production and exchange (Arrighi 1994:32-33), and 3) the increasing inability of an authoritative hegemonic center (or alliance of centers) to orchestrate the institutional infrastructure facilitating the expanded reproduction of capital on a world scale. This increasing inability stems not only from the increasing challenge of reconciling the burgeoning contradictions between 1) and 2) (Arrighi 1994:18,32-33). It also eventuates from the increasing deficit of territorial scale and organizational resources any center (or alliance of centers) enjoys relative to a global system that accretes new layers of complexity and interdependence with each passing cycle (Arrighi 1994:14,32-33). This last point may be Arrighi's most distinctive amendment to world-historical scholarship, since it is the pillar of his controversial claim that the decline of the US may be followed not by the ascent of another hegemon, but rather by heightening and perhaps irreparable systemic chaos (Arrighi 1994:6,79).[15]

A SINO-CENTERED RECONSTITUTION OF THE GLOBAL SYSTEM?

Arrighi's Revised Take on China and the Next Systemic Cycle

Arrighi's formulations about these increasingly insuperable structural contradictions and their implications for the temporal durability of the world-system are among *The Long Twentieth Century*'s most overlooked theoretical innovations. Given many world-system theorists' predilection for identifying cumulative trends in the punctuated evolution of the capitalist world-economy (*e.g.*, Boswell and Chase-Dunn 2000; Chase-Dunn and Lawrence 2009), this oversight is surprising. It is also surprising because it has become ever more commonplace for world-system theorists and fellow travelers to claim that the global order has entered an epoch of watershed crisis of unknown proportions and unknowable outcomes (*e.g.*, Amin 2004:17; Wallerstein 1996; Went 2001-2002:490). The claims of these analysts reflect the impasse which Arrighi himself starkly acknowledged well more than a decade ago. In its present instantiation, the world-system remains saddled with a possibly fatal mismatch between the seat of politico-

[14] A project carried forward in *Chaos and Governance in the Modern World System* (Arrighi and Silver et al. 1999).
[15] A claim elaborated in greater depth in *Chaos and Governance in the Modern World System* (Arrighi and Silver et al. 1999:275-278).

military predominance (the US)[16] and the most robust basin of capitalist growth – the East Asian littoral, of which the factory zones, financial hubs, and research centers of urban coastal China are now an integral part (McNally 2009).[17] Moreover, this mismatch prevails in a context where no single aspirant to hegemony – not even China, as I will argue below – possesses the scale and capability endowments sufficient to engineer new conditions of global rule and accumulation in a yet more deeply interpenetrating world-system. On the surface, then, it is surprising that in recent years, Arrighi entertains the notion that the Bush Administration's futile effort at prolonging US primacy only quickened the pace at which China is ascending to the hegemonic throne (Arrighi 2005a, 2005b, 2007). To the extent that he waxes about the ripening prospects of a Sinocentric systemic cycle of accumulation, Arrighi has backed away from his insightful hypotheses about the aforementioned cumulative forces driving the world-system toward possible disintegration. But it is fair to surmise that changing facts on the ground since the publication of *The Long Twentieth Century* persuaded Arrighi to deemphasize his earlier position that because no viable hegemonic successor to the US waited in the wings, the world-system was headed toward possible break-up; that is, new empirical realities compelled him to reassess a hypothesis others might have mistakenly construed as an inflexible theoretical commitment.

Moreover, this reassessment might be fundamentally consistent with the spirit and even the letter of *The Long Twentieth Century*. In the opening chapter of *The Long Twentieth Century*, Arrighi furnishes the basis for supposing why of late he seriously considers that China may be up to the task of anchoring a new systemic cycle of accumulation, and therefore why he has toned down his pessimistic musings about the world-system soon degenerating into unpredictable chaos. Discussing the almost accidental qualities of previous hegemonic transitions, Arrighi comments: "acquiring these organizational capabilities [to spearhead a new phase of capitalist expansion – *J.G.*] was far more the result of positional advantages in the changing spatial configuration of the capitalist world-economy than of innovation as such" (Arrighi 1994:14). In lockstep with these remarks, from the 1990's forward, the economic restructuring and the spatial reconfiguring of the East Asian accumulation process have gone hand in hand. The resulting reterritorialization of the intra-regional accumulation dynamic has shifted the motor of this dynamic to China, a state that plausibly features the scale and capability endowments required to reconstitute the global political economy on "new and enlarged foundations." The CCP has long aimed its gradualist "market reform and opening up" policies toward the deliberate end of bolstering China's techno-scientific and economic modernization and national strength *vis-à-vis* other states in East Asia and the world as a whole (Hart-Landsberg and Burkett 2004:30; Harvey 2005:122-123; So 2003:11-12,15-16; So and Chiu 1995:150-152). But without the active collaboration of core-based transnational corporations (and diasporic Chinese capitalists) seeking low-cost export platforms and a toehold in the colossal Chinese market, the strategy that has resituated the heart of the regional accumulation dynamic in urban coastal China would not be the

[16] In September 2008 the US Congress authorized $612 billion for the 2009 military budget; accounting for inflation, US defense spending is now higher than at any time since the end of World War II (C Johnson 2008).

[17] In his studies of global income inequality, Arrighi rarely ceases to note that over the course of the last two-and-a-half decades, China's rapid economic growth (and hence its rapidly growing GDP per capita figure) is the only countervailing force to what would otherwise be a drastically worsening global income inequality picture (Arrighi 2002b:81-83).

smashing success it has been.[18] Herein lies a parallel with Arrighi's analysis in *The Long Twentieth Century* of the non-purposive character of hegemonic transitions past. Despite the US state's explicit mission to prolong its primacy beyond its "sell by" date, its own productive enterprises have aided China's gaining of the very factors it needs to style itself as a potential hegemonic successor.[19]

Elsewhere we can find other instances in *The Long Twentieth Century* where Arrighi unwittingly prepares the groundwork for a seeming about-face in *Adam Smith in Beijing*. In the former, Arrighi (1994:62) comments on the happy circumstances under which the US assumed the baton of world-systemic leadership during the last hegemonic transition of the inter-war period:

> …the hegemonic role fell on a state … that had come to enjoy… exclusive cost advantages associated with absolute or relative geostrategic insularity from the main seat(s) of inter-state conflict on the one side, and with absolute or relative proximity to the main intersection(s) of world trade on the other… But that state in both instances was also the bearer of sufficient weight in the capitalist world-economy to be able to shift the balance of power among the competing states in whatever direction it saw fit.

Reflecting Arrighi's remarks, in maintaining an equidistant geopolitical independence from all of the major capitalist centers – each of which eagerly angles on behalf of "their" transnational capitals for privileged access to China's inestimable labor, product, and consumer markets – China has been able to pit them against one another, parlaying favors from one and then another camp into an aggregation of its hegemonic capacities. In *Adam Smith in Beijing* Arrighi marvels at China's leveraging of European Union equipment and technology imports in the name of their joint fight against dangerous US unilateralism (Arrighi 2007:208); that he relies on this species of argument to make his case about the prospects of a China-centered hegemonic succession shows his essential faithfulness to the explanatory framework set up in *The Long*

---

[18] Reputable research conducted by global business consultants (*e.g.*, Gu 2005) shows why China is the optimal site for transnational firms to relocate or subcontract their consumer goods manufacturing operations. When possible TNC's choose to situate their industrial subsidiaries and establish sourcing networks in countries where they can dispose of output both locally and globally. This reduces the risk of relying exclusively on demand outside the host country. Perhaps more critically, it presents the possibility of committing fixed investments and setting up supply chains in a few pivotal places, rather than many marginal places, peeling back the per-unit expense of regulatory compliance (not to mention bribes and kickbacks) and other transaction costs. Giant core-based makers and retailers of wage goods in particular thus prefer to concentrate offshore assembly plants and subcontracting ties in countries with sizable internal demand for those wage goods. Even though at the end of the day its development model remains export-led, because China's overall population is so massive the purchasing power of its "new middle class" is absolutely huge and hence so is internal demand for consumer goods (Harvey 2005:137). For a similar analysis, see Lynn (2003).

[19] Gowan (2004) beautifully distills the intrinsic curiosity of a US political formation that constantly defers to the prerogatives of its own "business internationalists" but also must habitually resort to an "America (*sic*) first" stance as the default mode of managing popular grievances with the domestic costs of a "business internationalism" that nonetheless in the final instance always calls the shots.

Twentieth Century. But if any world-historical phenomenon were to reveal the prescience of Arrighi's theoretical formulations about contradictions inclining the world-system toward irremediable chaos, it is the "peaceful rise" of China during the last decade.

The Contradiction-Riddled Interdependency of the Chinese and US Political Economies

If we take the Arrighi of *The Long Twentieth Century* at his word, and concur that another round of successful world-system expansion will require leadership by state and capitalist actors harboring endowments exponentially greater than those harbored by hegemonic political and business agencies during the "long" Twentieth Century (c. 1873-??), then it is hard to envision how a Sinocentric systemic cycle of accumulation will be up to the task (Harvey 2009). Despite China's sheer geographical breadth and its robust political-military autonomy, it is a stretch to say that these territorial and capability factors add up to the exponentially greater endowments necessary (if not sufficient) to lead the world-system through another cycle of expansion. In comparison to Japan, a large island nation-state famously deficient in strategic mineral deposits and still dependent for its security upon the force posture of the US military in the western Pacific, China does enjoy an impressive portfolio of resources. Its economy has doubled in size every seven years for the last 25 years (Tabb 2008:23), its GDP quadrupling between 1989 and 2004 alone (Anderson 2010:91). Despite its sporting of an infamously high Gini coefficient, China's GDP per person figure is 12 times higher today than 30 years ago, helping to cement the stability of CCP rule (Yao 2010). China boasts a precipitously growing base of global manufacturing capacity and share of global economic output (Glyn 2005; Harris 2005:10), now makes two-thirds of the world's copy machines, DVD players, and microwave ovens (Tabb 2008:23), and recently passed Germany to become the world economy's number one exporter (Wolf 2010). It famously possesses well above two trillion dollars of currency reserves (Anstey 2010), not to mention an increasingly potent arsenal of conventional and nuclear military forces (Righter 2008). All of these resources are commanded by an unfailingly durable party-state that jealously defends its hard-won national sovereignty (Anderson 2010:94; Harris 2005:9; So 2009:56).

But many of the attributes that make China appear to be a viable hegemonic successor merit qualification. China's reputation as the world-economy's industrial workshop obscures a few crucial facts. China's reputation may be well deserved, but the World Bank's long overdue recalibration of comparative GDP measures shows that China is not the economic colossus that many have perceived and alternately feared or celebrated (Mead 2007). Most of China's exports to core capitalist markets are "manufactured as foreign brands by foreign-owned companies . . . as part of cross-national production chains. . . . China pockets only a small part of the gain" (Shirk 2007:26; see also Hart-Landsberg and Burkett 2004:13; Harvey 2005:124; Panitch 2010:82; Tabb 2008:5; Walker and Buck 2007:52).[20] Along the same lines, more than a decade of conscious government policy has netted China only a few entrants to the Global Fortune 500, contrary to the ambitious aims of China's National Reform and Development Commission (Nolan 2004:18-24). China also remains technologically dependent in most high value-added sectors

[20] Tabb gives one telling example of this: "IPods… are 'Made in China' but are really only assembled and tested there. $3.70 of the value of the IPod remains in China. Apple takes $80 per unit in gross profit" (Tabb 2008:5).

(Engardio et al. 2007; Hart-Landsberg 2008). Well more than half the value of its high-technology exports is produced by fully foreign-owned enterprises (Harris 2005:12), and China's landmark ventures in the automobile, passenger aircraft, computer chip, and solar energy sectors rely heavily on imported innovations or feature designs obsolete by global standards (Roberts and Engardio 2009:40-42). And despite the overheated rhetoric of Pentagon intelligence sources about China developing offensive naval and airborne capabilities that contest US military dominance in the western Pacific as a whole, China's military modernization campaign has focused on the mere development (and purchase) of assets that would enable it to neutralize US intervention on behalf of Taiwan (Negroponte 2007; Klare 2005).

To cast doubt on China's hegemonic prospects in this manner alone, of course, is to abrogate a bedrock methodological principle to which Arrighi steadfastly holds in *The Long Twentieth Century* and since. To assess a state's future trajectory through the tiered global system solely by auditing its internal strengths and weaknesses and then comparing the balance of these factors to the balance of strengths and weaknesses possessed by actual or would-be rivals is to fundamentally miss one of the integral insights of *The Long Twentieth Century*. The hegemonic potential of a state lies not merely in its sum total of measurable territorial, politico-military, Gross Domestic Product, and other such endowments matched against the composite assets of its rivals (Arrighi 1994:15). More critically, this potential rests in the degree to which that state successfully leverages its internal endowments in the transnational contest to attract mobile money capital (Arrighi 1994:16), and in the heightened interstate competition that always accompanies the dissipation of the incumbent hegemon's ability to sustain an international order delivering collective benefits to the capitalist core's many bourgeoisies. Its potential thus also rests in how advantageously to its own ascent that state reshapes the external geopolitical and world market environment within which it and all other states act.[21]

To be sure, Arrighi's methodological claim that a state's hegemonic potential cannot be properly ascertained without taking into account how that state's endowments dialectically interdigitate with global networks of capital accumulation and state power is perceptive. Still, Arrighi miscalculates the likelihood of Chinese hegemonic succession. This is so partly because he does not heed his own recommendation in *The Long Twentieth Century*: his advisory to carefully diagnose the contradiction-ridden interdependencies between the decline of the declining hegemonic bloc of business and government agencies and the putative rise of the putatively rising hegemonic bloc of business and government agencies (Arrighi 1994:9). In *Adam Smith in Beijing*, Arrighi maintains that through the waging of an unwinnable occupation in Iraq and a broader "war on terror" that further damages US credibility in the eyes of its junior partners, the Bush Administration sped along the already inevitable process of US hegemonic decline (Arrighi 2007). Given the impact of the Bush Administration's imperial policies on the US' twin deficits and the reputation of its might, and hence on the dual pillars of the US' fading dominance, the stature of the dollar as "world money" and the threat of its using military force, it

[21] However, it bears comment that in *The Long Twentieth Century* Arrighi himself argues that after the apex of British hegemony, the succession prospects of the two primary hegemonic contenders (Germany and the US) were more strongly shaped by their internal size and capability attributes than in previous transitions, because "the world power of the leading capitalist state had grown so much in comparison to its forerunners and to its contemporary challengers…" (Arrighi 1994:60-61). Does this assessment of the relative importance of domestic scale and capability endowments for successful hegemonic ascent not carry across to the period of *Pax Americana*'s twilight?

is hard to disagree (Selden 2009b). Arrighi also marshals evidence that seems to indicate a causal interaction between US losses and Chinese gains. Among the cases he cites in *Adam Smith in Beijing* are the increasing orientation of Japanese and South Korean growth patterns toward China (Arrighi 2007:205), the daringness of China's economic diplomacy initiatives in raw material-rich Latin American republics (Arrighi 2007:207), and *via* its prominent role in the G20 group, China's championing of genuinely reciprocal multilateral trade liberalization (Arrighi 2007:208).[22] There is little doubt that such trends bring closer the day of reckoning for US primacy. Yet Arrighi incautiously presumes that the diminution of US dominance spells the hegemonic rise of China, at the expense of exploring the hypothesis that the US and China "are in a tight embrace, performing a minuet which is part dance of death" (Jones 2005:108). That is, he virtually ignores the possibility that the US and Chinese regimes of accumulation are so wedded to one another that rather than creating the vacuum that will enable a Sinocentric systemic cycle to begin, the ebbing of US dominance will throw Chinese ascent off course.

Arrighi tends to downplay just how much China's prosperity and stability have been deeply ensconced in the "China produces and lends, the US borrows and spends" framework binding together the two political economies. From 1997 onwards, the percentage of China's GDP devoted to fixed capital formation reached staggering levels, as the wage share of national income fell below 40% (Cheng 2007; Righter 2008). Much of this investment entailed the installation of export-oriented plant and equipment production complexes and human habitats up and down urban coastal China (Hart-Landsberg and Burkett 2004:13,48; Harvey 2005:124; Nolan 2004:15). While China matured into a giant exporter to all three macro-regions of the advanced capitalist world (the US, the EU, and the rest of East Asia), the US alone was responsible for soaking up China's sizable current account surplus (Brenner and Jeong 2009; M Li 2008c:28-29). The proper functioning of China's export-led development model – and the "structured coherence" (Harvey 1989) of its layers and layers of new, export-oriented built environments – thus became hostage to the willingness of liquid capital holders the world over to prop up asset bubbles (especially the housing bubble) and debt-financed (especially housing equity-financed) consumption in the US (Hart-Landsberg and Burkett 2004:49,66; Jones 2005:110; M Li 2008c:23-25; Panitch 2009). The resulting precariousness of China's position was reflected by the vigilance with which the CCP prosecuted exchange rate mercantilism as a *de facto* industrial policy. Although it did permit a strictly controlled "floating peg" for a little more than three years between 2005 and 2008, the CCP's refusal to significantly revalue the *yuan* relative to the dollar, in order to relieve excess capacity pressures upon its hundreds of export-oriented complexes and habitats, attests to this policy (Brenner and Jeong 2009; Petras 2005; X Li 2003).[23]

---

[22] After the publication of *Adam Smith in Beijing*, Arrighi and his colleagues continued to explore the theme of the interactive relationship between US power deflation and China's geo-economic rise, focusing on how the ebbing of the Washington Consensus and the emergence of a new order of PRC-led South-South cooperation entail one another (Arrighi and Zhang 2010).

[23] Of course, exchange rate mercantilism was also a *de facto* social policy, because China's urban coastal landscapes are clotted with rural migrants who would be transformed overnight into dangerous classes were China's industrial overaccumulation problem not cushioned by the "undervalued" *yuan* (Harvey 2005:141; Petras 2005; X. Li 2003). Although it did not induce a fierce *yuan* devaluation, the degeneration of the global economic crisis in Fall 2008 offered a snapshot preview of the social unrest such a devaluation might engender in China's coastal provinces. Already pushed to dangerous levels by thousands of yearly protests (mostly in the countryside) over illegal land grabs and illicit industrial pollution, social unrest was

The crisis of 2008-2009 has already shown just how tightly coupled were the respective post-Cold War economic expansions of the US and China. The former was driven by cheap credit, low interest rates, and asset bubbles, the latter by external demand for low-cost manufactures and the recycling of export earnings into dollar securities (Altvater 2009; Bello 2009; Hung 2009:14; M Li 2008c:21-30; Selden 2009b; Yang 2010). Now that the crisis has disrupted this coupling, China's development model is being thrust into a showdown with its various distortions. The world slump of 2008-2009 was not merely about the collapse of the securitized debt bubble originated on Wall Street (and in the City of London) and distributed globally. It is nothing less than the beginning of the end of a particular global capitalist configuration. This configuration prominently featured rising power countries experiencing (real or illusory) development booms based on (directly or indirectly) tapping into US demand artificially stretched by its seignorage privilege, and salting away currency reserves in dollarized instruments and speculative funds that further supercharged US demand and discriminated against internally-oriented domestic investment. Now that this configuration is transforming, China is suddenly stuck with a mismatch between massive amounts of export capacity and feeble foreign demand for its exports (Bello 2009; Brenner and Jeong 2009). For China's rise to have a decent chance of continued success, the CCP will need to retool its development model – not only financial and fiscal priorities, but the very social and physical landscapes of China's class and inter-regional arrangements (Petras 2005). However, China's ruling regime does not appear able, or even ready, to undertake the necessary serious adjustments. The Arrighi of *Adam Smith in Beijing* would not appreciate just how radical the overhaul has to be, nor the grave implications for China's upward path. And this is because this particular version of Arrighi does not have a satisfactory understanding of just how much China's economic boom of the last 20 years was embedded in the previously described global capitalist configuration – a configuration the 2008-2009 crisis has destroyed.

Were it not for Beijing's $586 billion stimulus package of November 2008, sharp economic contraction in the advanced capitalist North would have translated into a severe, rather than moderate, slowdown in China's rate of GDP growth (Ariff 2009; Callinicos 2010; Hiro 2009; Hung 2009:22). But the flooding of China's state-owned banks with easy credit, and ramped-up government investment in numerous major infrastructure projects, has not solved the problem of excessive export dependence in China's mode of accumulation. The monetary loosening has fueled speculation; share prices have been pushed up to unjustifiable levels, and the Beijing and Shanghai real estate markets have reached dizzying heights (Ariff 2009; Barboza 2010; Callinicos 2010; Ito 2010; Ito and Rial 2010). Cheap loans and infrastructure contracts have bloated industries already weighed down with overcapacity (Hung 2009:22). Meanwhile, little has been done to boost household mass consumption (Balakrishnan 2009:17; Hung 2009:22; Kwong 2009; Yang 2010). Ever since the Hu-Wen leadership began to propagate the "harmonious society" and "scientific development" concepts in 2004, the CCP has been attuned to dampening the ill effects of China's accumulation model, including the specter of terrible socio-political turbulence, with tax relief and income supplements extended to the poor,

---

pushed further to various urban, southeastern Chinese locations by a new round of large and violent demonstrations. Most of these protests were staged by export sector workers angered by summary dismissals from work, as well as unpaid back wages (Bello 2009; Bezlova 2008; Harvey 2009; Schwartz 2009).

especially the rural poor (Hung 2009:20; Selden 2009a; So 2009:55-56). To a limited degree, this approach was carried forward in the CCP's allotment of stimulus expenditures: pension supplements for idled state-owned enterprise workers, pay hikes for pre-secondary school teachers, and the like (Barber et al. 2009; Jacobs 2009). But these expenditures were relatively minor, compared to the huge sums used for rail and road construction and to prime the banks (Hung 2009:22). And a portion of 2009's "social" spending went toward worker retraining programs in the coastal factory zones, a government subsidy of the suddenly struggling export sector (Selden 2009a). China's very considerable income inequality – long a symptom of the CCP's policy to undernourish the countryside and fatten the coastal export sector – actually widened in 2008 and 2009 (Hung 2009), and in 2009 per capita income differentials between urban and rural areas hit their post-1978 apex (Fu 2010).

When the stock and property bubbles burst, as they inevitably must, China will look again to external markets to keep domestic growth ticking, and to keep social stability in place (Ariff 2009; Ito and Rial 2010). Yet, with the world economy still mired in a recessionary hangover, those markets will have largely vanished (Balakrishnan 2009:17; Bello 2009). They will have largely vanished not only because the asset bubbles which levitated consumer spending in the US and other outposts of the metropolitan North have vanished, nor only because the underlying bugaboo of capital overaccumulation still lingers in the global system (Balakrishnan 2009:18). These foreign markets will also have shriveled because China now faces multiplying protectionist measures taken against its purported exchange rate mercantilism, most notably the specter of the US listing China as a "currency manipulator" and then imposing an across-the-board 27.5% tariff against all Chinese imports (Anstey 2010; Beattie and Dyer 2010; Bradsher 2010; Callinicos 2010; Pettis 2010). Hypothetically, if increasingly nasty accusations of beggar-thy-neighborism and burgeoning trade wars compel a *yuan* revaluation, the Chinese leadership could seize the opportunity to launch a more equitable and inwardly-focused regime of growth. But redirecting China's political economy toward household mass consumption promises to be an arduous affair. Especially given the resurgent strength of China's urban coastal elites in the CCP's highest echelons, it will take a long time to fundamentally restructure China's development model in a manner that would effectively empower the Chinese working class (Hung 2009:24). The more likely outcome of China being forced to bear the burden of "adjustments to global imbalances" is a sudden winnowing of its export sector, with harsh layoffs and social unrest in train (Pettis 2010).

When dissecting in *Adam Smith in Beijing* the possible approaches the US might take toward coping with China's ongoing rise, Arrighi illustrates cognizance of how the Chinese and US political economies are mutually constituted. He insightfully frames the chief dilemma hobbling US attempts to respond to China's ascent (Arrighi 2007:305). On the one hand, rampant imports of Chinese-made consumer goods and Chinese financing of the Pentagon's spendthrift ways have become fulcrums of US growth and power projection. On the other, these commodity and capital inflows are rotting away the US manufacturing base, boosting China's leverage over US imperial adventurism, and preparing the ground for nationalist-protectionist anti-China populism with volatile domestic political consequences (Petras 2005; Shirk 2007:5-6; Wallerstein 2005). But Arrighi reveals less awareness of how resulting political volatility in the US translates into calamitous instability in the entire edifice of US-China geo-economic interdependence – and dims the prospects of a smooth Chinese ascent. Whenever the US brings anti-dumping charges against China in the WTO, or raises hackles about China's allegedly "undervalued" *yuan*, this

inflames possibilities of a tit-for-tat trade war and revenue losses for Chinese exporters. China could parry escalating US protectionism with its perennial threat to reposition its dollar reserves, a threat its officials have openly enunciated since the crisis broke (Batson 2009; Pettis 2010). But for now, this threat is weak tea. If China were to sell off a significant chunk of its dollar reserves, it would take a powder on its remaining reserves (Bezlova 2008; Sender 2009). Or the act of selling off some of its reserves would find willing buyers, supporting the dollar and negating its threat. A combination of the two would be a most unpalatable scenario for China (Pettis 2010). For the threat to be credible, what needs to occur is proof of a viable long-term strategy to undermine and replace the dollar's status as "world money." But this would involve China teaming up with Japan, the other most important state prop of US dollar hegemony. And as explained earlier, even under the unsteady hand of DPJ guidance, Japan is far from comfortable directly challenging US political dominance – for one part of its two-pronged foreign policy continues to lean on that dominance.

SOCIO-ECOLOGICAL CONSTRAINTS TO GLOBAL CAPITALIST REPRODUCTION

As Arrighi insightfully theorizes in *The Long Twentieth Century*, the net result of several rounds of world-systemic expansion and restructuring is a complex global division of labor that is at one and the same time highly economically integrated and unusually geopolitically lopsided. The increasing disproportionality between political-military power and economic dynamism in the world-system is further complicated by the imperative that the next hegemonic leader be endowed with historically unprecedented scale and organizational capabilities, per the pattern established in the past. This all adds up to "steering problems" for the present transitional conjuncture – problems so grave as to imperil the very continuation of the world-system. Arrighi's perceptive formulations are enduringly relevant for another reason as well. They assist in the probing of urgent questions about the historically produced relations between global capitalist expansion and biophysical constraints to further expansion. By joining concepts such as hegemonic scale and world-systemic depth to the project of world-systems analysis, in *The Long Twentieth Century* Arrighi opens up intellectual vistas for a more thorough grasp of why world-systemic reproduction decades into the future is a dubious proposition. But because Arrighi's viewpoint is myopically "social determinist" – *i.e.*, nearly blind to the ways in which accumulation and territorial pursuits in the world-system are always already embedded in metabolic exchanges between human society and nature (Moore 2009:3-6, 8) – he fails to marry his lucid remarks about the scale and capability barriers to "normal" hegemonic succession with a crucial acknowledgment of the imminent socio-*ecological* limits to continued systemic expansion.

An occupational hazard of basing long-range prognostications on observed regularities (be these regularities cyclical or aggregative) is that these regularities may be undergirded by conditions that lurk beneath the surface, unappreciated and hence untheorized. These conditions and the extent to which they have discreetly governed world-systemic development may become manifest and theorizable only at the time their prior obscurity can no longer be taken for granted – that is, precisely when they begin to evaporate. In other words, these conditions and their formerly unacknowledged enabling powers only become evident at the very moment their disappearance possibly undermines the continuation of the world-system itself. When putting the

finishing touches on *The Long Twentieth Century* 15 years ago, Arrighi failed to detect the degree to which world-systemic reproduction in the past, present, and future is contingent on a specific package of *geophysical* conditions. To be more precise, since the widespread adoption of the coal-powered steam engine in capitalist raw material extraction, transport, and industry two centuries ago, world-systemic expansion has been grounded in labor productivity increases inextricably linked to the exploitation of non-renewable fossil fuels (Altvater 1998:23-25; Christie 1980:16). This oft-noted relationship has been grounded in a heretofore oblique configuration of the carbon cycle. A distinctive geophysical ensemble of ample supplies of commercially recoverable fossil energy resources (Altvater 2006:42) combined with global and regional climates sufficiently stable and benign to encourage and reward the mobilization of wage labor-saving investment (Clark and York 2005:403-409; Simms 2005) has enabled a long sequence of socio-technical revolutions in value production. But a cast of historical social scientists now recognizes that this configuration is fast eroding (Foster 2009; Grimes 1999; M Li 2007:2-3).

Their acknowledgement of this emergent reality is built upon the latest and best findings of energy economists and climatologists (Foster 2009:11). Even the customarily cautious International Energy Agency (IEA) has joined the chorus of energy economists who argue that within the next decade or so – and very possibly sooner – the total global output of conventional crude oil will plateau and then irreversibly decline (Connor 2009; Foster 2009:92-99; Klare 2008:35-43). Dissenting voices inside and outside the industry claim that deep-sea drilling and enhanced field recovery techniques will considerably prolong the day when this plateau is reached (Mouawad 2009). But the same voices wittingly or unwittingly confound the issue. In theory, advances in oil discovery and extraction technologies enlarge the world's petroleum reserves. As the planet's stock of "easy oil" – that is, oil reservoirs in places that are geographically convenient to access and proximate to sites of processing and consumption – is progressively exhausted, the tapping of "tough oil" will prospectively meet future demand. However, as "tough oil" incrementally replaces "easy oil," and as an increasingly greater proportion of world petroleum throughput is sourced from technically challenging and physically remote locations, the capital expenditure cost and the energy input cost of producing each new barrel of oil goes up (everything else being equal) (Klare 2009). As the per barrel price of this utterly essential input moves inexorably upward, the accumulation process slows to a crawl, which in turn short-circuits investment in the developing, pumping, and delivering of "tough oil". In sum, implementing new technologies to hypothetically bring on line new supplies of "tough oil" will not fundamentally solve an epic problem the capitalist world-economy is now experiencing: its flagging ability to offset the tendential rise in the organic composition of capital through the organizing and generating of an "ecological surplus" (Moore 2009:5).

Meanwhile, credible studies conducted since the release of the Intergovernmental Panel on Climate Change (IPCC)'s Fourth Assessment Report of 2007 indicate that anthropogenic climate forcing is unfolding more quickly and with graver consequences for ecosystemic destruction than previously maintained by the scientific consensus (Hansen et al. 2008; UNEP 2009). Many in the climatological community now believe that if present trends in the emission of greenhouse gases into the atmosphere persist for merely another decade, a radically non-linear and certainly catastrophic process of "runaway" global warming will probably ensue (Leahy 2009; M M Li 2008b:51-53). Scholars are also catching on to a phenomenon that at first seems counterintuitive. The depletion of low-cost petroleum reserves may exacerbate rather than reverse

climate change, and intensifying climate change may in turn hasten the moment when conventional oil output reaches its ultimate apex. At the very least, the two-way connection between conventional oil depletion and global warming will be governed by both negative and positive feedback loops. For example, the rising costs of conventional oil extraction and the related search for substitute transport fuels is already leading to the increased tapping of energy resources that are considerably more greenhouse gas emissions-intensive than regular petroleum. The extraction and refining processes involved in the production of alternative hydrocarbon fuels derived from sources such as bitumen, oil shale, and tar sands are extraordinarily carbon positive (Klare 2008:40-41; Shah 2004:149). And most agrofuels do not fare much better in this regard. Not only are the fertilizer application, crop cultivation, and distilling practices associated with the industrial production of (most) agrofuels highly carbon-intensive, but the direct or indirect conversion of grasslands, tropical forests, and peat bogs to make room for expanded fuel crop cultivation is enormously destructive of carbon sinks (Fargione et al. 2008; Leahy 2008; Searchinger et al. 2008). On the other side of the coin, worsening climate destabilization is already yielding more extreme weather events and unpredictable environmental conditions in precisely those remote and physically challenging places where the petroleum industry is developing new fields in response to the depletion of old ones. That is, global warming may severely compromise the feasibility of exploring and exploiting oil reserves in deep-sea and arctic locations, thus bringing ever closer the day when conventional oil output reaches its final peak and accelerating the pace at which absolute shortages of conventional oil translate into permanently high energy resource costs (Klare 2008:60).

Historical social scientists who fully reckon with the alarming socio-ecological tendencies and patterns outlined above are converging upon a consensus that expansionary world capitalism will probably not thread the needle of conventional oil depletion and incipient climate chaos (Clark and York 2008:22; Moore 2008:59-62). They base this tentative conclusion on many factors and insights, the following two being especially elemental. One, the non-substitutable qualities of oil as a cheap, dense, and portable fuel source (as well as a fungible input into industrial agriculture) means that absolute declines in global petroleum output will throttle the expanded reproduction of capital in severe and unseen ways (Goff 2003:195-204; M Li 2007). Two, under circumstances of dramatic climatic shift and its wildly unpredictable consequences, repairing and safeguarding capitalistically productive natural and built environments would require such a massive diversion of realized surplus value to so-called “geo-engineering” projects as to paralyze the accumulation process (Jones 2005; O’Connor 1998:170,246-247).

While Arrighi was composing *The Long Twentieth Century*, these facets of the multifaceted global environmental crisis had yet to cross thresholds leaving historical social scientists no choice but to acknowledge previously ignored connections between the expanded reproduction of capital and the presence of favorable geophysical conditions. In the 15 years that have passed since the publication of *The Long Twentieth Century*, critical social science has made great theoretical strides toward comprehending the mutual constitution and co-evolution of society and the natural environment (Clark and York 2008:13; Goldman and Schurman 2000) – and, at the more innovative and radical end of the spectrum, in combining thermodynamic with political economy concepts to account for the perpetuation of uneven development on the world and other scales (Biel 2006; Bunker 1984; Hornborg 2001: 35-64; Takeda 2003). In addition, refracted through the various media of global structural inequality, the social manifestations of hydrocarbon energy depletion and anthropogenic climate change have begun to take on

noticeable forms just as scientific understanding of these trends and their impacts have measurably improved (McKibben 2006). But Arrighi's effacement of the socio-ecological constitution of the capitalist world-economy, and the successive geophysical barriers it creates and tries to supervene, also betrays a theoretical imprint. His Braudelian conceptualization of world capitalism – the rarefied zone of high finance and military power, suspended above the quotidian plane of production and exchange – inclines toward neglect of the environmental contradictions of material life. Whatever the sources of Arrighi's inattention, it is now inadmissible to breezily speculate on China's hegemonic trajectory down the road, as if fossil energy strains and intensifying global warming will not decisively condition the future of the capitalist world-economy – including its possible extinction. By impinging on the very process of world-systemic reproduction itself, the mutually interpenetrating character of energy resource bottlenecks and extreme climate perturbations[24] should make an already unlikely transition in world-systemic leadership between a declining US and a rising China even more inconceivable (Li 2008:10) – especially considering these bottlenecks and perturbations will both compound China's well-documented explosion of peasant and worker protests and hamstring the capacity of the Chinese state to respond to these myriad crises (French 2005a; Gulick 2004b; Li forthcoming; Silver 2003:167; Solinger 2005; Yang 2005).

China Stuck in World Capitalism's Closing Geo-Historical Window

China's hothouse accumulation of the last 15 years, of course, has more than a little to do with the gathering stress between the expansionary logic of world capitalism and the supply of energy resources world capitalism extracts, transforms, and depletes through the valorization process. Between 2000 and 2004, China accounted for 40 percent of the world's total increase in energy consumption (Wen and Li 2006:140) and between 2002 and 2007, 35 percent of the increase in oil consumption (Klare 2009). China's rapidly increasing demand for foreign oil and gas supplies has become a major force driving world market prices for hydrocarbon fuels (Hatemi and Wedeman 2007:104; Li 2008:2), and the continuation of its impetuous industrial growth is potentially held hostage by its fast rising bill for imported fossil fuels (Auerback 2005; Li forthcoming). Possible energy resource bottlenecks facing China might lead not only to a slowing in its rate of GDP growth, but also to further increases in Chinese popular unrest (Li 2010:11); China's party-state still abides by the formula that GDP expansion of at least eight percent per annum is the first rampart against worsening unrest (Kahn and Yardley 2007; Li and Lang 2010:46; Thompson 2009).

The CCP has in place a multi-pronged scheme to decouple its accumulation performance and hence its social cohesion from over-reliance on oil and gas imports. Formalized in the Five-Year Plan of 2006, this scheme includes features such as upgrading China's industrial structure into sectors that require less material inputs and yield less waste per unit of value produced (Bezlova 2007; McKay 2007) and improving its low energy conversion rate in manufacturing processes (Bezlova 2007; Economy 2007b; McKay 2007). But on both the sectoral upgrading and energy efficiency fronts, China has fallen well short of meeting targets and benchmarks mapped

[24] Another line of inquiry yet to be systematically explored involves the ways in which the coming peak in conventional oil output will choke off investments needed to cope with the deleterious effects of global warming.

out in 2006's Five-Year Plan, not in the least because ministries and bureaucracies in Beijing have lost much of their capacity to get national economic blueprints properly implemented at the local level (Economy 2007a; Economy 2007b; Kahn and Yardley 2007). Hence the burden of the CCP's designs to soften China's reliance on imported hydrocarbon fuels must rest on raising the contribution of domestic energy resources (renewable and otherwise) to China's consumption mix. By 2020 Chinese authorities intend to quintuple electricity output generated by nuclear power plants, double hydroelectric power capacity, and to radically ramp up wind power capacity, a trend already well underway (M Li 2008bM Li 2008a:6-7; Parenti 2009); by 2030, China's solar photovoltaic electricity generating capacity is projected to increase appreciably as well (M Li 2008bM Li 2008a:7). But what is often overlooked in conventional analyses of the party-state's plan to tap more and better domestic energy resources is that the enactment of said plan promises to ignite mass revolts in manifold unintended ways – and, moreover, that this is just as true for the "green and lean" facets of the plan as it is for its "dirty and bulky" components. Such is the squeeze that inevitably confronts a country containing 21% of the world's population and boasting a GDP that for 25 years has expanded at an annual average of nearly 10%, but is also endowed with a mere 11% of the world's primary energy supply, and an even more meager seven percent of its arable land and freshwater reserves (McKay 2007).

In one of the last countries on the planet whose public officials remain enamored with big dam projects that even the World Bank is no longer willing to underwrite, such projects have already proven their potential to incite popular upheaval. The showpiece of China's hydroelectric arsenal, of course, is the Three Gorges Dam. While its construction has inspired legions of protests by displaced Yangtse River valley dwellers, the true explosiveness of this situation was not fully revealed until October 2004. In a small city in Sichuan Province, nearly 100,000 evicted migrants denied adequate compensation and condemned to unemployment battled paramilitary police in a night-long rebellion (Chan 2004; Mooney 2004). More ominously, Chinese and American geophysicists have recently discovered that the sheer weight of the reservoir created and contained by the Three Gorges Dam may have helped to trigger the deadly Wenchuan earthquake of May 2008 (LaFraniere 2009). If the link between the dam's construction and the seismic calamity is conclusively proven, and if such findings trickle down to the Chinese public, popular anger and loss of CCP legitimacy may spiral out of control (LaFraniere 2009). But even seemingly benign small-scale renewable projects can spawn collective violence. When a local government in crowded Guangdong Province obeyed an order from Beijing to pursue clean energy production by building a space-intensive windpower farm, peasant victims of eminent domain rose up, with at least 20 of them meeting their end from gunfire issued by a riot squad (French 2006; Kahn 2005).

But on an earth where several centuries of "fossil capitalism" have pushed carbon sinks past their absorptive capacities, the part of the CCP's domestic energy sourcing strategy that most endangers China's putative hegemonic ascent is its intention to mine and oxidize coal in volumes greater than the present. China is by far and away the world's top extractor and user of coal and famously relies on coal as its preponderant energy source (Heinberg 2008; Kahn and Yardley 2007; M Li 2008bM Li 2008a:5; Parenti 2009). At the beginning of this century, CCP energy planners aimed to reduce China's relative dependence on coal, if not its absolute consumption of coal, optimistically projecting that China could temper the annual increase in its coal consumption and still foster economic expansion robust enough to contain social instability (Becker 2003; Economy 2007a). However, the raw amount of China's coal consumption doubled

between 2000 and 2007, constituting the major driver of China recently joining the US as the world's foremost emitter of atmospheric greenhouse gases (Bello 2008; Economy 2007a; Heinberg 2008; Li 2008:2,5).[25] By 2004, permits to add 562 new coal-fired power plants to China's energy production complex before 2012 were already approved or queued up (Clayton 2004). As of 2009, China was keeping up its notorious pace of bringing on line between one and two new plants per week, on average (Heinberg 2008; Parenti 2009); few, if any, of these plants are outfitted with combined-cycle turbines or other cutting-edge clean technology (Economy 2007b; Kahn and Yardley 2007). The anticipated gross amount of carbon dioxide to be released from these plants alone by 2012 will easily eclipse the anticipated net reduction in greenhouse gas emissions attained by Kyoto Protocol signatories during the initial implementation of the accord between 2005 and 2012 (Clayton 2004). Given extant North-South inequalities in both per capita energy resource consumption and per capita greenhouse gas emission, it would be ethically fraudulent to single out China's crash program to augment its coal-fired power plant capacity as an extraordinary environmental crime against humanity (McKibben 2005). But a simple and unpleasant fact will not go away: this program could very well unleash into the atmosphere the extra increment of carbon dioxide that catalyzes runaway global warming, a catastrophe that would not only put paid to the chimera of Chinese hegemony, but would also devastate China's hundreds of millions of rural poor as severely as any other human collectivity in the world-system (Gulick 2007; Parenti 2009).

In tandem with the overgrazing of livestock, climate change is already wreaking havoc on the arid landscapes of northwestern China, and the resulting desertification negatively impacts not only the relatively scant human population of the region, but also hundreds of millions of Chinese downwind. Partly because of shrinking runoff from mountains capped with less glaciers and snow than formerly (T Johnson 2007; *Xinhuanet* 2009), northern China now loses roughly 3000 square kilometers to advancing desert every year (X Li 2003; Nolan 2004:27). The rate of desertification in northwestern China specifically has doubled in the epoch of Dengist market reform and accelerating global warming (Economy 2004:66) and the bleaker assessments of this crisis assert that one-quarter of China's land area can now be labeled as desert (Economy 2007a). Moreover, China's State Environmental Protection Agency (SEPA) recently classified about half of the extant grassland as "moderately to severely degraded" (Economy 2004:65), which effectively means it is not suitable for pasturage. In addition to turning tens of millions of herdspeople and hardscrabble farmers into environmental refugees (Economy 2007a), the creeping deserts and retreating grasslands are the proximate cause of the macabre sandstorms that now smother Beijing and other large northern Chinese conurbations in toxic grit every spring (Economy 2007a). During the 1990's, the number of sandstorms hitting northern China increased from an annual average of 20 to an annual average of 35 (Economy 2004:66), and in March 2010 Beijing and surrounding environs choked on the worst sandstorm since the mid-2000's (Bodeen 2010). A less celebrated effect of northwestern China's emerging permanent drought is how it exacerbates the increasingly erratic and increasingly diminished flow of northern China's waterways, including the tributaries of the Huang He (Yellow River) and hence the Huang He itself. While it is well known that the Hwang He's flow volume has dropped by about 22.3 percent since the

[25] Astonishingly enough, China's underground coal fires alone may now account for up to 3 percent of all atmospheric carbon dioxide releases, an amount more or less equal to that emitted by the US' car and light truck fleet (Heinberg 2008; T Johnson 2008).

early 1960's (X Li 2003) and that the last stretch of this conduit of ancient Chinese civilization now runs dry for at least four months every year (R Smith 1997; Watts 2004), the grave condition of northern China's waterways is often mistakenly pinned solely on unsustainable withdrawal rates (X Li 2003; McKibben 2005:50). Yet climate change is also culpable for northern China's increasingly ominous water shortages: in 2001 Chinese hydrologists reported that more than 2000 lakes in Qinghai Province feeding the Huang He were vanishing into empty basins partly because of global warming (Economy 2004:69). More recently, in China's official climate change assay of 2007, scientists predicted that global warming-induced drought would result in a 30% precipitation drop in the catchment zones of the Hai, Huai, and Liao Rivers, northern China's three other most significant waterways (Economy 2007a).

Just as the connection between climate change and northern China's water scarcity tends to be underemphasized, so too does the connection between said water scarcity and the increasing lethality of the carcinogenic agricultural pesticides and toxic industrial effluents discharged into northern China's parched waterways. SEPA (China's national environmental bureaucracy) deems over 70 percent of the water to be found in the Hai, Huai, Huang He, and Liao as "not appropriate for human contact" (Economy 2004:69; Smith 1997). An increasingly common cause of death in the Chinese countryside is cancer of the esophagus, intestines, liver, and stomach, linked in epidemiological studies to exposure to high concentrations of waterborne synthetic chemicals (Yardley 2004); in 2007 China's Ministry of Public Health reported that rural cancer rates had leapt by 23 percent since 2005 and that this disturbing increase was in part caused by worsening water pollution (Economy 2007a). To some uncalculated extent, the outbreak of cancer-related mortality assaulting China's rural poor can be traced back to China's rivers no longer carrying enough flow to dilute the hazardous compounds that are routinely dumped into them (Nolan 2004:27) – and hence, ultimately back to the reality of global warming.

Indigent peasants in the Chinese countryside are not standing by idly while waterborne toxins take the lives of their family members and village mates. A growing proportion of China's voluminous protest "incidents" involve the popular classes mobilizing against local party-state officials held accountable for the deadly concentrations of carcinogenic substances contaminating the ecosystems in which ordinary people live, work, and play (Economy 2004:19; French 2005b; Magnier 2006). In 2006 China's preeminent environmental official announced that during 2005 an average of nearly one thousand pollution-related protests were staged every week (Economy 2007a; Magnier 2006). In some key ways China's homegrown "environmental justice" movement does not resemble those found in the advanced capitalist democracies of the Global North in one significant way. Aggrieved peasants often learn that the deck is stacked against them in local courtrooms where magistrates customarily serve the very officials against whom petitions are brought (Economy 2007a). Consequently, environmental justice campaigners sometimes resort to direct action – including direct action that occasionally turns violent (Economy 2007a; French 2005b). For example, in 2005 Zheijang Province played host to a ripple of belligerent demonstrations, in which 30,000-40,000 angry farmers surrounded polluting chemical and pharmaceutical plants that local officials refused to shut down, and destroyed government property and killed security police in the ensuing melees (Economy 2007a; French 2005b; Magnier 2006). When calculating the risks and costs of climate change, the environmental economists of the CCP and green INGO's alike fixate on how many inches of rising oceanic levels will submerge how many value-producing industrial parks and acres of fertile farmland near the coast, and so on; what their auditor's mindset precludes them from seeing is that, through

their collective action, China's rural poor will be the final arbiters of how the geophysical phenomenon of global warming shapes the socio-ecological phenomenon of China's parlous development path.

CONCLUSION

The indestructible contributions of *The Long Twentieth Century* to our understanding of the cyclical and aggregative development of the global capitalist system are many. I maintain that one of Arrighi's most pathbreaking accomplishments is his observing that each successive hegemonic regime has been grounded in state-capital alliances of exponentially greater spatial reach and functional capability. Equally important is his corollary that because the world geo-economic order has simultaneously become so densely networked and so imbalanced – most clearly manifest in the structural and spatial schism between military power and masses of accumulated capital – it is entirely reasonable to consider that no new, post-US hegemonic regime will emerge to muster resources on the scale necessary to lead the global system through another long wave of expansion. In other words, one of the most generous gifts of *The Long Twentieth Century* is its theorization of the (mounting) impediments to global capitalist reproduction. However, this theorization is incomplete, because it is insufficiently based on a sophisticated analysis of the ways in which long-term global capitalist expansion has depended upon successive low-cost – and from the perspective of capitalist rationality's own logic, "low-consequence" – mobilizations of various ecological inputs, a process which now appears increasingly untenable. Moreover, this theorization has subsequently been tempered by Arrighi's enthusiasm[26] that an ascendant China has the real potential to guide the global system through its present impasse by establishing itself as the East Asian pivot of a putatively sustainable "world market society." Arrighi's speculations about China's possible hegemonic destiny raise a host of extremely thorny conceptual questions that could not be addressed here.[27] Suffice it to say that the correspondence in Arrighi's *oeuvre* between the downplaying of contradictions to global capitalist reproduction and the hopeful assessment of China's ascent is a supreme irony. As other world-systems scholars have demonstrated meticulously, it is precisely China's meteoric rise, including the biospheric implications of its rise at this precarious moment in world geo-history, that poses numerous challenges to the longevity of the modern world-system like never before (Li 2008).[28] Nonetheless, as the quest continues for a "unified field theory" of the capitalist geo-economy's own undoing, *The Long Twentieth Century* will prove to be an indispensable tool.

---

[26] A guarded enthusiasm, admittedly (Arrighi 2010, 2009:85).

[27] Among them: what are the similarities and differences between a hypothetical "world market society" and the global capitalist system? Is there truly sound intellectual justification for suggesting that a reformed international order led by a state resembling today's China would somehow be *non-capitalist* (Panitch 2010)? And if the discontinuities between a China-anchored "world market society" and the current geo-economic order do indeed outweigh the continuities, does it not make more sense to conceive of a hegemonic China as the negation of the capitalist world-economy, rather than the inheritor of its mantle?

[28] Extrapolating from his astute discovery that the state-capital nexus of each successive hegemonic regime internalized a previously external facet of security provision and commodity production, in the posthumously published latest edition of *The Long Twentieth Century*, Arrighi asserts that the task before

REFERENCES

Altvater, Elmar. 2009. "The Plagues of Capitalism." Speech delivered to 2009 World Social Forum, available at *Europe Solidaire Sans Frontieres*. January 30. http://www.europe-solidaire.org/spip.php?article12913

_____ . 2006. "The Social and Natural Environment of Fossil Capitalism." In *Socialist Register 2007: Coming to Terms with Nature*, in Panitch, Leo and Colin Leys, editors. London: Merlin, 37-59.

_____ . 1998. "Global Order and Nature," in Keil, Roger et al., eds. *Political Ecology: Global and Local*. London: Routledge.

Amin, Samir. 2004. *Obsolescent Capitalism*. London: Zed Press.

Anderson, Perry. 2010. "Two Revolutions." *New Left Review* 61:59-96.

Anstey, Chris. 2010. "Roach Rebuffs Krugman Call to Pressure China on Yuan." *Bloomberg.com*. March 19. http://www.bloomberg.com/apps/ news?pid=20670001&sid=adVYlGeWMUJI

Ariff, Mohamed. 2009. "China's economic clout may be an illusion." *New Straits Times*. August 19.

Arrighi, Giovanni. 2010. *The Long Twentieth Century*. New and Updated Edition edition. London and New York: Verso.

_____ . 2009. "The Winding Paths of Capital." *New Left Review* 56:61-94.

_____ . 2007. *Adam Smith in Beijing: Lineages of the Twenty-First Century*. London and New York: Verso.

_____ . 2005a. "Hegemony Unravelling – I." *New Left Review* 32:23-80.

_____ . 2005b. "Hegemony Unravelling – II." *New Left Review* 33:1-34.

_____ . 2002a. "The African Crisis: World Systemic and Regional Aspects." *New Left Review* 15:5-36.

_____ . 2002b. "Global Inequalities and the Legacy of Dependency Theory." *Radical Philosophy Review* 5(1/2):75-85.

_____ . 1994. *The Long Twentieth Century*. London and New York: Verso.

Arrighi, Giovanni and Beverly Silver et al.. 1999. *Chaos and Governance in the Modern World System*. Minneapolis: University of Minnesota.

Arrighi, Giovanni and Lu Zhang. 2010. "Beyond the Washington Consensus: A new Bandung?"
Forthcoming in Shefner, Jon and Patricia Fernandez-Kelly, eds. *Globalization and Beyond: New Examinations of Global Power and its Alternatives*. University Park: Penn State University Press.

Auerback, Marshall. 2005. "What Could Go Wrong in 2005?" *TomDispatch*.com. January 21. http://www.tomdispatch.com/post/2141/ auerback_a_tour_of_economic_disaster_2005_style

---

the global system's next hegemon is to fully account for the degradation that industrial accumulation wreaks upon the natural environment and human beings, and thus to ensure that nature and labor are sustainably reproduced. Leaving aside the tricky matter of whether such "full-cost accounting" is at all compatible with a socio-economic order that prioritizes accumulation, there is this empirical inconvenience: for a short time the CCP launched a "green GDP accounting" pilot program, which quickly fell out of favor and was summarily terminated (Li and Lang 2010).

Balakrishnan, Gopal. 2009. "Speculations on the Stationary State." *New Left Review* 59:5-26.

Barber, Lionel, Geoff Dyer, James Kynge, and Lifen Zhang. 2009. "Wen Jiabao: does not see it as China's role to save capitalism from itself." *Financial Times*. February 1. http://www.ft.com/cms/s/0/ae6805b4-f08c-11dd-972c-0000779fd2ac.html

Barboza, David. 2010. "Contrarian Investor Sees Economic Crash in China." *New York Times*. January 8. http://www.nytimes.com/2010/01/08/business/global/08chanos.html

Barma, Naazneen, Ely Ratner, and Steven Weber. 2007. "A World without the West." *National Interest online*. July 1. www.nationalinterest.org/General.aspx?id=92&id2=14798

Batson, Andrew. 2009. "China Takes Aim at Dollar." *Wall Street Journal*. March 24.

Beattie, Alan and Geoff Dyer. 2010. "China export surge stirs US anger." *Financial Times*. June 10.

Becker, Jasper. 2003. "China in an energy quandary." *Asia Times Online*. August 28. http://www.atimes.com/atimes/China/EH28Ad01.html

Beeson, Mark. 2009. "East Asian Regionalism and the End of the Asia-Pacific: After American Hegemony." *The Asia-Pacific Journal Vol.2-2-09*. January 10. http://www.japanfocus.org/_Mark_Beeson-East_Asian_Regionalism_and_the_End_of_the_Asia_Pacific__After_American_Hegemony

Bello, Walden. 2009. "Asia: The Coming Fury." *Foreign Policy in Focus*. February 9. http://fpif.org/fpiftxt/5855

_____ . 2008. "Will Capitalism Survive Climate Change?" *Focus on the Global South*. April 1. http://focusweb.org/will-capitalism-survive-climate-change-3.html?Itemid=153

Bezlova, Antoaneta. 2008. "Balking at Changing Dollar-Centric Economic Order." *InterPress Service*. November 21. http://ipsnews.net/news.asp?idnews=44800

_____ . 2007. "China: Sustainable Development Gets Priority." *InterPress Service*. March 6. http://ipsnews.net/news.asp?idnews=36822

Bhadrakumar, M. K. 2007a. "US Shadow over China-Russia Ties." *The Asia-Pacific Journal*. April 2. http://www.japanfocus.org/products/details/2395

_____ . 2007b. "China begins to define the rules." *Asia Times Online*, January 20. http://www.atimes.com/atimes/China/IA20Ad03.html

Biel, Robert. 2006. "The Interplay between Social and Ecological Degradation in the Development of the International Political Economy." *Journal of World-Systems Research* 12(1):109-147.

Bradsher, Keith. 2010. "China Uses Rules on Global Trade to Its Advantage." *New York Times*. March 14. http://www.nytimes.com/2010/03/15/business/global/15yuan.html

Brenner, Robert and Seonjin Jeong. 2009. "On the Current World Crisis." *The Hankyoreh*. January 29. http://www.hani.co.kr/arti/society/society_general/335869.html

Bodeen, Christopher. 2010. "China's sandstorms blast Beijing with dust, sand." *Washington Post*. March 22.

Boswell, Terry, and Christopher Chase-Dunn. 2000. *The Spiral of Capitalism and Socialism: Toward Global Democracy*. Boulder: Lynne Rienner.

Bunker, Stephen. 1984. "Modes of Extraction, Unequal Exchange, and the Progressive Underdevelopment of an Extreme Periphery: The Brazilian Amazon, 1600-1980." *The American Journal of Sociology* 89(5):1017-1064.

Calder, Kent E. 2006. "China and Japan's Simmering Rivalry." *Foreign Affairs*. 85(2):129-139.

Callinicos, Alex. 2010. "Don't overstate China's power." *Socialist Worker* 2188. February 13. www.socialistworker.co.uk/art.php?id=20210

Cruz de la Castro, Renato. 2000. "Whither Geoeconomics?" *Asian Affairs, An American Review*. 24(4):201-221.

Chan, John. 2010a. "Mass protest against US base on Okinawa." *World Socialist Website*. April 29. http://www.wsws.org/articles/2010/apr2010/japa-a29.shtml

_____ . 2010b. "Japanese finance minister quits." *World Socialist Website*. January 19. http://www.wsws.org/articles/2010/jan2010/japa-j19.shtml

_____ . 2008. "Chinese president visits Japan: Tensions remain beneath talk of warmer ties." World Socialist Website. May 16. http://www.wsws.org/articles/2008/may2008/japa-m16.shtml

_____ . 2004. "Mass protests in China point to sharp social tensions." *World Socialist Website*. November 1. http://www.wsws.org/articles/2004/nov2004/chin-n01.shtml

Chase-Dunn, Chris and Kirk Lawrence. 2009. "The Next Three Futures: Another US Hegemony, Global Collapse, or Global Democracy?" Paper presented at the annual conference of the International Studies Association, "Exploring the Past, Anticipating the Future" Session, New York City. February 17. http://irows.ucr.edu/papers/irows47/irows47.htm

Cheng, Eva. 2007. "China: Wage share plunges." *Green Left Weekly*. October 19. http://www.greenleft.org.au/2007/728/37739.

Christie, Renfrew. 1980. "Why Does Capital Need Energy?" in Nore, Petter and Terisa Turner. *Oil and Class Struggle*. London: Zed.

Clark, Brett, and Richard York. 2008. "Rifts and Shifts: Getting to the Root of Environmental Crises." *Monthly Review*. 60(6):13-24.

_____ . 2005. "Carbon metabolism: Global capitalism, climate change, and the biospheric rift." *Theory and Society*. 34:391-438.

Clayton, Mark. 2004. "New coal plants bury 'Kyoto'." *Christian Science Monitor*. December 27.

Committee of 100. 2008. *Hope and Fear: Full Report of C-100's Survey on American and Chinese Attitudes Toward Each Another*. New York: Committee of 100.

Connor, Steve. 2009. "Warning: Oil supplies are running out fast." *The Independent*. August 3. http://www.independent.co.uk/news/science/warning-oil-supplies-are-running-out-fast-1766585.html

Deng, Peng. 2002. "Embracing the Polar Bear? – Sino-Russian Relations in the 1990s." *Journal of Third World Studies* 19(2):113-139.

Dore, Ronald. 2006. "Japan's New Miracle Economy: Neoliberalism and the Poverty of Wealth." *The Asia-Pacific Journal*. November 9. http://japanfocus.org/products/topdf/2267

The Economist. 2006. "A giant stirs, a region bridles." May 13.

_____ . 2005. "Koizumi Gets His Way." 376(8444):22-24.

Economist.com. 2008. "Japan's New Government." September 26. http://www.economist.com/agenda/displaystory.cfm?story_id=12322328

Economy, Elizabeth. 2007a. "The Great Leap Backward?" *Foreign Affairs*. September/October 2007. http://www.foreignaffairs.org/20070901faessay86503/elizabeth-c-economy/the-great-leap-backward.html

_____ . 2007b. "China vs. Earth." *The Nation*. May 7. http://www.thenation.com/doc/20070507/economy

_____ . 2004. *The River Runs Black: The Environmental Challenge to China's Future*. Ithaca, NY and London: Cornell University Press.

Engardio, Pete, Dexter Roberts, Frederik Balfour, and Bruce Einhorn. 2007. "Broken China." *Business Week*, July 23. www.businessweek.com/magazine/content/07_30/b4043001.htm

Fargione, Joe et al.. 2008. "Land Clearing and the Biofuel Carbon Debt." *Science* 319:1235–38.

Feffer, John. 2010. "Pacific Pushback: Has the U.S. Empire of Bases Reached Its High-Water Mark?" *TomDispatch.com*. March 4. http://www.tomdispatch.com/blog/175214/tomgram:_john_feffer,_can_japan_say_no_to_washington/

_____ . 2009. "Japan: The Price of Normalcy." *The Asia-Pacific Journal Vol. 2-3-09*. January 10. http://japanfocus.org/_John_Feffer-Japan__The_Price_of_Normalcy

Foster, John Bellamy. 2005. *The Ecological Revolution*. New York: Monthly Review Press.

French, Howard. 2006. "Police in China Battle Villagers in Land Protest." *New York Times*. January 17. http://www.nytimes.com/2006/01/17/international/asia/17china.html

_____ . 2005a. "Land of 74,000 Protests (But Little Is Ever Fixed)." *New York Times*. August 24. A(3):4.

_____ . 2005b. "Riots in Village in China as Chinese Pollution Protest Heats Up." *New York Times*. July 19.

Fu, Jing. 2010. "Urban-rural income gap widest since reform." *China Daily*. March 2. http://www.chinadaily.com.cn/china/2010-03/02/content_9521611.htm

Glyn, Andrew. 2005. "Imbalances of the Global Economy." *New Left Review*. (34):5-37.

Goldman, Michael, and Rachel Schurman. 2000. "Closing the 'Great Divide': New Social Theory on Society and Nature." *Annual Review of Sociology*. (26):563-584.

Gowan, Peter. 2004. "Triumphing Toward International Disaster: The Impasse in American Grand Strategy." *Critical Asian Studies*. 36(1):3-36.

Grimes, Peter. 1999. "The Horsemen and the Killing Fields: The Final Contradiction of Capitalism," in Goldfrank, Walter, David Goodman and Andrew Szasz, editors. *Ecology and the World-System*. Westport, CT: Greenwood.

Gu, George Zhibin. 2005. "China's competitiveness in a strong *yuan* world." *Asia Times Online*. August 2. http://www.atimes.com/atimes/China/GH02Ad02.html

Gulick, John. 2007. "Socio-Ecological Instability in China." *Peace Review*. 19(3):315-322.

_____ . 2004a. "A Critical Appraisal of Peter Gowan's 'Contemporary Intra-Core Relations and World-Systems Theory': A Capitalist World-Empire or US-East Asian Geo-Economic Integration?" *Journal of World-Systems Research*. 10(2):502-515.

_____ . 2004b. "Insurgent Chinese Workers and Peasants: The 'Weak Link' in Capitalist Globalization and US Imperialism," in Burton-Rose, Daniel, George Katsiaficas, and Eddie Yuen, editors, *Confronting Capitalism: Dispatches from a Global Movement*. Brooklyn, NY: Soft Skull, 292-306.

Hansen, James, Makiko Sato, Pushker Kharecha, David Beerling, Robert Berner, ValerieMasson-Delmotte, Mark Pagani, Maureen Raymo, Dana L. Royer and James C. Zachos. 2008. "Target Atmospheric CO2: Where Should Humanity Aim?" *The Open Atmospheric Science Journal*. 2:217-231.

Harris, Jerry. 2005. "Emerging Third World powers: China, India, and Brazil." *Race and Class*. 46(3):7-27.

Hart-Landsberg, Martin. 2008. "The Realities of China Today." *Against the Current* November/December. http://www.solidarity-us.org/node/1940.

Hart-Landsberg, Martin, and Paul Burkett. 2004. "China and Socialism: Market Reforms and Class Struggle." *Monthly Review*. 56(3):7-123.

Harvey, David. 2009. "Why the US Stimulus Package Is Bound To Fail." *Reading Marx's Capital with David Harvey*. February 12. http://davidharvey.org/2009/02/why-the-us-stimulus-package-is-bound-to-fail/

_____ . 2005. *A Brief History of Neoliberalism*. Oxford, UK: Oxford University Press.

_____ . 1989. "The Place of Urban Politics in the Geography of Uneven Capitalist Development," in Harvey, *The Urban Experience*. Baltimore, MD: Johns Hopkins Press.

Hatemi, Peter, and Andrew Wedeman. 2007. "Oil and Conflict in Sino-American Relations." *China Security*. 3(3): 95-118.

Hatoyama, Yukio. 2009. "Japan must shake off US-style globalization." *Christian Science Monitor*. August 19. http://www.csmonitor.com/Commentary/Opinion/2009/0819/p09s07-coop.html

Heinberg, Richard. 2008. "Coal in China." *MuseLetter #195*. June 27. http://globalpublicmedia.com/museletter_coal_in_china

Hirai, Junichi. 2004. "After the elections." *International Viewpoint Online Magazine* 356. February. http://www.internationalviewpoint.org/spip.php?article108&var_recherche=Hirai

Hiro, Dilip. 2009. "Defying the Economic Odds." *TomDispatch.com*. May 3. http://www.tomdispatch.com/post/175067/dilip_hiro_the_newest_superpower

Hornborg, Alf. 2001. *The Power of the Machine*. Walnut Creek, CA: Altamira.

Hughes, Christopher. 2009. "Japan's response to China's rise: regional engagement, global containment, dangers of collision." *International Affairs*. 85(4):837-856.

Hung, Ho-fung. 2009. "America's Head Servant? The PRC's Dilemma in the Global Crisis." *New Left Review* 60:5-25.

Ito, Takatoshi. 2010. "China's property bubble is worse than it looks." *Financial Times*. March 17. http://www.ft.com/cms/s/0/9b09f824-3163-11df-9741-00144feabdc0.html.

Ito, Aki and Patrick Rial. 2010. "Rogoff Says China Crisis May Trigger Regional Slump." *BusinessWeek.com*. February 24. http://www.businessweek.com/news/2010-02-24/rogoff-says-china-crisis-may-trigger-regional-slump-update1-.html

Jacobs, Andrew. 2009. "China Fears Tremors as Jobs Vanish From Coast." *New York Times*. February 23.

Johnson, Chalmers. 2008. "We Have the Money." *TomDispatch.com*. September 28. http://www.tomdispatch.com/post/174982/chalmers_johnson_the_pentagon_bailout_fraud

Johnson, Tim. 2008. "China's coal fires belch fumes, worsening global warming." *McClatchy Newspapers*. November 17. http://www.mcclatchydc.com/226/story/55758.html

_____ . 2007. "Warming triggers 'alarming' retreat of Himalayan glaciers." *McClatchy Newspapers*. June 7. http://www.mcclatchydc.com/163/story/16151.html

Jones, Mark. 2005. "Battle of the Titans," in McKillop, Andrew and Sheila Newman, editors. *The Final Energy Crisis*. Pluto Press: London.

Kahn, Joseph. 2005. "Police Fire on Protestors in China, Killing Several." *New York Times*. December 9.

Kahn, Joseph and Jim Yardley. 2007. "As China Roars, Pollution Reaches Deadly Extremes." *New York Times*. August 26. http://www.nytimes.com/2007/08/26/world/asia/26china.html?ex=1188705600&en=6ae4a672525a05e7&ei=5070&emc=eta1

Kambayashi, Takehiko. 2009. "Briefing: Why power may shift in Japan." *Christian Science Monitor*. http://www.csmonitor.com/World/Asia-Pacific/2009/0819/p10s04-woap.html

Kingston, Jeff. 2007. "Japan, Just a Puppet of America?" *The Japan Times*. July 8.

Klare, Michael. 2009. "Oil 2009: Be Careful What You Wish For." *TomDispatch.com*. January 8.

_____ . 2008. *Rising Powers, Shrinking Planet*. New York: Metropolitan Books.

_____ . 2006. "Containing China." *TomDispatch.com*. April 18. http://www.tomdispatch.com/index.mhtml?pid=78021

_____ . 2005. "Revving Up the China Threat." *The Nation*. October 24. http://www.thenation.com/doc/20051024/klare

Kunitomi, Kenji. 2007. "Neo-liberal counter-reform and militarization." *International Viewpoint Online Magazine* 386. http://www.internationalviewpoint.org/spip.php?article1212

Kwong, Peter. 2009. "No Reform or Relief in China." *Agence Global*. April 27. http://www.agenceglobal.com/Article.asp?Id=1984

LaFraniere, Sharon. 2009. "Possible Link Between Dam and China Quake." *New York Times*. February 6. http://www.nytimes.com/2009/02/06/world/asia/06quake.html?partner=rssemc=rss

Leahy, Stephen. 2009. "Time Running Out on Vows to Act, Scientists Warn." *InterPress Service*. September 24. http://www.ipsnews.net/print.asp?idnews=48577

_____ . 2008. "Record Financing For Biofuels, Not Food." *InterPress Service*. February 4. http://www.ipsnews.net/news.asp?idnews=41066

Li, Minqi. Forthcoming. "The End of the End of History: the Structural Crisis of Capitalism and the Fate of Humanity." *Science and Society*

_____ . 2008a. "Peak Energy and the Limits to China's Economic Growth: Prospect of Energy Supply and Economic Growth from Now to 2050." Political Economy Research Institute Working Paper Number 189. December 2008. http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_151-200/WP189.pdf

_____ . 2008b. "Climate Change, Limits to Growth, and the Imperative for Socialism." *Monthly Review*. 60(3):51-67.

_____ . 2008c. "An Age of Transition: The United States, China, Peak Oil, and the Demise of Neoliberalism." *Monthly Review*. 59(11):20-34.

_____ . 2007. "Capitalism with Zero Profit Rate?: Limits to Growth and the Law of the Tendency of the Rate of Profit to Fall." University of Utah Department of Economics Working Paper Series, No. 2007-05, www.econ.utah.edu/~mli/CV%20(minqi-Utah).doc

Li, Vic and Graeme Lang. 2010. "China's 'Green GDP' Experiment and the Struggle for Ecological Modernisation." *Journal of Contemporary Asia*. 40(1):44-62.

Li, Xinxin. 2003. "Ten Hidden Dangers Affecting China's Economic Operations." *Beijing Liaowang in Chinese*. November 24(47):6-8.

Lo, Dic. 1999. "The East Asian Phenomenon: The Consensus, the Dissent, and the Significance of the Present Crisis." *Capital and Class* 67:14-15.

Los Angeles Times. 2005. "Scapegoat, Made in China." April 16. http://www.latimes.com/news/printedition/opinion/la-ed-trade16apr16,1,4414212.story

Lynn, Barry. 2003. "Trading with a Low-wage Tiger." *The American Prospect*. 14(2). http://www.prospect.org/print/V14/2/lynn-ba.html

Magnier, Mark. 2006. "As China Spews Pollution, Villagers Rise Up." *Los Angeles Times*. September 3. http://www.latimes.com/news/nationworld/world/la-fg-enviro3sep03,1,687961. story?page=2&cset=true&ctrack=1&coll=la-headlines-world

McCormack, Gavan. 2007. *Client State: Japan in the American Embrace*. London and New York: Verso.

_____ . 2005. "Koizumi's Coup." *New Left Review* 35:5-16.

McKay, Huw. 2007. "From growth to 'quality of growth.'" *Asia Times Online*. March 17. http://www.atimes.com/atimes/China/IC17Ad05.html

McKibben, Bill. 2006. "The Coming Meltdown." *The New York Review of Books* 53(1). http://www.nybooks.com/articles/18616

_____ . 2005. "The Great Leap." *Harper's Magazine*. 311(1867):42-52.

McNally, David. 2009. "From Financial Crisis to World-Slump: Accumulation, Financialisation, and the Global Slowdown." *Historical Materialism*. 17(2009):35-83.

Mead, Walter Russell. 2007. "The Great Fall of China." *Los Angeles Times.* December 30.

Mooney, Paul. 2004. "China faces up to growing unrest." *Asia Times Online*. November 16. http://www.atimes.com/atimes/China/FK16Ad01.html

Moore, Jason W. 2009. "Ecology and the Accumulation of Capital." Unpublished manuscript prepared for the workshop "Food, Energy, Environment: Crisis of the Modern World-System," Fernand Braudel Center, Binghamton University, 9-10 October 2009.

_____ . 2008. "Ecological Crises and the Agrarian Question in World-Historical Perspective." *Monthly Review*. 60(6):54-62.

Mouawad, Jad. 2009. "Oil Industry Sets a Brisk Pace of New Discoveries." *New York Times*. September 24. http://www.nytimes.com/2009/09/24/business/energy-environment/24oil.html?_r=4&adxnnl=1&adxnnlx=1253823214-gOUKnCPuYHLssi65Q2h+Gw

Murphy, R. Taggart. 2006. "East Asia's Dollars." *New Left Review* 40:39-64.

Negroponte, John. 2007. *Annual Threat Assessment of the Director of National Intelligence.* Washington, D.C.: Office of the Director of National Intelligence.

Nolan, Peter. 2004. *China at the Crossroads*. Cambridge, UK: Polity.

O'Connor, James. 1998. *Natural Causes*. New York: Guilford.

Overholt, William. 2007. *Asia, America, and the Transformation of Geopolitics*. New York: Cambridge University Press.

Palat, Ravi. 2005. "On New Rules for Destroying Old Countries." *Critical Asian Studies*. 37(1): 75-94.

Palat, Ravi Arvind. 2004. *Capitalist Restructuring and the Pacific Rim*. London and New York: RoutledgeCurzon.

Panitch, Leo. 2010. "Giovanni Arrighi in Beijing: An Alternative to Capitalism?" *Historical Materialism* 18:74-87.

_____ . 2009. "The Financial Crisis and American Power: An Interview with Leo Panitch." *Socialist Project*. E-bulletin No.186. February 16.

Parenti, Christian. 2009. "Can China Catch a Cool Breeze?" *The Nation*. April 15. http://www.thenation.com/print/article/can-china-catch-cool-breeze

van der Pijl, Kiis. 2006. *Global Rivalries from the Cold War to Iraq*. London: Pluto Press.

Pei, Minxin and Michael Swaine. 2005. "Simmering Fire in Asia: Averting Sino-Japanese Strategic Conflict." *Carnegie Endowment Policy Brief*. No. 44.

Petras, James. 2005. "Statism or Free Markets? China Bashing and the Loss of US Competitiveness." *Counterpunch Online*, October 22-23. http://joun.leb.net/petras10222005.html

Pettis, Michael. 2010. "How will an RMB revaluation affect China, the US, and the world?" *mpettis.com (china financial markets)*. March 17. http://mpettis.com/2010/03/how-will-an-rmb-revaluation-affect-china-the-us-and-the-world

Righter, Rosemary. 2008. "Black Smoke over China." *Times Literary Supplement*. January 30.

Roberts, Dexter, and Pete Engardio. 2009. "The China Hype." *Business Week*. November 2:36-42.

Schwartz, Nelson. 2009. "Rise in Jobless Poses Threat to Stability Worldwide." *New York Times*. February 15.

Searchinger, Timothy et al.. 2008. "Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land Use Change." *Sciencexpress*. February 7. http://www.princeton.edu/~tsearchi/writings/Searchinger_et_al-ScienceExpress.pdf

Selden, Mark. 2009a. "China's Way Forward? Historical and Contemporary Perspectives on Hegemony and the World Economy in Crisis." *The Asia-Pacific Journal*. March 24. http://www.japanfocus.org/-Mark-Selden/3105

_____ . 2009b. "East Asian Regionalism and its Enemies in Three Epochs: Political Economy and Geopolitics, 16th to 21st Centuries." *The Asia-Pacific Journal*. February 25. http://www.japanfocus.org/-Mark-Selden/3061

Sender, Henny. 2009. "China to stick with US bonds." *Financial Times*. February 11. http://www.ft.com/cms/s/0/ba857be6-f88f-11dd-aae8-000077b07658.html?nclick_check=1

Sevastopulo, Demetri. 2006. "Japan foreign chief warns of nationalism in Asia." *Financial Times*. May 4.

Shirk, Susan. 2007. *China: Fragile Superpower*. Oxford, UK: Oxford University Press.

Shorrock, Tim. 2005. "Bright Side to Stormy Sino-Japanese Ties." *InterPress Service*. December 14. http://www.ips.org/asiaamerica/morevoices/2005/china-japan2.html.

Silver, Beverly. 2003. *Forces of Labor: Workers' Movements and Globalization Since 1870*. Cambridge, UK and New York: Cambridge University Press.

Simms, Andrew. 2005. *Ecological Debt*. London: Pluto.

Shah, Sonia. 2004. *Crude: The Story of Oil*. New York: Seven Stories Press.

Smith, Richard. 1997. "Creative Destruction: Capitalist Development and China's Environment." *New Left Review* 1(222):3-41.

So, Alvin. 2009. "Rethinking the Chinese Developmental Miracle," in *China and the Transformation of Global Capitalism*, Ho-fung Hung, editor. Baltimore, MD: Johns Hopkins Press.

_____ . 2003. "The Communist Path of Developmental State: The Chinese Experience." Unpublished manuscript.

So, Alvin and Stephen Chiu. 1995. *East Asia and the World Economy*. Thousand Oaks, CA: Sage Publications.

Solinger, Dorothy. 2005. "Worker protests in China – plentiful but preempted?" *Taipei Times*. February 19:9.

Tabb, William. 2008. "IBSA and the BRICs: State Logic versus Capital Logic Approaches to Projecting 21st Century Globalisation." Paper presented as keynote address at the Global Studies Association Annual Conference, Pace University, New York City, June 8.

_____ . 1996. "The East and the World Today." *Social Justice* 23(1-2):250-262.

Tabuchi, Hiroko. 2009. "Japan's Economy Plunges at Fastest Pace Since '74." *New York Times*. February 16.

Takeda, Louise. 2003. "Political Ecological Economics: An Emerging Transdisciplinary Approach to Sustainability." *The Interdisciplinary Journal of International Studies* 1:41-57.

Thompson, Drew. 2009. "Beijing's GDP Numerology." *Foreign Policy*. March 10. http://www.foreignpolicy.com/articles/2009/03/09/beijings_gdp_numerology

Tsai, Michelle. 2009. "China's Other Massacre." *Foreign Policy*. June 2. http://www.foreignpolicy.com/story/cms.php?story_id=4960

Tucker, Noah. 2009. "Did China Cause the Crisis?" *21st Century Socialism*. February 2. http://21stcenturysocialism.com/article/did_china_cause_the_crisis_01808.html

UNEP. 2009. *Climate Change Science Compendium 2009*. Nairobi: United Nations Environmental Program.

Walker, Richard and Daniel Buck. 2007. "The Chinese Road." *New Left Review* 46:39-66.

Wallerstein, Immanuel. 2005. "The U.S., China, and India." *Commentary No.166*. August 1. http://www.binghamton.edu/fbc/166en.htm

_____ . 1996. "The Global Possibilities, 1990-2025," in Terence K. Hopkins and Wallerstein et al.. *The Age of Transition: Trajectory of the World System 1945-2025*. London: Zed Books.

Watts, Jonathan. 2004. "On the water front." *The Guardian*. November 11. http://www.guardian.co.uk/china/story/0,7369,1348274,00.html

Wen, Dale, and Minqi Li. 2006. "China: Hyper-Development and Environmental Crisis," in Panitch, Leo and Colin Leys, eds. *Coming to Terms with Nature*. Monmouth, UK: Merlin Press.

Went, Robert. 2001-2002. "Globalization: Towards a Transnational State? A Skeptical Note." *Science and Society*. 65(4):484-491.

Wolf, Martin. 2010. "China and Germany unite to impose global deflation." *Financial Times*. March 16. http://www.ft.com/cms/s/0/cd01f69e-3134-11df-8e6f-00144feabdc0.html

Xinhuanet. 2009. "Melting glaciers on China's Qinghai-Tibet plateau water source 'worrisome'." February 4. http://news.xinhuanet.com/english/2009-02/04/content_10763469.htm

Yamaguchi, Mari. 2007. "Fukuda wins poll, likely next PM." *Associated Press*. September 23.

Yang, Lian. 2005. "Dark Side of the Chinese Moon." *New Left Review* 32:132-140.

Yang, Yao. 2010. "The End of the Beijing Consensus." *Foreign Affairs.com*. February 2. http://www.foreignaffairs.com/articles/65947/the-end-of-the-beijing-consensus

Yardley, Jim. 2004. "Rivers Run Black, and Chinese Die of Cancer." *New York Times*. September 12.

York, Geoffrey. 2007. "Japan's right wing re-emerges." *Toronto Globe and Mail*. August 7.

THE LONG TWENTIETH CENTURY & THE CULTURAL TURN: WORLD-HISTORICAL ORIGINS OF THE CULTURAL ECONOMY

Benjamin D. Brewer, PhD
Assistant Professor of Sociology
James Madison University
brewerbd@jmu.edu

ABSTRACT

In this essay I link Giovanni Arrighi's world-historical framework in The Long Twentieth Century to debates about the "cultural turn" in global capitalism since the 1970s. I do so primarily through interrogation of the writings of one of the major figures in such debates: Fredric Jameson. In his Jameson's engagement with Arrighi's, he emphasizes the determinative influence of finance capital on an expansion in the degree of cultural abstraction and fragmentation that is emblematic of the post-modern condition. Building on this linkage, I extend and elaborate Arrighi's analysis of historical capitalism's cycles of accumulation, in which periods of material expansion give way to phases of financial expansion and accelerated restructuring of the organizational and institutional foundations of the world-economy. I conclude that Jameson's assertion of a link between the financialization of the world economy and post-modern cultural forms is best understand as a correlative rather than a causal relationship, for the growing salience of finance capital and the new forms and degree of cultural abstraction are themselves both dimensions of the more fundamental socio-economic restructuring attending a period of financial expansion.

INTRODUCTION

My aim in this essay is to explore the possibilities for a creative synthesis between the world-historical economic sociology pioneered by Giovanni Arrighi (1994, 2007; Arrighi and Silver 1999) and the post-structuralist concern with the "cultural turn" in the history of global capitalism since the 1970s. In turning to one of contemporary social science's most nebulous signifiers, "culture" (a slippery slope), I resist the temptation to do everything at once. Instead, I focus on the increasingly important role of the commercialized production, distribution and consumption of images, brands, and popular culture in leading sectors of the core economies. Why strike these two, seemingly antagonistic, perspectives together to begin with? Perhaps, to mix some metaphors, so that the resulting sparks might ignite the straw men from each – the purportedly deterministic political-economy approach and the cultural studies perspective's (over)emphasis on acts of agency and resistance -- and in so doing, light the path to an analytically productive account of contemporary socio-economic change. Or, following Arrighi's great methodological injunction, because this should help in distinguishing just what is *cumulative*, what is *cyclical*, and what is truly *new* about present cultural and economic change.

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 39-57**
ISSN 1076-156X

Even in the wake of a hyperbolic decade in which the "new economy" discourse came and went, pronouncements of the unique, historically unprecedented or epoch-making transformations in culture, commerce and society are not hard to come by. So, this is a path worth following not *only* because of the truism that we now live in an age of "informational" or "cultural" capitalism (Bell 1973; Castells 2000a; DeBord 1995 [1967]; Lash and Urry 1987, 1994; Poster 1990; Webster 2002) – even if this claim is more than worthy of interrogation in its own right. Rather, this is equally important because so many empirical studies in globalization studies themselves point to the importance of culturally-inflected, "intangible" economic activities (e.g. branding, design, marketing, retailing) in maintaining competitive advantage for firms, and nations, in the contemporary global division of labor (Aspers 2010; Bair and Gereffi 2001; Coe 2004; Coe and Hess 2005; Dolan, Humphrey and Harris-Pascal 1999; Gereffi 1999; Hughes 2000, 2007; Hughes, Wrigley and Buttle 2008; Jernigan 2000; Klein 2000; Korzeniewicz 1994; Pratt 2008) For instance, from some of the leading scholars in the global commodity chains perspective we hear that:

> Many 'lead' firms have narrowed their focus to product development and marketing while outsourcing production and production-related functions to suppliers…*Much of this shift can be captured by noting the increased cost and importance of activities that deal with intangibles, such as fashion trends, brand identities, design and innovation, over activities that deal with tangibles, the transformation, manipulation and movement of physical goods* (Gereffi et. al., 2001: 33, emphasis mine).

Likewise, "brands play an increasingly important role in enterprise strategy" (Humphrey & Schmitz 2001: 26), in as much as brands "which can be created without proprietary links to specific manufacturers or distribution channels" (Gereffi et. al. 2001: 33) are now seen as a major source of market power.

In what follows, I sketch out the ways that Arrighi's analytical framework can be re-purposed to speak explicitly to these developments, which are frequently held up by cultural studies analysts as evidence for the growing centrality of intangible, cultural knowledges within contemporary economic life. Although *The Long Twentieth Century* seems to have little to say about the core concerns of the cultural studies project (broadly construed), this silence does not derives from an inherent theoretical antagonism. Arrighi offers a set of insights into the shifting organization of business enterprise and leading sectors of the capitalist world-economy that can yield fresh insights into the developments associated with the "new" or "cultural" economy. I therefore rely on Arrighi's notion of "financialization" of the world economy, but not merely as a measure of the increasing volume or influence of finance capital, *tout court*. A fuller reading of his analysis underscores that financialization itself cannot be understood without reference to the broader set of social, political and economic transformations by which historical capitalism has been restructured and reorganized on progressively larger scales over time – a process in which financialization serves as *consequence* as much as *cause*. It is within these dynamics that the forces impacting commercialized cultural production are generated, institutionalized within particular organizational arrangements, and ultimately transformed as well.

PART I: INTERROGATING THE NEW/CULTURAL/INTANGIBLE ECONOMY

A series of somewhat systematic internet searches for the LTC and its association with various terms, topics and phrases yielded a surprising (to this author, at least) finding: *The Long Twentieth Century* is linked with nearly as many online syllabi, conference proceedings, and web-based discussions within the domains of comparative literature, critical theory, and cultural studies as it is to those from international political economy and world-systems analysis. Without making too much of such a rough-and-ready survey, the basic finding is nonetheless noteworthy. For, despite Arrighi's intellectual *and* personal association with the world-systems tradition – not to mention the paucity of explicitly "cultural" analysis in the book itself – *The Long Twentieth Century* seems to have gained a good bit of traction within cultural studies.

In this section, I address one of the emblematic ways that Arrighi's work has been read by critical cultural studies. I do so primarily by interrogating Fredric Jameson's engagement with Arrighi's work, particularly *The Long Twentieth Century*. Jameson is best known for his writings on postmodernism as the "cultural logic of late capitalism." In this work (1984, 1991), Jameson intervened in the then-intensifying debates surrounding postmodernity with a fundamentally materialist analysis of postmodern culture. Jameson's notion of the postmodern condition and postmodern culture centers on its fragmentation, depthlessness and lack of historicity and affective potency (Roberts 2000: 133). Broadly speaking, the postmodern for Jameson is a condition of increased social and cultural abstraction, marked by *pastiche* – an empty mimicry separated from the ironic and detached voice of modernist parody – and *schizophrenia* – denoting a sort of breakdown in the process of signification leading to a discontinuity and ultimate incoherence in the meaning of images and texts (Homer 2000: 180-183). As such, cultural texts themselves (film, writing, advertising and so forth) come to embody this postmodern condition in their further abstraction from realist – or even modern – meanings grounded in time and space.

Jameson's deployment of *The Long Twentieth Century* builds upon this earlier work, and hinges on the increasing abstraction of postmodern culture unleashed by the expanding role of finance capital within the world economy. Reprising his earlier work, Jameson argues that *modernism* as a cultural and aesthetic shift in the late- 19th century was fueled by the proliferation of new social forms of abstraction (Homer 2002; Roberts 2000). Modernist abstraction, which worked against the realism it ultimately supplanted, derived from the social dislocations associated with industrialization and urbanization in the nineteenth century – the "effects of money and number in the big cities of nineteenth-century industrial capitalism" (Jameson 1998: 143) – along with the shifting relationship between capital, labor and commodities. Money, in its role as universal equivalent of value and exchange, pushed the representation of social reality toward further abstraction. The growing mass of consumer commodity items, with their own material qualities and functional utilities, were increasingly evaluated only in relation to other commodities through their abstract monetary exchange value; unique craftspeople, knowledge and skills were likewise transformed by the more abstracted notion of "labor power" via the monetary wage. Modernist abstraction was therefore a function of "money itself in a situation of capital accumulation."

> Money is here both abstract (making everything equivalent) and empty and uninteresting, since its interest lies outside of itself….it directs attention elsewhere, beyond itself, towards what is supposed to complete (and also

> abolish) it, namely production and value. It knows a semi-autonomy, certainly, but not a full autonomy in which it would constitute a language or a dimension in its own right (Ibid.: 160-161).

The financialization of capitalism brings a related shift in abstraction – effectively ushering in the postmodern condition – for Jameson sees financialization as "a play of monetary entities which needs neither production (as capital does) nor consumption (as money does): which…can live on its own internal metabolism and circulate without any reference to an older type of content" (Ibid.: 161). In other words, an even more refined form of cultural abstraction emerges as "capital itself becomes free-floating," and detached "from the 'concrete context' of its productive geography" (Ibid.:142). While money may have increased the degree of abstraction predominant in the perception and representation of social life during the "productive" moment of industrial capitalism across the mid-19th to late-20th centuries, it nonetheless remained partially grounded, Jameson argues, in its material origins, as "cotton money, or wheat money, textile money, railway money and the like" (Ibid.: 142). With the growing predominance, in the late twentieth century, of financial means of capital expansion and accumulation came an intensification of social and cultural abstraction, for "money capital [had] reached its ultimate dematerialization, as messages which pass instantaneously from one nodal point to another across the former globe, the former material world" (Ibid.: 154). Put simply, money, always a force for abstraction under capitalist production and exchange, is even further un-tethered from the social relations of capitalist production during a phase of financial expansion. Alongside these changes comes a related shift in the forms, or degree, of abstraction in cultural production and the representation of social life.

It is worth noting here that Jameson's argument, while distinctive in its own degree of abstraction, is not unique. Indeed, clipped and shorn of its more obtuse passages and claims, the core of Jameson's argument linking finance capital to a less materially-grounded, more intangible and abstract set of cultural and social forms, sounds quite similar to some other influential macro-level treatments of the economic and cultural dimensions of our times. For instance: Manuel Castells' (2000a, 2000b, 2004) sprawling analysis of the "information age" in which he asserts that the rise of a "new economy" – centered on the production, distribution and consumption of intangible and dematerialized information – has driven transformations in social organization and relations. The network, in his view, is the paradigmatic organizational form of the information age; flows of information and finance capital through technology-enabled global networks are now the most salient determinants of social and economic development. Yet, finance capital – or "financial flows" – is so central to Castells' framework that it becomes difficult to analytically distinguish the presence of a globally integrated financial system from these other elements of the "new economy" and "network society."

Likewise, David Harvey's tremendously influential account of the transition to "post-Fordism" and postmodernity hinges on the emergence of new forms of small-batch, highly specialized, more "flexible" production firms within the interstices of a global industrial structure constricted by the rigidities of Fordist mass production and consumption, and the inherent contradictions of this system's expansion to a growing proportion of the world's population. Still, deep into the analysis, Harvey says:

> What does seem special about the period since 1972 is the extra-ordinary efflorescence and transformation in financial markets…*I am therefore tempted to see the flexibility achieved in production, labour markets, and consumption more as an outcome of the search for financial solutions to the crisis-tendencies of capitalism, rather than the other way round.* This would imply that the financial system has achieved a degree of autonomy from real production unprecedented in capitalism's history (1990: 194, emphasis mine).

In sum, we encounter in all these perspectives a shared sense that an understanding of finance capital is crucial to any analysis of contemporary social change. Yet, for all three, there is a general analytical discomfort in actually incorporating financialization into an analysis of social change within the world-system of the late 20th and early 21st centuries. In all of these treatments[1] – to varying degrees and for somewhat different reasons – we also encounter a sense that the growing weight of finance capital is in some way connected to an expansion in the "cultural" dimensions of economic activity, a shift toward a more "intangible" or "immaterial" global economy, and an increasingly abstract cultural and socio-political realm.

Getting Empirical with Jameson

Jameson posits an intriguing connection between cultural abstraction and finance capital, but, on its own, the argument offers very little immediate direction to more empirically-grounded analysis. In Jameson's own phrasing (1998: 146), his analysis is "epochal" in its ambition –it specifies a relationship at many levels of abstraction from concrete space and time. Certainly close analysis of various cultural texts could help us establish *that* these new forms of expression and abstraction exist and can be observed and delineated. However, the path is less clear to those of us seeking to understand *how* financialization is concretely and causally linked to what we might call the "production of abstraction" by specific agencies, actors and organizations.[2] Jameson provides one possible starting point when he argues:

> [A]ny comprehensive new theory of finance capitalism will need to reach out into the expanded realm of cultural production to map its effects: indeed *mass cultural production and consumption themselves...are as profoundly economic as the other productive areas of late capitalism, and as fully integrated into the latter's generalized commodity system* (1998: 143-144, emphasis mine).

This actually closely follows the argument Jameson made as part of his seminal essay on postmodernity:

---

[1] And we could add Lash and Urry (1987, 1994) to this list as well.

[2] Here I would appear to agree with Sean Homer when he notes that, "what this work [of Jameson's] lacked…was any systematic account of the mediations between the individual subject and the world system" (2002: 186).

> What has happened is that aesthetic production today has become integrated into commodity production generally: the frantic economic urgency of producing fresh waves of ever more novel seeming goods (from clothing to airplanes), at ever greater rates of turnover, now assigns an increasingly essential structural function and position to aesthetic innovation and experimentation (1984: 56).

In this, Jameson suggests a link between finance capital and the predominance of abstraction in postmodern culture might be found in the production, distribution and consumption of commercialized "popular" culture. Perhaps what is new to late-20th century (and early 21st century) capitalism is the significance of this "mass cultural production" or, in different words, "aesthetic production/innovation"? Or perhaps under conditions of financialization, the "cultural" dimensions of production and consumption intensify to such an extent that a general shift toward increasing cultural abstraction or intangibility can be identified?

Materialization to Abstraction…and Back Again

One of the most significant mechanisms by which cultural abstraction and the socioeconomic restructuring of financialization are linked is highlighted by what Don Slater (2000) refers to as the socio-cultural "processes of materialization." Taking aim at the notion that, within contemporary capitalism, "the processes, factors and outputs of economic processes are to be understood – increasingly – in terms of meanings, signs and cultural processes"(Ibid.: 95), Slater instead problematizes the distinction between "sign" and "object." In fact, the object/sign distinction wrongly presumes a natural "physicality" or "objectness" of things, even though the very stability of something as a coherent physical object is itself a socially-constructed property. Put differently, "objectness" itself is also an immaterial "sign" in so far as it must be established through social interaction rather than through some essential, inherent physical quality of the object itself – a relational rather an essentialist ontology. The "materiality" of objects and activities is actually produced by the relative stability of the *link* between an object and the meaning attached to it as a particular type of physical thing. Slater labels the construction, maintenance, and transformation of these linkages between objects and physical definitions as the "processes of materialization."

The process of materialization is clearly foundational to market and trading activity, best illustrated by our routine discussion of the "market" for a particular commodity – the "cell phone" market, the "car" market and the like. In this conventional usage, there is an assumed stability to the material definition of the item in question – there is a clear definition of what this object is, how it works, what it does and how it provides a particular utility. What is more, by invoking a "market" for this commodity we assume that competing versions released by different producers are ultimately substitutable items.[3]

[3] For example, we discuss the market for "home computers" and presume a fixed set of capabilities – the "meaning" of the commodity based on the utility it offers (e.g. word processing, financial management, web browsing) – provided by a concrete combination of material objects (e.g. monitor, cpu, keyboard). A Dell can be compared with, and substituted for, an Apple, HP or Lenovo for these are all fixed commodities available to consumers in the "computer" market.

There are two problems with this, however. For one, there are actual technical changes in the nature of most commodified objects that imply new utilities and functions and thus disturb their fixed "material" identity over time. Secondly, and more importantly, the material stabilization of commodities is itself an important dimension of the competitive process for firms and market actors.[4] Over time, capitalist competition thus disrupts and reworks the provisional stabilization of "material" product identities. Today:

> Economic actors – functionally differentiated into institutions such as advertising, brand consultancy, design – may place the conjoint redefinition of goods and markets at the very center of market practices: marketing, for example, is specifically dedicated to altering relations of sameness and difference for competitive advantage. *Far from competition presuming the stability of things, destabilization is central to conceptualizing and conducting competitive strategies* (Ibid.: 98, emphasis mine).

To be clear, the processes of materialization have *always* been unstable and dynamic; pre-capitalist market exchange required the stabilization of goods and categories just as much as contemporary capitalist market activity does. In this sense, the processes of materialization are a longstanding, even *universal*, fact of human socio-economic activity. What *can* change over time is the relative importance of materialization activities for securing competitive advantage in the accumulation of capital. In this respect:

> What is 'new' today…concerns the extent to which the process of materialization…has become reflexively institutionalized and instrumentalized as a premise of economic action and organization. We can re-describe vast areas of corporate and consumer behavior in terms of [materialization/dematerialization] in the interests of either competitive gain or cultural reproduction. *Put this way, we open up the historical question of what new social conditions have opened up that historical path* (Slater, 2002: 103, emphasis mine).

Thus, the oft-asserted 'dematerialization' of contemporary capitalism and the growing importance of cultural or image-based factors within contemporary capitalism do not diminish the physicality of goods. Instead, we are witnessing the increasing intensity and scale of de/re-materialization processes driven by market actors who increasingly see such activity as a source of competitive advantage. As Slater indicates, explaining variations in the organizational institutionalization and increasing intensity of this competition requires consideration of deeper socio-historical dynamics (for example) that give rise to these "new social conditions." Arrighi's historical framework allows us to take Slater's guiding thread and elaborate these dynamics of

[4] Returning to the "home computer," the advent of high speed networking, massive increases in storage capacity and processing power have all contributed to a longer-run shift in capabilities *and the material framing of computing devices*. For example, is the home computer now a personal entertainment device, a multimedia "hub," a communications device? Indeed, Apple – the "computer" now scrubbed from its trademark – has famously specialized in the redefinition of computing device categories

materialization, the increasing prominence of advertising and brand-creation, and financialization into a provisional model.

PART II: SYSTEMIC CYCLES OF ACCUMULATION & MATERIALIZATION

For Arrighi, phases of capitalist development are conceptualized as "systemic cycles of accumulation." These cycles are characterized by an initial period of *material* expansion of the world economy, enabled by the production and effective maintenance of geopolitical order by a hegemonic state, followed by an era of financialization. Material expansions have been founded on the relatively stable expansion of an integrated world-economy centered on leading sectors in which the hegemon specializes. Eventually, material expansion has given way to decline and crisis: of profitability within the world economy, and of legitimacy for the hegemonic state. This crisis tendency, however, has normally been partially forestalled and reversed in the "core" economies – and, most significantly, the declining hegemon's – through the widespread retraction of capital from the material economy and a concomitant turn to finance as the leading line of capital accumulation. Arrighi labels this second, and terminal, period of a systemic cycle of accumulation, *financial* expansion. Like material expansion, financial expansion has inherent limits. Economically, specialization in the successful management of a global oversupply of finance capital in the absence of a sufficient supply of profitable material outlets for such investment ultimately proves self-defeating. Geopolitically, the costs of maintaining global order and the necessary legitimacy required for successful governance become increasingly untenable for the declining hegemon – particularly in the context of an increasingly incoherent and unstable world economy.

From this vantage point, financialization – accompanied by the neoliberal resurgence, or what Philip McMichael (2007) calls the "Globalization Project" – emerged as a pivotal development in the capitalist world-economy in the early 1970s. What is distinctive about Arrighi's formulation relative to Jameson's adoption thereof is its contention that financialization is best understood as an indicator for the global restructuring of the world capitalist system. Arrighi's conception is, therefore, emphatically *not* a single, totalizing explanation for contemporary social change. Rather, in Arrighi's scheme of things, financial expansion results from the interpenetrated dynamics of geopolitical competition and hegemonic crisis, intensified inter-capitalist competition and restructuring within the world division of labor, and social unrest (Arrighi and Silver 1999: 30). If these broad dynamics of material expansion, hegemonic crisis and financialization are cyclical phenomena of historical capitalism, the particular configurations they have assumed have by no means been fixed; they are historically specific. Indeed, they are marked by "organizational revolutions" at multiple levels:

> In [prior hegemonic transitions], the transformation of one dominant system of business enterprise to another did not proceed along some predetermined path inscribed in an invariant structure. Rather, the transformation occurred through a spatial shift of the system's center and a fundamental change in the way business enterprises related to one another and to governments (Ibid.: 121).

For our purposes, the centrality of organizational innovations within firms and markets during the financial expansion and hegemonic transition is particularly germane. The essentially Schumpeterian mechanics of the process are straightforward:

> The very success of the leading business enterprises of the hegemonic state in 'monopolizing' high-value-added activities draws new competitors into their path of development. As a result, 'monopolization' becomes costly or impossible. More important, expansion and intensifying competition along the paths that had made the fortunes of the hegemonic states' enterprises create the conditions for the emergence of new and more profitable paths of development that over time lead to the formation of new systems of business enterprise under new hegemonies (Ibid.: 97).

Put simply, the success of the material expansion produces an inherent tendency toward the eventual retraction of capital from these same lines of accumulation, a process that has repeatedly given way to financialization (Arrighi 1994: 313). Of course, the material economy does not disappear; rather, it is subjected to restructuring and reorganization within the primacy of financialization. In all prior cycles of accumulation, this restructuring and reorganization during financial expansion has also helped to lay the foundation for a subsequent material expansion of the capitalist world-economy under the political and economic "leadership" of an emergent hegemonic power.

Global "commodity chain" analysis can illuminate the dynamics of this sectoral and industry-level reorganization in eras of financialization. The commodity chain heuristic allows us to map the variety of capitalist responses to changing structural conditions within and across various domains of an uneven global economy:[5]

> The [commodity] chain describes the full range of activities that are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and disposal after use (Kaplinsky 2005: 101).

In this fashion, we can envision the global division of labor at any given moment as the dense network of global commodity chains and their interlocking connections. The key actors within this network of global commodity chains are firms – it is at the firm level where strategic investment and allocation decisions are made within the larger context of competitive pressures and anticipated profitability. Within a capitalist world-economy, the basic *logic* determining a firm's engagement within and across commodity chains does not shift over time. In any given chain, participating firms will seek to maximize profitability by specializing in the particular

[5] Readers familiar with the global commodity/value chain framework will recognize I am avoiding many of the debates within that literature with respect to forms of governance and organizational structure within commodity chains. Such concerns are not immediately relevant to our discussion, where we will use the GCC construct primarily as a conceptual mapping device, not an analytical construct.

activities that, at a given time, are anticipated to yield the highest rate of profit.[6] While the firm-level goal of increased profitability may not vary over time, the strategies and activities to realize that goal most certainly do, often significantly. The global "commodity chain" construct therefore helps to trace these dynamic shifts in the global division of labor and the leading sectors of the world economy over time. Using the commodity chain optic and taking Slater's processes of materialization as a fixture of socio-economic action, our task is twofold: to explain how these processes are institutionalized during different periods of historical capitalism, and how their intensity and structural function shift across these periods.

Answering the first question is relatively straightforward. The processes of materialization became structurally central to historical capitalism only through the institutionalization, and ultimate professionalization, of advertising, merchandising, and marketing as distinct fields of economic and professional activity. Daniel Pope (1983), Stuart Ewen (2001 [1976]) and Richard Ohmann (1996) each locate this shift during the late nineteenth century and the early twentieth century, the point at which industrialized production of most consumer durable commodities consistently exceeded existing consumer demand – in so far, that is, as that demand was constrained by prevailing social norms and customs regarding consumption and thrift. Advertising came to be seen by manufacturers as "a strategy to match demand to the conditions of capitalist production required by the new [productive] technologies" (Ewen 2001: 33). In Ewen's phrasing, the rise of the "captains of industry" in the US during the late nineteenth-century brought with it the "captains of consciousness": mass *consumption* had to be institutionalized as a social practice if mass *production* was to be profitably absorbed:

> The mechanism of mass production could not function unless markets became more dynamic…Now men and women had to be habituated to respond to the demands of the productive machinery. The corollary to a freely growing system of goods production was a 'systematic, nationwide plan…to endow the masses with more buying power,' a freely growing system of consumer production (2001: 24-25).

At the broadest level, then, advertising and marketing worked to establish the necessity of consumption, pushing nascent consumers to increasingly commodify their "needs" and helping them to enumerate, and expand, their material desires. To be sure, the growing reliance on the market for many of the core demands of basic social reproduction was also generated by the larger trends of urbanization and proletarianization and the decline of home-based production (Ohmann 1996: 48-50, 62-72). That the most important U.S. industries in the middle of the 19th century were, in Pope's (1983: 32) words, "processing the nation's abundant raw materials and agricultural products into materials which consumers themselves would then fashion into items of utility – bread from flour, buildings from board, clothing from textiles" is testament to the massive transformations in everyday life that would accompany the process of industrialization in the subsequent decades.

The construction of nationally advertised and distributed brand identities for an increasing number of consumer products – cereals, biscuits, juice and other processed foods, cleaning soaps and household supplies, safety razors and toiletries (Pope 1983: 43-61) – also

[6] See Kaplinsky (2005: 62-84) for a systematic discussion of this process using the theory of "rents".

served an immediate strategic function for many producers. Manufacturers of such products, seeking to integrate their operations vertically (through the formal control and incorporation of multiple stages within the full chain of activities responsible for bringing products to market), came to see brand construction through national advertising as a means to upend the prevailing balance of power as it was distributed across retailers, wholesalers, distributors and manufacturers within these established commodity chains. Most simply, manufacturers of undifferentiated, non-branded, commodity products – which, in fact, meant most every consumer good within U.S. markets prior to the late nineteenth century – had comparatively little control over the "downstream" activities of wholesaling, distribution and retailing.

> When producers made unbranded, unadvertised goods, wholesalers could ignore them, could drive down prices, and could control which items reached the retailers' shelves. Retailers themselves could devote their sale efforts only to products carrying a high margin. *Manufacturers' advertising campaigns might remedy this* (Ibid.: 79-80, emphasis mine).

By constructing brand identities attached to key products through regional or national advertising – for instance, the "Uneeda Biscuit" brand of soda crackers as opposed to the generic, bulk crackers sold in a general store (Ibid.: 48-50) – might build a brand-consciousness amongst consumers that would require retailers buy and stock branded goods instead of previously unbranded, presumably lower-cost, goods sourced from wholesalers. "Advertising itself served as a partial substitute for vertical integration into retailing," for: If customer demand could make a dealer stock an item, and if manufacturer pressure could make him sell it expeditiously and efficiently, why duplicate effort by investing in a manufacturer-owned retail network? (Ibid.: 82).

Clearly the formalization of advertising, merchandising, branding and marketing activities featured centrally in the *establishment* of the vertically-integrated corporate form from the outset of what became the U.S.-led material expansion of the twentieth-century world-economy. And, from Paul Baran and Paul Sweezy's (1966) seminal analysis of the operation of this material expansion *once fully established*, we learn how these same activities – which they call the "sales effort" – became essential to the function of a capitalist system dominated by large multi-divisional and multi-national corporations. Baran and Sweezy use the term "monopoly capital" in referring to the dominance of a comparatively small group of corporations that, although not literal monopolists, exerts what amounts to *de facto* oligopolistic control over the markets in which they are involved. Because vertical integration creates efficiency through the careful management of the flow of an entire production process, disruptive and unpredictable variations in the prices for the final outputs of the process were this system's Achilles heel. In response to this risk, market control under monopoly capitalism was exerted through a tacit arrangement in which price competition was shunned. In an expansionary period dominated by only a few key firms in most markets, this cooperative stance ultimately benefited the small group of participants by avoiding the zero-sum game of price competition (Ibid.: 58-59).

With a taboo against price competition, Baran and Sweezy argue, firms instead turned to innovations within the production process itself – the management and reconfiguration of the "flow" – as the main means by which profitability could be expanded, leading ultimately to a general decline in production costs and a consequent tendency for the total economic surplus to rise (Ibid.: 68-72). This growing surplus, which could not be productively reinvested in the same

lines of production from which it was derived, therefore needed to be absorbed in some other fashion, with the "sales effort" – "advertising, variation of the products' appearance and packaging, 'planned obsolescence,' model changes, credit schemes, and the like" (Ibid.: 115) – being one of the most important such strategies.[7] In this way, Baran and Sweezy underscore how it is only with monopoly capital and vertical integration that the sales effort assumed a primary structural function, as one of capitalism's "decisive nerve centers."

In sum, the core actors and activities that drove the processes of materialization and, thus the (de)stabilization of goods and services, were first institutionalized as elements of standard business practice during the material expansionary phase of the U.S.-led systemic cycle of accumulation, Arrighi's "long twentieth century." The routinization and professionalization of the sales effort were achieved most directly through the formation of marketing and advertising firms themselves, specializing in the these activities as their primary line of activity, and through the establishment of marketing, promotional and branding departments within the prototypical vertically-integrated corporation. Thus if we hope to uncover the socioeconomic dynamics that change the scale and scope of these processes of materialization we must understand the kinds of pressures to which the activities and agencies comprising the "sales effort" are subjected by the large-scale institutional and world-economic reorganization associated with the financial expansion.

PART III: FINANCIALIZATION, (DE)MATERIALIZATION AND ABSTRACTION

We have thus far sought to more systematically articulate and elaborate Jameson's rather underspecified assertion that the expanding volume of finance capital, or its growing importance as a source of accumulation, within the world-economy underpins or drives the fragmentation and increasing abstraction of postmodern culture. Following Jameson's own indication, we have looked to the increasing commercialization of culture and the growing importance of "aesthetic" or cultural innovation as a foundational source of this cultural shift. Narrowing our focus, we have then identified Slater's "processes of materialization" as one of the primary mechanisms generating cultural abstraction of this sort. The processes of materialization are what "stabilize" our understanding of what constitutes a good or service and the particular material "meaning" we attach to it through its presumed utility and function. By now, the processes of materialization are primarily the purview of firms specializing in advertising and branding as well as bureaus within larger firms charged with the same activities - all of them specializing in the sales effort.

As we have argued above, financialization is accompanied by – indeed *reflects* – the large-scale restructuring of the capitalist world-economy through organizational, institutional and political transformations. So, what happens to this "sales effort" as the comparatively cooperative, phase of Arrighi's material expansion gives way the increasingly zero-sum competition emblematic of financialization? To be sure, the sales effort certainly does not disappear or diminish with this shift, even if the prevailing world-economic conditions in the

[7] Baran and Sweezy would likely have also agreed with Slater's earlier contention that the basic activities associated with the process of materialization were by no means a novelty of the mid-twentieth century, given their assertion that salesmanship is in fact "…much older than capitalism as an economic and social order" (114-115).

material expansion are themselves fundamentally altered by the "financial turn." To the contrary, the sales effort has only intensified along with financialization. In commodity chain terms, the broadest shift associated with the financialization of the world-economy since the 1970s has been the widespread *dis*-integration and reconfiguration of formerly vertically integrated commodity chains. This has given rise to what the literature generally refers to as "buyer-driven" commodity chains. In these chains, lead firms coordinate and "drive" the organization of the commodity chain through contracting relationships, without taking a direct equity ownership stake in many of the links or nodes in the chain (Gereffi 1994). As such, the function of the sales effort has shifted away from an essential set of activities needed to stabilize a capitalist world-economy driven by large, multi-national, multi-divisional corporations, and toward a set of activities by which a growing number of firms compete, even more intensively, as their *primary* specialization and/or source of competitive advantage. This is a move from management of the total productive flow from initial inputs to final outputs toward, to re-work Harvey's (1990) phrase, increasingly "flexible specialization" in only a select few activities or commodity chain nodes.

The *overarching* trend produced by this dynamic has been the turn toward financial activities as a means of capital accumulation, yet it would be absurd to claim that the global division of labor itself becomes more financial, post-industrial, or abstract/intangible *as a whole*. Indeed, the total volume of commodity manufacturing output at the world level has *increased* during this phase of financialization even if, at the same time, manufacturing and industrial activities have not been (see figures on world manufacturing value-added in Amsden 2003, Arrighi et. al. 2003; Krippner 2005). In Arrighi's scheme, the dynamics of financialization are not simply those of money capital in circulation. The issue is instead one of reorganization of the geographical distribution of global commodity chains, as well as the leading sectors of capital accumulation. And, as commodity markets grow increasingly competitive at the close of the material expansion, we can anticipate three general strategies for firms, whether pursued alone or – more realistically – in conjunction with each other.[8]

Firstly, firms might remove themselves as much as possible from commodity production chains entirely, shifting capital toward directly financial sources of profit and accumulation. Evidence for this shift is apparent from Krippner's (2005) analysis of the financialization of the U.S. economy. Krippner finds not only the growing weight of the financial sector within the overall accumulation of profits in the U.S., but, just as important, a marked rise in the significance of finance-related activities for *non-financial* firms. Put differently, the result of this first strategy is a shift toward financial means of accumulation by firms that historically specialized in commodity chains organized primarily around productive activities. This strategy is reflected by non-financial firm expanding their acquisition of financial assets, expanding the scope and scale of their existing financial subsidiaries, or acquiring new, finance-centered subsidiaries (Crotty 2005: 104). For instance, General Motors – the prototypical example of the vertically-integrated, commodity-production chain – and the degree to which this firm has leaned more heavily on its own finance subsidiary (GMAC) to generate profits for the entire organization – not just on automobile loans but a full array of financial instruments and

[8] Please note that the following types of firm-level responses are not intended to be comprehensive summaries of empirical demonstration of these strategies but rather illustrative sketches in the service of our broader argument.

investments (including a heavy investment-turned-loss in the American "subprime" mortgage market) (Andrews 2009).

Secondly, firms might retain *some* engagement with manufacturing commodity chains, but a more selective one guided by the value-added within these nodes. As it happens, this has generally pushed firms away from specialization in productive activities through vertical integration, resulting in precisely the dynamic captured by existing GCC studies that trace a large-scale shift into marketing and branding activities in a number of different industries. The GCC research literature, amongst many others, is rife with empirical illustrations of this strategy (Bair and Gereffi 2001; Coe 2004; Coe and Hess 2005; Dolan, Humphrey and Harris-Pascal 1999; Gereffi 1999; Hughes 2000, 2007; Hughes, Wrigley and Buttle 2008; Jernigan 2000; Klein 2000; Korzeniewicz 1994; Pratt 2008). The sport-oriented apparel, equipment and footwear firm Nike typifies this strategy. As a so-called "manufacturer without (company owned) factories" Nike epitomizes this specialization in the sales effort – leaving actual production and sourcing activities to a variety of sub-contractors in which Nike has no equity stake or direct ownership control. Nike thus specializes in design work, branding, marketing, lifestyle construction and the like, benefitting from increasing competition amongst sub-contracted suppliers in the form of lower production costs, little need for coordination in supply of materials and manufacturing, and greater flexibility (Hollister 2008; Korzeniewicz 1994; Strasser 1993).

The third strategy is a move to create new areas of activity – be they new product lines or incorporation of new geographical areas. This strategy might rely on the creation of new commodity chains outright, or the "colonization" reorganization of existing but under-exploited commodity chains.[9] My own research (2005) on the creation and continued evolution of an increasingly commercialized world soccer economy since the early 1970s provides some illustration of this strategy. After 1970, a number of major professional sports which had until then been only partially, or much less intensively, commodified were transformed by a wave of commercialization. This wave was often facilitated by an overlapping network of agents and firms who realized it was both *possible* (primarily because of media deregulation and expansion) and *attractive* (because there were comparatively few competitive pressures within the global sport economy) to valorize sporting activities and organizations (Aris 1990; Smit 2007, 2008; Sugden and Tomlinson 1998, 2003). In almost every case, the reconfiguration of these sporting commodity chains depended on linking them more directly to existing broadcast media commodity chains, unlocking new sources of revenue and profits within the professional sport economy. What is more, a number of the central actors in driving the commercialization of soccer (most notably, Adidas executive Horst Dassler) themselves came from backgrounds in the kinds of athletic fashion apparel and footwear firms that so strongly exemplify the "buyer-driven" commodity chain model (Andrews 2001).

What is most interesting in the light of our focus on the "cultural economy" is the centrality of the mass media along with the sales efforts of advertising, branding and marketing within **all** three strategies. What is more, it is not difficult to see the potentially self-reinforcing nature of these strategies - how the expansion of some of these activities can, at the aggregate level, call forth further investment and activity within the others. All of these strategies can deepen and intensify the sales effort. The "virtuous circle" here is logically straightforward: the

[9] In Slater's terms, we would see this as the market "materialization" of previously ignored spheres of social activity.

more that firms of all sorts pursue financial forms of expansion, the more that capital is available and, in fact, in need of new investment opportunities. As leading firms in a variety of productive industries specialize more narrowly in the sales effort alone (Nike, Reebok and other footwear design/brand companies, for instance), competition within the sales effort activities intensifies. Increased competition within the sales effort fosters increasing innovations within this domain, attracting or demanding even further investment in the sales effort.

This kind of commercial "cultural" work – the branding, promotional, and advertising activities of the sales effort – further encourages an expansion in the need for venues for this work, deepening the demand for media outlets of various sorts and the innovative and novel use of mass media formats both old and new. Finally, media commodity chains – in part from their growing significance following from the pressures elaborated above – themselves can feature within the third firm-level strategy identified earlier: that is within the move toward previously under-exploited or ignored lines of accumulation. In a context where large multi-divisional corporations are seeking new lines of activity and accumulation (having retracted or lessened their involvement in material commodity chains), nodes within already-established mass media commodity chains (e.g. broadcast networks, talent agencies, movie studios) begin to appear as potentially enticing acquisitions themselves.

It is in the conjoint operation of all these factors – that is, the shifting of firm-level resources and business strategies toward new and/or alternative lines of activity, a growing reliance on the sales effort within these, specialization within the sales effort itself – that we can locate the intensification of competition as well as expansion of scale in the processes of materialization. And as the sales effort in its various forms has expanded (Dawson 2004), this has ultimately only further intensified the processes of materialization and, by turn, our perception of the (im)materiality of socio-economic life and the predominance of cultural abstraction.

CONCLUDING REMARKS & IMPLICATIONS

My aim in this essay has not been to "prove" these various contentions but rather to sketch out how they might be put together in the service of a broader argument linking financialization to cultural transformation. The model I have advanced toward this end begins from Jameson's rather nebulous linking of finance capital (more specifically, Arrighi's financialization) to a "cultural turn" within the socio-economic sphere. This turn has allegedly propelled the fragmentation and abstraction of contemporary cultural representation. I have advanced or solidified Jameson's contention in two main ways. First, I have reiterated and elaborated the conceptual underpinnings of Arrighi's framework, upon which Jameson constructs his interpretation of the finance capital and culture link. Here I have, in particular, emphasized the dynamics of world-economic restructuring that are both cause and consequence of financialization.

Secondly, I have specified a set of activities – Slater's processes of materialization – through which socio-economic restructuring can be linked to the commercial cultural transformations that Jameson nods toward as the "source" of postmodern abstraction. Putting these two insights together, I have argued that the restructuring and reorganization that is part and parcel of financialization. Moreover, as illuminated by the commodity chain heuristic, financialization has intensified competition within the processes of materialization by

repositioning their structural function for, and organizational housing within, business enterprises in this current era of financial expansion.

Of course, this argument alone is not sufficient to *document* such linkages and connections. Thus, returning to the original hope that this framework could help in more effectively articulating the efforts of scholars of the world-system and global political-economy with those of the cultural studies and critical theory domains, I believe there are different lessons for each. In the case of the global commodity chains literature, the issue seems to be seeing the forest for the trees. On the one hand, we have an impressive accumulation of empirically-rich studies of specific commodity chains, many arriving at the conclusion that "culture" increasingly matters for competitive advantage. On the other hand, the accomplishments of empirical depth underscore the need for a comprehensive cross-chain (or, aggregated chain) meta-analysis. In other words, a step back from the intensely concrete and empirically rich "within" commodity chain focus might reveal broader "sectoral" (or "across" chain) trends that could help to direct future commodity chain research toward a more systematic, less atomized, account of contemporary socio-economic change. For instance, the "sectoral" connections we have just discussed, connecting the sales effort activities in a host of production-centered global commodity chains to commercial mass-media commodity chains, is unlikely to be illuminated by digging deeper empirically into either set of commodity chains; collecting detailed analyses of each of the trees still won't give us an adequate account of how the forest operates as a whole. Hopefully this essay demonstrates, at least in outline form, how this inter-chain aggregation, or sectoral analysis, might be accomplished for our particular concerns.

Likewise, Arrighi's world-historical analysis can bring to the study of commercialized popular culture, or the cultural studies project more broadly, a more structured analytical and methodological framework, as well as a deeper range of historical evidence. Bringing this historical framework to bear on the concerns of cultural studies is intended to strengthen the utility of the latter – most significantly by hewing to Arrighi's Three Questions: What is cumulative? What is cyclical? And what is truly new about contemporary cultural change? In this respect, the world-historical analysis above undermines the hyperbole of much of the cultural economy discourse – at least in so far as such analysis asserts the profound novelty of contemporary developments. Yet, it nonetheless reinforces and amplifies the more nuanced notion that marketing, advertising, branding, and the "sales effort" more generally, has changed in important ways since the 1970s. The nature of such changes can only be elucidated through historical analysis of the sort described above, so I would hope that the cultural studies project – and those concerned with the commercialization of culture more broadly – might engage such analysis more vigorously.

ACKNOWLEDGEMENTS

Many thanks to Jason W. Moore and an anonymous reviewer at *JWSR* for extensive, insightful and useful comments. Giovanni Arrighi also provided comments on a much earlier version. This work was supported in part by the James Madison University Program of Grants for Faculty Educational Leaves.

REFERENCES

Amsden, Alice. 2003. "Comment: Good-Bye Dependency Theory, Hello Dependency Theory." *Studies in Comparative International Development* 38(1): 32-38.

Andrews, David L. 2001. "Sport." Pp. 131-162 in *Culture Works: The Political Economy of Culture*, edited by Richard Maxwell. Minneapolis, MN: University of Minnesota Press.

Andrews, Edmund L. 2009, May 21. "Treasury Department is Said to Plan Second Bailout for GMAC." *New York Times*, accessed online 3/4/2010.

Aris, Stephen. 1990. *Sportsbiz: Inside the Sports Business*. London: Hutchinson.

Arrighi, Giovanni. 1994. *The Long Twentieth Century: Money, Power, and the Origins of Our Times*. London: Verso.

_____. 2007. *Adam Smith in Beijing*. London: Verso.

Arrighi, Giovanni, Kenneth Barr, et al. 1999. "The Transformation of Business Enterprise." Pp. 97-150 in *Chaos and Governance in the Modern World System*, Giovanni Arrighi and Beverly J. Silver. Minneapolis, MN: University of Minnesota Press.

Arrighi, Giovanni and Beverly J. Silver. 1999. *Chaos and Governance in the Modern World System*. Minneapolis, MN: University of Minnesota Press.

Arrighi, Giovanni, Beverly J. Silver and Benjamin D. Brewer. 2003. "Response to Alice Amsden." *Studies in Comparative International Development* 38(1): 39-42.

Aspers, Patrick. 2010. "Using Design for Upgrading in the Fashion Industry." *Journal of Economic Geography* 10: 189-207.

Bair, Jennifer and Gary Gereffi. 2001. "Local Clusters in Global Chains: The Causes and Consequences of Export Dynamism in Torreon's Blue Jean Industry." *World Development* 29: 1885-1903.

Baran, Paul A. and Paul M. Sweezy. 1966. *Monopoly Capital: An Essay on the American Economic and Social Order*. New York: Monthly Review Press.

Bell, Daniel. 1973. *The Coming of Post-Industrial Society*. New York: Basic Books.

Brewer, Benjamin D. 2005. *Switching Fields: The World Soccer Economy in an Era of Globalization*. Doctoral Dissertation, Department of Sociology, Johns Hopkins University.

Castells, Manuel. 2000a. *The Rise of the Network Society (Second Edition)*. Oxford: Blackwell.

_____. 2000b. *End of Millenium (Second Edition)*. Oxford: Blackwell.

_____. 2004. *The Power of Identity (Second Edition)*. Oxford, Blackwell.

Coe, Neil M. 2004. "The Internationalisation/Globalisation of Retailing: Towards an Economic - Geographical Research Agenda." *Environment and Planning A* 36(9): 1571-1594.

Coe, Neil M. and Martin Hess. 2005. "The Internationalization of Retailing: Implications for Supply Network Restructuring in East Asia and Eastern Europe." *Journal of Economic Geography* 5(4): 449-473.

Crotty, James. 2005. "The Neoliberal Paradox: The Impact of Destructive Product Market Competition and 'Modern' Financial Markets on Nonfinancial Corporation Performance in the Neoliberal Era." Pp. 77-110 in *Financialization and the World Economy*, edited by Gerald A. Epstein. London: Edward Elgar.

Dawson, Michael. 2004. *The Consumer Trap: Big Business Marketing in American Life*. Chicago: University of Illinois Press.

DeBord, Guy. 1995 [1967]. *The Society of the Spectacle*. London: Zone Books.

Dolan, Catherine, John Humphrey, and Carla Harris-Pascal. 1999. "Horticulture Commodity Chains: The Impact of the UK Market on the African Fresh Vegetable Industry." *University of Sussex Institute of Development Studies Working Paper #96*.

Ewen, Stuart. 2001. *Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture (25th Anniversary Edition)*. New York: Basic Books.

Gereffi, Gary, John Humphrey, Raphael Kaplinsky and Timothy J. Sturgeon. 2001. "Introduction: Globalisation, Value Chains and Development." Pp. 1-8 in *IDS Bulletin: The Value of Value Chains*, edited by Gary Gereffi and Raphael Kaplinsky. Sussex, UK: Sussex University Institute of Development Studies.

Gereffi, Gary. 1994. "The Organization of Buyer-Driven Global Commodity Chains: How US Retailers Shape Overseas Production Networks." Pp. 95-122 in *Commodity Chains and Global Capitalism*, edited by Gary Gereffi and Miguel Korzeniewicz. Westport, CT: Praeger.

_____. 1999. "International Trade and Industrial Upgrading in the Apparel Commodity Chain." *Journal of International Economics* 48: 37-70.

_____. 2001. "Beyond the Producer-driven/Buyer-driven Dichotomy: The Evolution of Global Value Chains in the Internet Era." Pp. 30-40 in *IDS Bulletin: The Value of Value Chains*, edited by Gary Gereffi and Raphael Kaplinsky. Sussex, UK: Sussex University Institute of Development Studies.

Harvey, David. 1990. *The Condition of Postmodernity*. Cambridge, MA: Blackwell.

Hollister, Geoff. 2008. *Out of Nowhere: the Inside Story of How Nike Marketed the Culture of Running*. Meyer & Meyer Sport.

Homer, Sean. 2002. "Fredric Jameson." Pp. 180-188 in *Postmodernism: The Key Figures*, edited by Hans Bertens and Joseph Natoli. London: Blackwell Publishers.

Hughes, Alex. 2000. "Retailers, Knowledges and Changing Commodity Networks: The Case of the Cut Flower Trade." *Geoforum* 31:175-190.

_____. 2007. "Geographies of Exchange and Circulation: Flows and Networks of Knowledgeable Capitalism." *Progress in Human Geography* 31(4): 527-535.

Hughes, Alex, Neil Wrigley and Martin Buttle. 2008. "Global Production Networks, Ethical Campaigning, and the Embeddedness of Responsible Governance." *Journal of Economic Geography* 8(3): 345-367.

Humphrey, John and Hubert Schmitz. 2001. "Governance in Global Value Chains." Pp. 19-29 in *IDS Bulletin: The Value of Value Chains*, edited by Gary Gereffi and Raphael Kaplinsky. Sussex, UK: Institute of Development Studies at Sussex.

Jameson, Fredric. 1984. "Postmodernism, or, The Cultural Logic of Late Capitalism." *New Left Review* n. 146: 59-92.

_____. 1991. *Postmodernism, or, The Cultural Logic of Late Capitalism*. Durham, NC: Duke University Press.

_____. 1998. "Culture and Finance Capital." Pp. 136-161 in *The Cultural Turn: Selected Writings on the Postmodern 1983-1998*. New York: Verso Press.

Jernigan, David H. 2000. "Applying Commodity Chain Analysis to Changing Modes of Alcohol Supply in a Developing Country." *Addiction* 95 (Supplement 4):S465-S475.

Korzeniewicz, Miguel. 1994. "Commodity Chains and Marketing Strategies: Nike and Global Athletic Footwear Industry." Pp. 247-265 in *Commodity Chains and Global Capitalism*, edited by Gary Gereffi and Miguel Korzeniewicz. Westport, CT: Praeger.

Kaplinsky, Raphael. 2005. *Globalization, Poverty and Inequality: Between a Rock and a Hard Place*. Malden, MA: Polity Press.

Klein, Naomi. 2000. *No Logo*. New York: Picador.

Krippner, Greta R. 2005. "The Financialization of the American Economy." *Socio-Economic Review* 3: 173-208.

Lash, Scott and John. 1987. *The End of Organized Capitalism*. Madison, WI: University of Wisconsin Press.

_____ . 1994. *Economies of Signs and Space*. London: Sage Publications.

McMichael, Philip. 2007. *Development and Social Change: A Global Perspective*. New York: Pine Forge Press.

Ohmann, Richard. 1996. *Selling Culture: Magazines, Markets, and Class at the Turn of the Century*. London: Verso.

Pope, Daniel. 1983. *The Making of Modern Advertising*. New York: Basic Books.

Poster, Mark. 1990. *The Mode of Information: Poststructuralism and Social Context*. Chicago, IL: University of Chicago Press.

Pratt, Andy C. 2008. "Cultural Commodity Chains, Cultural Clusters, or Cultural Production Chains?" *Growth and Change* 39(1): 95-103.

Roberts, Adam. 2000. *Fredric Jameson*. London: Routledge.

Slater, Don. 2002. "Markets, Materiality and the 'New Economy.'" Pp. 95-114 in *Market Relations and the Competitive Process*, edited by Stan Metcalfe and Alan Warde. Manchester, UK: Manchester University Press.

Smit, Barbara. 2007. *Pitch Invasion: 'Adidas', 'Puma' and the Making of Modern Sport*. New York: Penguin.

_____ . 2008. *Sneaker Wars: The Enemy Brothers Who Founded Adidas and Puma and the Family Feud That Forever Changed the Business of Sport*. New York: Ecco Publishers.

Strasser, J.B. 1993. *Swoosh: The Unauthorized Story of Nike and the Men Who Played There*. New York: Harper Paperbacks.

Sugden, John and Alan Tomlinson. 1998. *FIFA and the Contest for World Football*. Cambridge, UK: Polity Press.

_____ . 2003. *Badfellas: FIFA Family at War*. Edinburgh, UK: Mainstream Publishing.

Webster, Frank. 2002. *Theories of the Information Society: Second Edition*. New York: Routledge.

THE COFFEE COMMODITY CHAIN IN THE WORLD-ECONOMY: ARRIGHI'S SYSTEMIC CYCLES AND BRAUDEL'S LAYERS OF ANALYSIS

John M. Talbot
Department of Sociology
University of the West Indies, Mona
john.talbot@uwimona.edu.jm

ABSTRACT

This article presents a history of coffee in the modern world-economy, using an analytical framework synthesized from Arrighi's concept of systemic cycles of accumulation and Braudel's notion of three levels of economic analysis: material life, the market economy, and capitalism. It takes the commodity chain as the unit of analysis, and argues that this choice helps to illuminate the causal connections between Braudel's three layers. The method of incorporated comparison is used to compare restructurings of the coffee commodity chain with the restructurings of the larger world-economy during each of Arrighi's systemic cycles.

INTRODUCTION

In this paper, I use Arrighi's four "systemic cycles of accumulation" as a framework to describe and explain transformations of the world coffee economy, focusing on the use of coffee in everyday life and the global trade in coffee.[1] I link these changes to the recurrent pattern that Arrighi identifies for each systemic cycle, moving through alternating periods of "material" and "financial" expansion. I attempt to explain how the changes in material life and the market economy were shaped by, and in turn helped to shape, the development of each systemic cycle of accumulation as a whole. I employ a variation of McMichael's (1990, 1992) method of incorporated comparison to compare changes in the structure of the coffee commodity chain with changes in the world-economy, because the former is a part of the latter. When a hegemonic power restructures the world-economy, it does so by restructuring the commodity chains that comprise it. However, each commodity chain also has its own logic and history, which condition its further evolution and render it either open, or resistant, to restructuring at particular historical conjunctures. Instances where the evolution of the commodity chain does not correspond exactly with the evolution of the world-economy may provide important clues about the dynamics

[1] Arrighi describes each systemic cycle as beginning in the financial expansion of the preceding cycle, running through the material expansion, and including the subsequent financial expansion. This yields a series of overlapping systemic cycles which is probably truer to the development of capitalism as the top layer of the system (1994: 214-15). For this analysis, I have dated the beginning of each cycle at the beginning of the material expansion to obtain a series of non-overlapping cycles, which makes it easier to deal with events in the two lower layers of the system.

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 58-88**
ISSN 1076-156X

underlying the evolution of each. The article concludes with some generalizations drawn from the analysis and some reflections on the theoretical framework.

ANALYTICAL FRAMEWORK

Giovanni Arrighi's *The Long Twentieth Century* (1994) stands as a masterpiece of world-systems analysis. Arrighi sets out to construct, as he puts it, a "genealogy of modern capitalism … as a succession of systemic cycles of accumulation" (1994: 84). Arrighi's analysis shows how capitalism began in the system of northern Italian city-states in the fourteenth century and expanded to encompass the entire planet. The development and expansion of capitalism has been accomplished through a succession of systemic cycles: the Genoese, Dutch, British, and U.S. Each cycle begins as a new hegemonic power, with new organizational capabilities, leads an expansion and restructuring of the system. Each cycle has two phases: a material expansion followed by a financial expansion. The material expansion begins when the new hegemon embarks on a process of restructuring of both the world economy and the interstate system to serve its interests; however, these interests are always presented as, and to some extent perceived as, the general interests of the system as a whole. During the material expansion, capital is invested primarily in the expansion of production and trade in goods. But as the material expansion proceeds, it generates more profits than can be profitably re-invested in production and trade. As this happens, a growing share of capital is diverted into speculation and financial deals, inaugurating the financial expansion. This stimulates competition between states to attract the growing volume of mobile capital, causing increasing instability and chaos in the system. At the same time, other rising capitalist powers copy the organizational innovation of the hegemonic state, undercutting its power and ability to lead. The crisis that follows is eventually resolved by the rise of a new hegemonic power, offering a new organizational innovation that initiates a new expansion and restructuring of the system.

Arrighi draws heavily on Fernand Braudel's three-volume *magnum opus*, *Civilization & Capitalism 15th-18th Century* (1981; 1982; 1984). In this work, Braudel conceptualizes the totality of economic life as consisting of three intersecting layers, which he calls material life, the market economy, and capitalism. The bottom layer in this construction, material life, is described as the "infra-economy, the informal other half of economic activity, the world of self-sufficiency and barter of goods and services within a very small radius." (1981: 24) The middle layer of the market economy consists of all those activities which have traditionally been considered economic: exchanges between freely competing buyers and sellers in markets. The top layer, capitalism, in Braudel's memorable phrase, is "the zone of the anti-market, where the great predators roam and the law of the jungle operates." (1982: 230, quoted in Arrighi 1994: 10) However, Arrighi's analysis focuses primarily on this top layer of the three-tiered structure:

> The notion of systemic cycle of accumulation, we have noted, derives directly from Braudel's notion of capitalism as the top layer of the hierarchy of the world of trade. Our analytical construct, therefore, focuses on that top layer and offers a limited view of what goes on in the middle layer of market economy and the bottom layer of material life. This is simultaneously the main strength and the main weakness of the construct. (24)

As Arrighi notes, "we cannot do everything at once." (25) And he has done quite a lot, not only setting out a genealogy of capitalism, but also opening up a research program. For, as he notes:

> The logic of the top layer is only relatively autonomous from the logics of the lower layers and can be fully understood only in relation to these other logics. … [This] requires that we descend again to explore the lower layers of market economy and material life with the knowledge and questions brought back from the journey into the top layer which this book undertakes. (26)

In order to advance this research program, it is necessary to understand not only the distinctions between these three layers, but also the ways in which they are connected. Braudel never presents an extended, systematic discussion of these distinctions and connections; he interjects brief sketches of them throughout the three volumes of *Civilization and Capitalism.* We have to attempt to construct a systematic account from the sketches. He starts with the definition of material life quoted above, as the informal and subsistence economy. But his discussion in the first volume ranges much more broadly than this. Central chapters in this volume discuss food and eating habits, beverages and drinking habits, clothing styles, and the construction and decoration of housing. He concludes this section by saying that:

> our investigation takes us at this point not simply into the realm of material 'things', but into a world of 'things and words' – … *languages* with everything that man contributes or insinuates into them … And those strange collections of commodities, symbols, illusions, fantasms and intellectual schemas that we call civilizations must also be invoked at this point. (1981: 333)

Rather than simple, informal, economic activity, then, what he is discussing here might better be labeled *material civilization*, which he seems to use as a synonym for material life. This includes all of the material objects of everyday life as well as the cultural meanings attached to them. He further clarifies at the beginning of the second volume:

> Between 'material life' (in the sense of an extremely elementary economy) and 'economic life', the contact surface is not continuous, but takes the form of thousands of humble points of intersection: markets, stalls, shops. Each point marks a break: on one side is economic life with its commerce, its currencies … on the other 'material life', the non-economy, imprisoned within self-sufficiency. The economy begins at the fateful threshold of 'exchange value'. (1982:21)

He contrasts the mentality of the merchant, who starts with money and buys goods only to sell them in order to acquire more money (MGM′), with the mentality of the peasant, who comes to the market with goods to sell for money, but only as a means of acquiring other goods (GMG′) (1982: 62-4). From the peasant's perspective, the transaction closely resembles barter, except that it is mediated by money. Thus Braudel's conception of material life includes the common 'things' of everyday life that are used or consumed primarily for their use values, even if these things have

been obtained from the market, as long as the buyer is primarily concerned with their use values rather than their exchange values.

Economic life, or the market, involves the exchange or circulation of goods according to set rules between relatively small buyers and sellers:

> The economy, in the sense in which I wish to use the word, was a world of transparence and regularity, in which everyone could be sure in advance, with the benefit of common experience, how the processes of exchange would operate. This was always the case on the town market-place … And it was the case too, even if the distance was greater, for any *regular* trade of which the origins, conditions, routes and markets were fixed. (1982:455)

He acknowledges that there are two different senses of the word *market*: "On one hand it is used, in a very loose sense, of all types of exchange that go beyond self-sufficiency …" Thus we have urban markets or a gold market (1982:223). "On the other hand, the word 'market' is often applied to a rather large broad form of exchange, also known as the market economy …" (1982:223-4). "Historically, one can speak of a market economy, in my view, when prices in the markets of a given area fluctuate in unison …" (1982: 227). This, Braudel thinks, has been the case in Europe since the twelfth century. The latter use of the word is what he is referring to when he speaks of economic life. Finally, because this market system was freely competitive and run by small traders and merchants, only small profits were earned; Braudel refers to it as "micro-capitalism" (1981: 562).

The top layer of Braudel's schema is the zone of capitalism:

> [T]he *agents* and men involved were not the same … the rules of the market economy regarding, for instance, free competition as described in classical economics, although visible at some levels, operated far less frequently in the upper sphere, which is that of calculation and speculation. At this level, one enters a shadowy zone, a twilight area of activities by the initiated which I believe to lie at the very root of what is encompassed by the term capitalism: the latter being an accumulation of power (one that bases exchange on the balance of strength, as much as, or more than on the reciprocity of needs) a form of social parasitism … (1982:22)

Braudel refers to it as the "anti-market" because the laws of the market do not apply here, or they apply only rarely. Consequently, this is the sphere in which the large profits are made.[2] A defining characteristic of capitalism is its flexibility and adaptability. Opportunities for huge profits opened up at different times, in different places, and in different spheres of economic activity. Capitalists had to be ready to take advantage of the opportunities when they arose: "the characteristic advantage of standing at the commanding heights of the economy … consisted

[2] For a detailed discussion of the distinction between the market and capitalism, see Wallerstein (2001: 207-17).

precisely of *not* having to confine oneself to a single choice, of being able, as today's businessmen would put it, to keep one's options open." (1982: 381) During the period from 1400-1800 that Braudel was analyzing, capitalism's "home ground" was the long-distance trade, including the financing of this trade:

> Long-distance trade certainly made super-profits: it was after all based on the price differences between two markets very far apart, with supply and demand in complete ignorance of each other and brought into contact only by the activities of the middleman. … [I]f super-profits vanished from one line, it was always possible to find them again on another route with different commodities. (1982:405)

Capitalism only occasionally entered into the sphere of production before 1800. However, after the Industrial Revolution in the nineteenth century, capitalism found a new home ground in industrial production (1982: 231-49).

Since capitalism was based on power, it depended on the state. State power was necessary to suspend the rules of the market economy, to guarantee the monopolies, and to protect the super-profits of the capitalists. But state power was controlled by the capitalists: "The city-states … were at this time tools completely in the hands of their merchants." (Braudel 1984: 51) Braudel considers Genoa and Amsterdam to have been city-states; Britain was the first territorial state to become a hegemon, but here, "England fell under the domination of its merchants fairly soon after the 1688 revolution" (Braudel 1984: 51), that is, well before its rise to hegemony. However, Braudel does acknowledge that there is the potential for conflict, because states and capitalism do not always have interests in common:

> [T]he state undoubtedly encouraged capitalism and came to its rescue. But the formula can be reversed: the state also discouraged capitalism which was capable in return of harming the interests of the state. … Capitalist interests, in the past as in the present, naturally extend beyond the narrow boundaries of the nation; and this prejudices, or at any rate complicates, the dialogue and relationship between state and capital. (1982: 554)

If Braudel only sketches the characteristics of, and the distinctions between, his three layers of analysis, he has even less to say about the connections between them. As Arrighi notes, echoing other critics, Braudel "does indeed describe more than he theorizes." (2001: 120) However, it is an exaggeration to say, as Tilly does, of Braudel's three-layer conceptualization: "It does not, however, reflect a causal hierarchy. It does not unfold a tight analytical model that guides the movement from one analysis to the next." (1984: 66) There is a causal analysis in Braudel, but like his descriptions of the three layers, it is scattered through his work. It is complex and contingent, and maybe not as "tight" as Tilly would like. However, it is not clear whether a "tight" causal model can really explain the broad sweep of historical time that both Braudel and Arrighi seek to deal with.

On the one hand, first the market and later capitalism grow out of the base of material life. As population increased, a division of labor became necessary, leading to the growth of towns and the need to exchange goods. The existence of towns required a supply of food from the

surrounding countryside, exchanged for goods produced in the towns. Markets were taken over by the towns, increased in number and became specialized (1981: 480-1; 1982: 25-44, 600-1). Gradually, various forms of private trading developed to evade the tightly controlled town markets and make larger speculative profits (1982: 45-9). But it was the opportunities for huge profits opened up by the long distance trade in the wake of European attempts to conquer the rest of the world that led to the birth of capitalism (1982:600-1).

On the other hand, once all three layers had been established, influence flowed primarily from the top down. The lower level of material life was a world of unthinking routine which was highly resistant to change. He calls it "this layer of stagnant history" (1981: 28). As the market economy expanded, more and more of the goods which were part of material life passed through the market, gradually changing the way people thought about them. A decisive development was the creation of labor markets: "The peasant who was paid a wage, … even if he received so much of his pay in kind that he practically never had two coins to rub together at the end of the year, had grown accustomed to reckoning in money terms." (1982:59) Thus the market slowly invaded and reshaped some of the layer of material life, rolling back its boundaries; but large parts of it still remained outside of economic life. However, it was the layer of capitalism that exerted the most influence on the other layers. The capitalists:

> … could manipulate exchange to their advantage and disturb the established order. … [T]hey created anomalies, 'zones of turbulence' and conducted their affairs in a very individual way. At this exalted level, a few wealthy merchants … could throw whole sectors of the European or even world economy into confusion, from a distance. (1981: 24)

Further:

> In a context where other structures were inflexible (those of material life and, no less, those of ordinary economic life) capitalism could choose the areas where it wished and was able to intervene, and the areas it would leave to their fate, rebuilding as it went its own structure from these components, and gradually in the process transforming the structures of others. (1981: 562)

Even the expansion of the market economy was often (though not always) driven by the top layer. During the sixteenth century, fairs spread across Europe. Braudel argues that "progress forward in the sixteenth century must have been achieved from *above*, under the impact of top-level circulation of money and credit, from one fair to another. Everything else would have depended on these international monetary movements …" (1982:135).

Braudel does note a couple of exceptions to this top-down causation. First, the layer of material life could be a site of active resistance against the forces of capitalism and the market:

> [T]he market economy had … been a restrictive order, and, like all restrictive orders, … it had created an opposition, counter-forces, both above and below itself. … [F]ollowing the 1973-4 crisis, we are beginning to see the development

> of a modern version of the non-market economy: hardly disguised forms of barter, the direct exchange of services … (1981:24-5).
>
> Nowadays, on the other hand, if there is a substantial sector outside the 'economy' or outside the market, it is more likely to reflect a refusal from below … (1982: 28-9).

Second, economic life is the main source of innovations that are later adopted by capitalism:

> The lowest level, not being paralyzed by the size of its plant or organization, is the one readiest to adapt; it is the seedbed of inspiration, improvisation and even innovation, although its most brilliant discoveries sooner or later fall into the hands of the holders of capital. (1984:631)

There is a clear causal hierarchy here; capitalism shapes the two lower layers much more than they shape capitalism. Further, the market tends to invade and colonize material life more than material life alters the functioning of the market. However, this does not preclude some causal influence from working in the opposite direction during certain conjunctures.

In this article, I seek to contribute to the research program set out by Arrighi, by venturing down from the heights of capitalism's systemic cycles of accumulation into the aspects of material life and economic life connected to the coffee commodity chain. I investigate how the coffee commodity chain evolved through Arrighi's four systemic cycles and to explore the connections between Braudel's three layers of analysis through this evolution. Coffee is an apt commodity for this type of analysis. It was introduced into Western Europe by Venetian traders during the Genoese systemic cycle, and has played an important role in the shaping of material life, the market economy, and capitalism as a system ever since. The coffee commodity chain is the linked sequence of activities involved in growing coffee, processing it, shipping it, roasting it, and selling it to consumers. Some of these activities, such as growing coffee or consuming it, may be phenomena of material life, while others, such as the transactions that move coffee along the chain from the grower to the exporter to the importer to the consumer, are primarily phenomena of the market economy. The overall structure and organization of the chain are often decided at the level of capitalism. The commodity chain as a unit of analysis thus encompasses activities at all three of Braudel's levels, within a structure that links them together so that a change in one activity is likely to spark changes in all other linked activities. The commodity chain is therefore an ideal unit of analysis with which to explore the connections among Braudel's three levels.

The introduction of an agricultural commodity into Braudel's conceptualization illuminates a fourth layer that serves as the foundation of his three-story house: the ecological layer. Although Braudel begins the first volume of the *Civilization and Capitalism* trilogy by introducing the concept of the biological regime, it does not play a major role in his analysis thereafter (Moore, 2003:42-5). However, there are several ecological characteristics of coffee production that impinge on the market, and through it, on material life and capitalism. First, coffee is a tree crop that takes 3-5 years after it is planted to begin producing; this means that coffee production responds relatively slowly to price signals emanating from the market economy. Thus coffee growers collectively tend to over-plant during periods of high prices, since the planting of new trees has no immediate effect on price levels. This over-planting typically

leads to oversupply and falling prices 3-5 years later. Second, coffee tends to produce cyclically; a heavy crop one year is followed by a lighter crop in the following year. These supply fluctuations can also cause price fluctuations in the market. In addition, coffee is susceptible to a variety of pests and diseases, and it is sensitive to environmental variations in rainfall and temperature; all of these factors can influence the amount of coffee that a tree will produce. All of this means that the amount of coffee produced from year to year and region to region can fluctuate rather widely and unpredictably, introducing a measure of uncertainty into the calculations of the market economy, and opening opportunities for speculation by capitalists (Talbot 2004: 31-5). Capitalism and the market also impinge on the ecological layer. Coffee was often planted on forested land cleared by slash and burn techniques; this facilitated erosion and rapid exhaustion of soil fertility, driving the growers further into the forest to clear more land to meet the demands of the market and the capitalists for more coffee (Tucker 2000).

THE GENOESE SYSTEMIC CYCLE

Arrighi's first, or Genoese, systemic cycle of accumulation began in the mid-fifteenth century and extended through the 16th century into the early 17th century. It was characterized by a relationship of political exchange between Genoese capitalists and Iberian rulers. The Genoese controlled European and Atlantic trade and provided the financing, and the Iberians provided military power and protection of trade routes, as well as an expanding New World empire from which to draw commodities for trade (Arrighi 1994: 109-32).

During the Genoese cycle, coffee was mainly an Islamic beverage, and its commodity chain was located outside the European world-economy. Although the origins of coffee drinking are obscure, it is fairly well established that coffee drinking was popular among the Sufis of Arabia Felix, now known as Yemen, by the fifteenth century. From there, during the sixteenth century, coffee drinking spread north through the Arabian Peninsula and beyond, reaching Cairo in the early 1500s and Istanbul around 1550. At the same time, although much less well documented, the coffee drinking habit was spreading east through Persia to India and west through northern Africa (Topik 2003: 26-7; Ukers 1935: 17-8). At first, the coffee probably came from Ethiopia, the place where arabica coffee is believed to have originated, where it was picked from wild bushes. As demand for coffee grew, peasant farmers in Yemen began to cultivate the crop in the mid sixteenth century (Wrigley 1988: 1-4; Hattox 1985: 12-26; Tuchscherer 2003: 50-2). Thus, during this time, coffee was an Islamic beverage, a commodity that circulated within a world-system separate from the European one (Braudel, 1984: 467-84).

The early coffee trade centered on the Red Sea port of Mocha, near the main area of coffee cultivation; Indian merchants carried it east from there, Egyptian merchants carried it north through the Red Sea, and Arab and Turkish merchants carried it overland through the Ottoman Empire (Wrigley 1988: 16-7; Hattox 1985:26-8; Tuchscherer 2003: 52-5). Although we know very little about these early non-European traders, it is likely that they, like the European long-distance traders, were motivated by large profits that could be made by carrying coffee from Mocha to distant cities where it was in demand (Hattox 1985: 72-3, 79; Tuscherer 2003: 53-4). However, the merchants in Mocha who sold the coffee probably also made considerable profits, because they enjoyed a monopoly on its supply, which they jealously guarded (Wild 2004: 75-6; Wrigley 1988: 38; Tuscherer 2003: 54-5).

In those early Islamic cities where coffee drinking became popular, it sparked a change in the material lives of the citizens: the rise of the coffeehouse. Hattox (1985) argues that coffee drinking spread not only because of the nature of the beverage itself, but because of the social rituals that grew up surrounding its consumption. "One went to the coffeehouse not merely because one wished to drink coffee. One went to the coffeehouse because one wished to go out, to spend the evening in the society of his fellows, to be entertained, to see and be seen." (89-90) Hattox argues that this was a new phenomenon in Islamic cultures, where all meals were prepared and eaten in the home, and the only public venue available for socializing was the tavern, where no devout Muslim could afford to be seen. This social aspect of coffee drinking was also what led to periodic attempts by various rulers to ban the beverage as unacceptable under Islamic law; what the rulers were really concerned about, Hattox (1985: 91, 100-3) argues, was what those gathered at the coffeehouse were talking about, and where that talk might lead.

Once coffee drinking had become established in cities like Cairo and Istanbul, it was encountered by European travelers, who brought back stories of the hot, dark brew consumed by the Arabs (Wrigley 1988: 12; Ukers 1935: 18-9). Venetian merchants, who controlled the eastern Mediterranean trade (Arrighi 1994: 91, 115), were probably the first to bring coffee into Western Europe, around 1600, from Alexandria or Istanbul. The Dutch first imported coffee from Mocha into Amsterdam in 1616 (Wrigley 1988: 16, 24). During the latter half of the seventeenth century, coffee drinking would spread through the major urban centers of Europe.

Coffee thus entered the European world-economy toward the end of the Genoese cycle, as one of the many exotic products being brought in by explorers and traders. It was a novelty, probably consumed by a few small groups of very wealthy individuals in the major cities. However, there was a thriving coffee commodity chain during this cycle, which connected production in Ethiopia and Yemen with consumption located throughout the Islamic world and beyond. From what little we know about the chain during this period, it seems probable that its growth was driven by changes in material life. The cultural innovation of the coffeehouse led to increasing demand for coffee. Once the coffee drinking habit had spread beyond Yemen, coffee necessarily became a marketed commodity, since it was not grown in the other places where it was consumed. However, there was not yet a market economy in Braudel's sense, with prices moving in unison in the different urban coffee markets. This opened the opportunity for large profits to be obtained by the Mocha merchants and the long distance traders who served as the middlemen, both capitalist in the Braudelian sense of using market power to obtain super-profits. Where the European world-system of the Genoese cycle intersected with this non-European trade circuit, in the eastern Mediterranean, Europeans "discovered" coffee and began to use it. Its consumption would spread rapidly through Europe during the Dutch cycle, and the major world powers would begin to restructure the commodity chain and incorporate it into the expanding European world-system.

THE DUTCH SYSTEMIC CYCLE

Arrighi dates the second, Dutch-led systemic cycle of accumulation from c. 1640, after the United Provinces won independence from Spain and used their control over the Baltic trade in grains and naval stores to consolidate their position as the hegemonic power in the world-economy. Dutch hegemony was again based on an alliance between political/military and economic powers, but

this time *within* the territory of the United Provinces. The organizational innovation of the Dutch that allowed them to surpass the Genoese was the internalization of the protection costs involved in protecting their trade routes. The material expansion of the Dutch cycle lasted through the mid-1700s, followed by a financial expansion through the rest of the century. By the 1790s, Britain had taken over as the hegemonic power in the world-economy (Arrighi 1994: 132-44).

Once coffee had been "discovered" during the Genoese cycle, its use spread rapidly during the Dutch-led material expansion. One chronology of the first openings of coffeehouses in major cities illustrates this: Venice 1645, London 1652, Marseilles 1659, Amsterdam 1663, Paris 1675, Hamburg 1679, and Vienna 1683 (Burgin 1978, cited in Wrigley 1988: 32). These coffeehouses were meeting places for political, economic, and literary elites, but were also frequented by not-so-wealthy middle classes and professionals (Wrigley 1988: 24, 28-9; Heise 1987: 37). As coffee drinking spread through Europe, it also spread to new and larger segments of the population. Demand for coffee therefore must have grown fairly rapidly during the Dutch period of material expansion.[3]

At the beginning of this period, Yemen was still the only place in the world where coffee was grown commercially (although wild Ethiopian coffee was also being imported into Yemen for local consumption and for re-export), and its merchants enjoyed a monopoly (Tuscherer 2003:54-5; Wild 2004: 75-6). But the growing demand for coffee, and the opportunities to profit from its trade, led the Dutch and the French to attempt to break Mocha's monopoly on the trade, by creating new sources of supply more directly under their control.

The first important commercial plantings of coffee outside Yemen were made by the Dutch in the 1690s, in Java and Ceylon.[4] During the 1720s, Java eclipsed Mocha as the major source of coffee for the Amsterdam market, Europe's most important (Wrigley 1988: 16; Topik 2003: 28). However, the Dutch strategy was also to focus on trade, not production (Arrighi 1994: 150-8). They devised a system to force Javanese peasants to produce coffee by using local rulers as their agents. They signed agreements with these rulers obliging them to deliver a set amount of coffee to the VOC (the Dutch East Indies Company) at a fixed price. These local rulers then forced peasants under their control to grow the coffee (Fernando 2003: 159; Ukers 1935: 40). The Dutch also attempted to enhance their trading profits by creating a monopoly of supply. They were able to do this forcibly for the spice trade in the East Indies (Arrighi 1994: 150-8), but were unable to eliminate Mocha as an alternate source of supply for the coffee trade. However, they did try to use their control over the supply from Java to augment their control over the Indian Ocean trade, undercutting the Indian merchants who had previously controlled it[5] (Topik 2003: 27-8; Wild 2004: 98-100).

Dutch attempts at controlling the supply of coffee were short-lived. Once the Dutch broke the Arab monopoly, another rising mercantilist power, France, also got into the business of globalizing coffee cultivation. They introduced coffee to the island of Bourbon (now Réunion) in 1715, and it rapidly, if briefly, became a major coffee producer. Here coffee was grown directly

---

[3] This was rapid growth from a very small base, so that even at the end of the Dutch cycle, total consumption was fairly low by modern standards, and it was found only among the urban upper and middle classes.

[4] Some coffee had probably been planted earlier along the southwest (Malabar) coast of India, but it is unclear by whom, and this coffee was not an important factor in world trade at this time.

[5] Even before coffee drinking took off in Europe, the VOC was profiting from the Indian Ocean trade, carrying coffee from Mocha to India.

by French planters using slave labor (Campbell 2003: 68-9). This exemplified the French and British mercantilist strategy, which was soon to overtake the Dutch, of exerting direct control over production (Arrighi 1994: 176-7). The labor necessary to pursue this strategy was supplied by slavery.

From these beginnings in Java and Bourbon[6], coffee quickly spread to the New World, but via Europe. Coffee was raised in the Amsterdam and Paris botanical gardens, and seedlings from these plants were carried to Surinam by the Dutch in the early 1700s, and to Martinique by the French in the 1720s. Surinam and Martinique would be the source for most, if not all, the coffee trees that diffused throughout the Americas in subsequent centuries (Wrigley 1988: 40-7; Ukers 1935:2-5). From Martinique, coffee was introduced into Saint-Domingue (Haiti), which became a major producer in the second half of the century, until the 1791 revolution (Trouillot 1982: 337-8). The British also introduced it into Jamaica in about 1730 (Ukers 1935: 70), but Jamaica only became a major producer, briefly, after a slump in world sugar prices and the arrival of Saint-Domingue planters driven out by the revolution, in the early 19th century (Delle 1998: 50-2). Coffee from Surinam or French Guiana was introduced into Brazil in the 1720s, and coffee from these and other sources spread through other Caribbean, Central and South American colonies in the latter half of the 18th century (Wrigley 1988: 46-50; Ukers 1935: 5). Latin Americans would become the world's major producers only after their countries achieved independence in the 1820s. All of these developments during the Dutch cycle brought the coffee commodity chain more firmly under European control. Consumption spread through Europe, and most production was now within the boundaries of the expanding European world-economy (Trouillot 1982: 339-40). But the spread of production itself was also a part of the outward expansion of the boundaries of the system, as new areas of the world outside of Europe were linked to the core of the system, as suppliers of coffee.[7]

As was the case for the Islamic-controlled commodity chain during the Genoese cycle, the main driving force behind the development of this new, European-controlled coffee commodity chain was at the level of material life. Just as the coffeehouse filled a social need in Islamic societies, so it did in European cities. As coffeehouses spread through Europe in the second half of the 17th century, demand increased, but Mocha was still the only source of coffee. The long-distance traders were the key connections between these export and import markets. European coffeehouse owners had no direct knowledge of coffee production or of the supply available in Mocha; and the Arab merchants in Mocha who sold it could only infer information about final demand for coffee in Europe from the amounts purchased by the traders. Further, there were no regular markets for coffee in the early days of this trade. The arrival in Mocha of a European trader wanting to buy coffee raised local prices (Wrigley 1988: 16). Conversely, the arrival of a new load of coffee in Amsterdam probably depressed local prices (Topik 2003: 29).

---

[6] The names of these earliest coffee production sites were used to denote types of coffee in the early trade, and they have become a part of contemporary coffee lingo. Mocha is still used to denote the type of coffee grown in Yemen, and is often applied to coffees with similar taste characteristics. Java became an American slang word meaning coffee in general, as well as denoting coffee produced on the island of Java, which is a constituent of the oldest and best known coffee blend, Mocha Java. Bourbon today is used to denote a specific variety of Arabica coffee tree, supposedly a direct descendant of the trees that were brought from Bourbon to Martinique by way of Paris.

[7] This process involved other commodities besides coffee; foremost among them sugar, which was the main plantation crop of both Saint-Domingue and Jamaica.

But there was little correlation between prices in Mocha and Amsterdam. This created a situation in which the traders, the only ones who had some information about both supply and demand, were able to make large profits by maximizing the spread between the purchase price at Mocha and the selling price in Amsterdam.

All of this made the coffee trade part of the "home ground" of capitalism, in Braudel's terms. This trade also provided the impetus for capitalism to venture into the realm of production. By gaining control over the supply of coffee, long distance traders could lower the purchase price and eliminate the uncertainties associated with buying coffee from Mocha. While the Dutch capitalists did not invest directly in production, but worked through Javanese intermediaries, the French and British capitalists did move into production, initially in Bourbon and Jamaica, respectively. However, this spread of production through the newly colonized areas would not have been profitable without expanding European demand. As Europeans gained more control over production and the supply of coffee increased, the trade became regularized, competition increased, and the rate of profit declined. Topik (2003: 29) argues that the world coffee market became more integrated by the second half of the 18th century, and that prices in Amsterdam became more stable. In addition, with rising consumption, the volume of coffee flowing into Europe increased substantially. All these factors combined meant that the Amsterdam coffee market was a more competitive market by the end of the 18th century. In Braudel's terms, then, the coffee trade became a part of the market economy. This shift of coffee from the realm of capitalism down to the level of the market economy roughly coincides with the transition from the material expansion of the Dutch cycle to its financial expansion.

The social aspects of coffee consumption embodied in the coffeehouses seem to place them at the level of material life, according to Braudel's definition. But the relationship between capitalism, the market, and material life in the coffeehouse phenomenon was much more complex. It illustrates the difficulty of separating the three layers in Braudel's schema, even at this relatively early period in the history of the European world-economy. This is best documented for the London coffeehouses, which I discuss presently, although similar social processes were probably happening in other major European cities at this time as well (Heise 1987: 130-40; Wrigley 1988: 33; Ukers 1935: 93-100). First, coffee, as a tropical crop, could never be a part of Europe's informal, subsistence economy. If the Europeans wanted coffee, they had to venture to the tropics to get it. This meant that European coffee drinkers were integrated into a world market. Even so, we can still place coffee drinking firmly within the level of material life, since the stimulative effect of the brew and the sociability of the coffeehouses were the main reasons that people consumed coffee. They did not value it for its exchange value, but for its use value.

Coffeehouses also became meeting places for merchants and others, where important business was conducted. Perhaps most famous was Edward Lloyd's coffeehouse, which was frequented by merchants engaged in long-distance trade, ship owners, and insurance underwriters. The *ad hoc* deals arranged in this coffeehouse would in time evolve into Lloyd's of London (Ukers 1935: 80-1; Wrigley 1988: 28; Schivelbusch 1992: 49-51). Jonathan's and Garraway's became meeting places for stock brokers, and the birthplaces of the London Stock Exchange (Wrigley 1988: 28). The Jerusalem Coffee House was a gathering place for agents of the East India Company (Wild 2004: 86). Heise (1987: 128) argues that "the coffee-house lent major impetus to the evolution of the bourgeoisie from a class in itself to a class for itself, and to the latter's emancipation from the aristocracy and the clergy." While this may be a bit of hyperbole, it

is clear that major institutions of the market economy, as well as strictly capitalist ventures, were organized through the coffeehouses. Here we see all three of Braudel's layers interwoven in a way that is very difficult to separate, even analytically. When a ship owner and a merchant who were planning a voyage to China went to Lloyd's, bought cups of coffee, and sat down with an underwriter to negotiate insurance for the trip, as well as to discuss current affairs, was this material life, the market, or capitalism?

The impact of coffeehouses on society went well beyond the economic. Political, literary, and scientific elites all had their favorite, "specialized," meeting places. The Royal Society was founded in Tillyard's Coffeehouse, which was frequented by scientists such as Edmund Halley and Isaac Newton (Wild 2004: 89-90; Wrigley 1988: 25). Richard Steele's *Tatler* and Joseph Addison's *Spectator* emerged from Button's, one of the leading literary coffeehouses, and they gathered material for their journals at various other coffeehouses (Heise 1987: 131; Wrigley 1988: 29; Ukers 1935: 75-6). Republicans met at the Turk's Head Coffeehouse, while the Royalists met at Tillyard's; Whigs met at St James', while Tories met at the Cocoa Tree (Wild 2004: 88-92; Ukers 1935: 55-6; Wrigley 1988: 30). Coffeehouses became known as "Penny Universities," because the price of admission was often one penny, while a cup (or dish, as it was called) of coffee could be had for one or two pennies more. For this price, one could listen to, or participate in, discussions of the great ideas of the time, often involving some of the leading minds of the time (Ukers 1935: 69-70; Wild 2004: 87). It could be argued that the coffeehouses were incubators of what today would be called civil society, a potential counterweight against the forces of the market, hence, a part of material life for Braudel. Material life does not just roll back and weaken under the onslaught of capitalism and the market economy, but retains the ability to rejuvenate and expand in new ways.

While the development of a European-controlled coffee commodity chain had many positive effects on material life in Europe, the effects on the material lives of those peoples incorporated into the expanding world-system through coffee production were certainly disastrous. The penetration of capitalism into their material lives led to the imposition of coffee cultivation in Java, in the more benign case. Javanese peasants surely resented the imposition, but little is known about their reactions to it during this early period. The evidence suggests that their resistance was mostly passive. Yet the Dutch were able to obtain significant amounts of coffee through this system (Fernando 2003).

In the other early colonies where coffee was grown with slave labor, the effects are widely known. Africans were ripped from their old material lives and transplanted to completely different ones in plantation-slave economies in Reunion and the Caribbean, and later Brazil, in order to produce coffee for the European markets. This was the epitome of capitalism, throwing "whole sectors of the … world economy into confusion, from a distance." (Braudel 1981: 24) There were revolts and rebellions against this destruction of material life by capitalist forces, most notably the Haitian revolution. Sugar was a more important force behind the development of these slave economies and the rebellions against them, but coffee also played an important role. Trouillot (1982) argues that it was the introduction of coffee into Haiti that destabilized the sugar-plantation slavery system and made the revolution possible.

Coffee consumption appears to have grown rapidly during the material expansion of 1640-1740. This opened the possibility for super-profits to be earned by capitalists, first by controlling trade, and later by controlling production. This led to the global expansion of coffee production and the incorporation of new regions into the expanding world-economy. During the

financial expansion of the late 18th century, this growth appears to have tapered off. Coffee consumption had probably saturated the markets among the urban upper and middle classes in Europe, and the slowing of growth in demand probably made it less urgent to secure new sources of supply. Profitability in the coffee trade was also lower, removing incentives to bring new areas into production. Profits continued to be made from the coffee trade, but they were probably increasingly invested in other financial dealings. It would take the spread of coffee consumption to the working classes during the British cycle to set off a new round of expansion.

THE BRITISH SYSTEMIC CYCLE

By the 1790s, Britain had displaced the United Provinces as the hegemonic power in the world-economy. The organizational innovation that propelled the British forward was the internalization of production costs, achieved by bringing the peripheral areas where the raw materials for British industry were produced within the expanding boundaries of the British Empire. The material expansion of the British cycle stretched through the 1870s, with two distinct phases. For the first 50 years, the "endless accumulation of capital" was achieved through investment in expanding industrial production in Britain. However, beginning in the 1840s, there was a massive export of British capital to peripheral areas. This in turn stimulated a massive increase in raw material flows back to Britain. The financial expansion began in the Great Depression of 1873-96 and ended in the Great Depression of the 1930s (Arrighi 1994: 159-74). Latin America was one of the major destinations for the exported British capital, which touched off an export boom of raw materials from Latin America to Europe and North America. Coffee was the most important export of Latin America during this boom (Topik and Wells 1998: 8; Topik 1998: 38).

Once again during the British cycle, the uses of coffee in material life seem to have been the driving force behind the expansion and reorganization of the coffee commodity chain. Coffee consumption spread from the middle and upper classes to the new industrial working classes being created by the industrial revolution. Ironically, despite the central role of British capital in the Latin American export boom, most of the coffee exports did not go to London. British mercantilists and the state had built their economic and military power on the trade of tea from China[8], sugar from the Caribbean, and slaves from Africa to produce the sugar. When the Industrial Revolution created a large working class in Britain in the early 19th century, tea with sugar provided an important part of their sustenance (Mintz 1985: 110-9).[9] However, the situation in the other industrializing core powers was different, and coffee became the beverage that kept workers awake for long hours in the factories. Most important among these was the U.S., whose break from Britain was symbolized by the Boston Tea Party, confirming its national identity as a coffee-drinking country (Ukers 1935: 102-3; Wild 2004: 127-38). During its early industrialization, between 1830 and 1900, U.S. per capita coffee consumption rose from three to

[8] The British began planting tea in India only after they had achieved hegemonic status, in the 1830s. And although Britain had been a major coffee consuming country in the second half of the seventeenth century, by the early eighteenth century, tea had replaced coffee as the hot beverage of choice. This change was driven by the East India Company and the state, which both derived far more revenues from tea than from coffee (Mintz 1985:110-9; Schivelbusch 1992: 79-84: Ukers 1935: 70).

[9] In a parallel with coffee, this expansion of tea consumption encouraged the British East India Company to break China's monopoly on the supply of tea by planting it in India.

thirteen pounds annually (Jimenez 1995: 39-40). France and Germany were the major European coffee importers (Samper and Fernando 2003: 443). The British still traded in coffee, and London was a major coffee port because it was the financial center of the world, but it served mainly as an entrepôt for the European trade (Topik 2003: 39).

During the Dutch cycle, coffee had been introduced into most of the major regions of the world where it could be grown. During the British cycle, the late entrants surpassed the older, established producing regions. The Caribbean had become the most important coffee-growing region toward the end of the Dutch cycle, with Saint Domingue being the largest producer up to the time of the revolution. After the revolution, the center of Caribbean coffee production briefly shifted to Jamaica and Cuba, before Haiti recovered its position as a major producer by the 1820s (Samper and Fernando 2003: 428).[10] Coffee had been introduced into many Latin American countries from the Caribbean during the late 18th and early 19th centuries, but had not become a major product. The most important early producers were Brazil, Venezuela, and Costa Rica, but none were major exporters until the 1820s. Colombia, Guatemala, El Salvador, Nicaragua, and Mexico became significant producers toward the end of the 19th century (Roseberry 1995: 6, 11; Samper and Fernando 2003: 424-35). It was not until the countries of Latin America won independence from Spain and Portugal that the center of world coffee production shifted there. Brazil rapidly emerged as the dominant producer.

The mass consumption of coffee in the U.S. and Europe, and the mass production of coffee in Brazil, were mutually reinforcing developments. Brazil's supply of huge volumes of relatively cheap coffee was the precondition for the rapid expansion of coffee consumption by the working classes. At the same time, Brazil could not have expanded production so rapidly, and achieved economies of scale in production and transportation, if not for the growing demand for coffee among European and American working classes (Topik 2003: 31-8). While U.S. per capita coffee consumption rose from three to thirteen pounds, Brazilian coffee exports increased from 30,000 to 600,000 metric tons (Samper and Fernando 2003: 432-3).

Brazilian production was based on slave labor for most of the 19th century. The importance of coffee to the economy, and the importance of slave labor to coffee production, may have delayed the abolition of slavery, which didn't happen until 1888 (Topik 1998: 43). This was one factor in the cheapness of Brazilian coffee. But an equally important factor was the availability of huge expanses of virgin land that could be cleared and planted in coffee (after the indigenous inhabitants had been removed). These new plantings were considerably more productive than land that had been under coffee cultivation for many years.[11] Here British capital played the crucial role, supplying the capital necessary to build an extensive railway network. The new railroads opened up virgin lands in the interior to coffee cultivation and made the transport of

---

[10] Jamaican production declined drastically in the 1830s; Cuban production did the same in the 1840s.

[11] An additional factor was the way Brazilian coffee was harvested and processed. It was harvested by stripping the branches of the trees, collecting ripe and unripe cherries together, rather than picking only the ripe cherries. This method meant that all the coffee could be picked with one pass through the trees, rather than the several passes required by the method of picking only the ripe cherries. It also meant that less skilled labor was required. The coffee was processed by the dry method, in which the cherries were dried in the sun and then the cherry, parchment and silverskin coatings were all removed in one hulling operation. This was cheaper than the wet processing method, in which the fresh cherries were depulped, fermented, washed, and then dried, and the parchment and silverskin coatings removed in a later, separate hulling operation. The Brazilian method produced coffee of lower quality, but at a significantly lower price.

massive quantities of coffee to the ports economically feasible. Beginning in the middle of the 19th century, the steamship revolution also made transportation from Brazilian ports to Europe and the U.S. somewhat cheaper, much quicker, and more reliable (Topik 2003: 31-6; 1987: 59-63).

The coffee commodity chain shifted geographically in this cycle. The archetypal coffee trade route during the Dutch cycle had been Java to Amsterdam; under the British cycle it was Brazil to New York. The form of transactions also shifted. Mercantilist transactions that operated within imperial spheres gave way to market transactions between U.S. and European trading firms and Latin American exporters.[12] It seems that rising hegemons are already testing and perfecting their organizational innovations well before they attain hegemonic status. The British (and French) were already internalizing production costs through colonial coffee production during the Dutch cycle, and during the British cycle, the U.S. was perfecting a new form of neocolonial domination of nominally independent nations. Already, there was heavy U.S. and European participation in the Latin American export firms (Topik 1998: 58-60). This allowed the traders to drive down export prices and maximize the price spreads between export and import markets, thus earning large profits. Finally, the volume of coffee flowing through the chain also expanded dramatically as coffee went from a luxury item to a mass consumption good.

The British cycle represents a major change from the Dutch in the relative importance of material life, the market, and capitalism. Capitalism moves into new home grounds, the layer of the market greatly expands, and consequently, the layer of material life recedes. With the coming of the Industrial Revolution, capitalism began to radically restructure the material lives of the vast majority of the population that had been confined to that "layer of stagnant history" (Braudel 1981:28). As peasants were drawn or driven off the land and into the factories to become the new working class, they needed a stimulant to get them up in the morning and keep them awake through a long working day. While tea provided that stimulation in Britain, coffee provided it in Continental Europe and the U.S.. Consequently, there are important differences between the ways that coffee was used by the upper classes in the coffeehouses of the Dutch cycle and by the working classes of the British cycle. Coffee began to move out of the coffeehouse and into the home (Jimenez 1995: 39-41). As a result, the focus of coffee consumption moved from the social rituals surrounding it to the physical effects of the beverage. This changed the way people thought about coffee, from a beverage that promoted alertness and mental agility for conversation and debate, to a much more instrumental orientation: coffee was an aid that helped them to earn a wage. In other words, coffee drinking began to move out of the realm of material life and into the realm of the market economy.

Capitalism had already relinquished the long distance trade in coffee by the financial expansion of the Dutch cycle, as the trade became more regular and competitive. During the British cycle, a few capitalists who managed to gain market power in both exporting and importing markets were able to manipulate the markets to earn large profits, but trade was no longer the main locus of capitalism. It had been involved in the spread of colonial production during the Dutch cycle, but this option also began to decline during the British cycle. Capitalism now moved directly into production, in Brazil. The increasing demand for coffee by the growing U.S. working class was expressed at the level of the market economy. Brazilian planters read

[12] Some mercantilist transactions between European colonial powers and their colonies continued, but they were no longer the most important ones.

these market signals, realized that there was money to be made from coffee, and greatly expanded their production. In the process, they created a demand for British capital goods in the form of iron to build the railroads, at a time when British capitalists were looking for investment opportunities outside Britain in order to continue their accumulation of capital. I refer to the Brazilian planters as capitalists in Braudel's sense of the word, because they based their production on slave labor to minimize costs, and because they took over and cleared massive tracts of new land to plant coffee. Both required the exercise of power (in alliance with the state) and enabled the planters to earn profits larger than they would have on a competitive market (Dean 1969: 6). However, these were *peripheral* capitalists; they were producing for a world market controlled by Brazilian export firms (many foreign controlled) and U.S. and European import firms. They could not set their own prices for the coffee, and hence probably did not earn super-profits. Further, the financing required for this venture was beyond the capacity of local capital and the state, hence the necessity of drawing in British capitalists to help build the railroads, and share in the profits. However, as a result of this process, the Brazilian planters were able, by the late 1800s, to construct a near-monopoly in coffee production, through which they would attempt to exert their market power.

Once again, these changes at the level of the market economy, as well as at the level of capitalism as a system, had impacts on the material lives of the people growing the coffee. In the case of Brazil, coffee was grown by slave labor until abolition in 1888, although the importation of *colonos* had begun in the 1870s (Dean 1969: 35-6). Under the *colono* system, the state subsidized the importation of European workers to work the plantations under one-year contracts. This resulted in "the only instance in history in which massive numbers of Europeans crossed the Atlantic to work on semitropical plantations." (Topik 1998: 45) Since the *colonos* were free to move after the ends of their contracts, and since the rapid expansion of coffee created severe labor shortages, the *colonos* were much better treated than the slaves had been (Topik 1998: 48-50; Dean 1969: 42). Many *colonos* worked the plantations for only as long as it took them to acquire their own land; thus the *colono* system led to the growth of a sector of independent, small-to-medium size, market-oriented farmers alongside the plantation sector[13] (Font 1990: 11-22).

As Brazilian production grew to over 50% of total world production by the 1850s, events in the Brazilian coffee regions became more closely linked with developments in the coffee markets of the U.S. and Europe. The use of steamships to transport the coffee and the use of transatlantic cables to transmit information about coffee supplies and prices made this linkage much tighter than it had been during the Dutch cycle (Topik 2003: 32-4). Under these conditions, the ecology of coffee production, which caused wide variations in Brazilian production, could have effects similar to capitalism, throwing "whole sectors of the … world economy into confusion, from a distance" (Braudel 1981: 24). The instability of supply helped to make coffee an object for speculation by capitalists in the main consuming market, the U.S.. An alliance of three large import firms, known as the Trinity Syndicate, manipulated prices through the 1870s

[13] However, the small-to-medium sized farms in Brazil would have been considered large to very large in most other coffee growing countries. Font (1990: 17, 282-3) defines smallholders as owners of less than 20,000 coffee trees. He estimates that this translates into a farm of less than 60 hectares. And these "smallholders" only produced 30% of Brazil's coffee by 1930, so in the late 1800s, coffee was still a plantation crop.

by buying up large amounts of coffee to create artificial shortages. When the syndicate collapsed in 1880-81, its losses were variously estimated at between $5 and $10 million; this suggests the magnitude of the speculative profits that had been made. This episode led directly to the founding of the New York Coffee Exchange, a futures market to help regulate and stabilize the coffee market. However, speculators still attempted to manipulate both the Coffee Exchange and the market for physical coffee (Jimenez 1995: 42; Pendergrast 1999: 63-9).

Ecological effects also magnified the rise of Brazil to dominance in coffee production in the late 1800s. Coffee leaf rust, a fungus that attacks the trees, spread through Ceylon and Java, the second and third largest producers after Brazil, in the 1870s and 1880s (Samper and Fernando 2003: 424-40; Clarence-Smith 2003: 101-11). In Ceylon, planters gave up on coffee and started planting tea or rubber, while some coffee production continued on Java and the other islands of Dutch Indonesia (Clarence-Smith 2003: 110-3). Declining Asian production combined with a frost in Brazil in 1887 caused a shortage of coffee on world markets and a period of high prices through the mid 1890s (Topik 2003: 35; Samper and Fernando 2003: 451). Brazilian growers responded to the high prices by planting massive numbers of new coffee trees. The number of trees in Sao Paulo state alone increased fourfold in fourteen years (Topik 2003: 35). As the new trees began to produce, Brazilian exports began to grow rapidly in the mid 1890s, causing prices to fall by 50% between 1895 and 1897 (Samper and Fernando 2003: 451). Some growers realized that overproduction was the cause, but others blamed the U.S., British, and German exporters who dominated the Brazilian export trade for manipulating prices. Growers and their political representatives floated numerous plans to rescue the coffee sector, but the Brazilian state, committed to a liberal, non-interventionist stance, refused to intervene (Topik 1987: 62-7).

Prices had recovered only slightly by 1906, when the forecast of a record crop sent panic through the coffee regions (the actual 1906 crop turned out to be 50% higher than the previous record) (Topik 1987: 67). Brazil at this point produced about three-quarters of the world's coffee, and the world price was already low due to the persistent overproduction. A crop that large in Brazil could have caused the price to fall to near zero, ruining many large Brazilian growers. Since the federal state had declined to intervene previously, the state governments of the main coffee-producing states decided to go ahead on their own.[14] They agreed to buy surplus coffee and hold it off the market to prevent the price from collapsing (Holloway 1975: 44-55; Topik 1987: 67-8). They could then gradually sell it off in succeeding years in such a way as to not undercut the price.[15] However, they needed financial backing in order to buy the coffee and hold it until it could be sold. The Rothschilds, the most powerful London financial house and the main source of foreign loans for the Brazilian state, refused to get involved because they didn't think the plan would work. Herman Sielcken, head of one of the largest U.S. coffee import firms, put together the necessary financing. He ended up controlling the surplus coffee and using it to squeeze the market to make huge profits. But the intervention worked, in the sense that it did prevent the price of coffee from collapsing. This first valorization plan, as it was called in Brazil, set the pattern for future interventions by the Brazilian state. Once the Sao Paulo state

[14] Sao Paulo, Minas Gerais, and Rio states originally agreed to participate in the valorization, but ultimately only Sao Paulo, which stood to be the main beneficiary in any event, carried it out. Thanks to Steven Topik for this clarification.

[15] Because of the two-year bearing cycle, Brazilian production was virtually guaranteed to be significantly lower in 1907, so that at least some of the retained surplus could be sold relatively quickly.

government had proved that intervention could work, the federal government got involved in subsequent valorizations, as did the Rothschilds, and this eventually led to the Permanent Defense of Coffee, which institutionalized state regulation of the coffee sector (Holloway 1975: 56-75; Topik 1987: 71-92).

This story illustrates the complexity of the relations between state and capitalism, and adds the dimension of core-periphery relations. Peripheral capitalism, in the person of the Brazilian planters, faced ruin in the market. They appealed to the state to subvert the operation of the market. Sao Paulo state, more directly under the control of the planters, complied, but the federal state was drawn in only reluctantly. However, neither the peripheral state nor peripheral capitalism could command the funds to finance the operation. They had to rely on capitalists in the core. Even they were hesitant to take the risk, but Sielcken and those who were willing made the super-profits; all the peripheral capitalists got from the deal was their own survival. After Sielcken demonstrated the viability of the scheme, other core capitalists were more willing to participate in future valorizations, but they almost certainly earned much lower profits. Sielcken's super-profits came not from his investment in the valorization, but from subverting the operation of the market – using his control over the valorization coffee to manipulate coffee markets in the U.S.. This manipulation forced coffee consumers to pay higher prices, and thus eventually attracted the attention of the U.S. state, which forced Sielcken to sell off the remaining valorization coffee, but not until 1913 (Holloway 1975: 69-75).

The U.S. speculators who made super-profits on coffee, represented by the Trinity Syndicate and Herman Sielcken, were the capitalist heirs of the long distance traders of the Dutch cycle. They were coffee importers, in a position to possess the most up-to-date information about production and exports from Brazil, and from other producing regions, information that the people who bought coffee from them were probably not privy to. However, they did not earn their super-profits by buying and selling coffee on the market, but by manipulating it; that is, they were operating at the level of the anti-market, as Braudel would say. Further, this manipulation required access to huge amounts of liquid capital, and its growth coincides with the beginning of the financial expansion of the British cycle, around 1870. The New York Coffee Exchange itself was a creature of the financial expansion, a new market where those who possessed huge amounts of capital could attempt to multiply it through financial dealings.

Once again during this cycle, it seems that a rapid increase in coffee consumption during the material expansion triggered not only an increase in production, but a geographic shift in its center. During the Dutch cycle, the center had shifted from Mocha to Asia (Java, Ceylon, India). During the transition to the British cycle, it shifted briefly to the Caribbean (Haiti, Jamaica, Cuba), and during the British cycle, to Latin America, particularly Brazil. In this case, there was a lag in the shift because the British were tea drinkers. Therefore the biggest increase in consumption and production came in the second half of the 19th century, as the U.S. working class, and its coffee consumption, grew rapidly. This means that the expansion of consumption and production continued well into the period of financial expansion, whereas it had probably slowed during the financial expansion of the Dutch cycle. However, consumption stagnated after 1900 (Jimenez 1995: 42-5), and probably declined during the world depression of the 1930s. It would take the initiation of a new systemic cycle, under U.S. leadership, to revive it.

THE U.S. SYSTEMIC CYCLE[16]

The fourth (U.S.) cycle began in the 1940s, with a very brief period of material expansion lasting until the early 1970s, and a financial expansion which may now be experiencing its terminal crisis. The organizational innovation of the U.S. cycle was a diversified and integrated national economy (as opposed to the British economy's integration with its colonies) and the internalization of transaction costs within large vertically integrated transnational corporations (TNCs) (Arrighi 1994: 269-300). The U.S. oversaw the decolonization of most of the former European colonies and their integration into the capitalist bloc during the period of material expansion, and the integrated U.S. economy became the development model for these new nations (McMichael 2004: 14-36).

Brazil's Permanent Defense of Coffee led logically to efforts to enlist major Latin American coffee producing countries into efforts to control the supply of coffee on the world market. These other Latin American countries had benefited from Brazil's unilateral efforts to support the world market price and had expanded their production during the early 1900s, but their growing market shares undermined the effectiveness of Brazil's efforts. However, they refused to cooperate in supply management, and during the 1930s, the Brazilian state was forced to destroy massive amounts of coffee that it had stockpiled to support the price, because that was cheaper than continuing to hold it. As war engulfed Europe, Latin American producers began to lose access to the European coffee market, leaving them with huge surpluses and threatening a collapse of the world market worse than had been anticipated in 1906. U.S. officials feared that the economic devastation caused by such a collapse might drive the Latin Americans, particularly Brazil, into alliances with the Axis powers. They proposed an Inter-American Coffee Agreement. Each Latin American country would be given an export quota for the U.S. market. This would control the flow of coffee into the U.S. market and head off potential cutthroat competition that could lead to a price collapse. Producing countries would receive reasonable prices for the coffee they exported, and they could then afford to store their surplus coffee and hold it off the market to support the price. This agreement would provide a model for future coffee agreements. In this case, we have an alliance of the U.S. and peripheral states acting to regulate the market, in the geopolitical interest of the U.S., but also in the long-term interests of the U.S. coffee trading and roasting companies, which would be assured of reasonably stable future supplies and prices. Coffee growers and peripheral capitalists who controlled coffee processing and export also benefited.

After World War II, as the European market again became accessible, and as coffee consumption increased after wartime controls were lifted in the U.S., world demand for coffee increased rapidly, and shortages developed. There was also a spread of coffee consumption beyond the traditional markets of the U.S. and Europe, which further increased world demand for coffee.[17] One impact of the U.S. occupation of Japan was a rapid increase in coffee consumption

[16] Unless otherwise noted, all material in this section is drawn from Talbot (2004).

[17] U.S. coffee consumption actually began to decline in the 1960s, and coffee was surpassed by soft drinks as the favorite U.S. beverage in the late 1970s. This decline was only arrested by the specialty coffee revolution that began in the 1980s, although the decline leveled off in the 1990s and consumption has increased slightly in the early 2000s. However, the decline in U.S. consumption has been more than offset by increases elsewhere.

there. As living standards and per capita incomes began to rise in parts of what was now known as the Third World, middle classes began to take up the coffee habit. Latin American non-producers such as Argentina and Chile, North African and Middle Eastern countries, and Southeast Asia all increased their shares of world coffee imports. And consumption also increased in Eastern Europe and the USSR. In many cases, coffee consumption served a particular function in the material lives of these new consumers: status symbol. It was a sign that their countries were developing and modernizing, that they now had enough disposable income to imitate the lifestyles of people in the world's richest, most powerful country. But increasingly, under the dominance of U.S. capitalism, embodied in the TNCs, lifestyles themselves became objects of consumption, that is, part of the market economy rather than material life.

The result was a new expansion and relocation of coffee production. The new area of expansion was primarily in Africa, and to a lesser extent in Asia. Two different forces drove this relocation. On the one hand, there was a rapidly growing demand for instant coffee, which could be most profitably produced with robusta, the coffee variety grown in West Africa and most Asian producing countries.[18] On the other hand, the European powers and the U.S., as decolonization began to seem inevitable, were seeking to create new capitalist-oriented economic activities, or expand existing ones, to bring a measure of prosperity to the colonies and give them an economic stake in joining the "free" world. A number of African countries were already minor coffee producers, and more had the right ecological conditions for its production. With shortages of coffee developing, and demand for robusta coffee increasing, expansion of robusta coffee production in these African colonies seemed a logical choice.

The geography of the coffee commodity chain thus became much more complex than it had been in previous cycles. Where the archetypal coffee trade route during the British cycle had been Brazil to New York, there were now multiple routes, defined by (neo)colonial relations: Latin America to New York; Africa to London, Le Havre, and Hamburg; and, a bit later, Indonesia to Tokyo. The form of transactions that moved coffee along the chain remained market based as they had been during the previous cycle. While the U.S. organizational innovation involved vertically integrated TNCs, this was not characteristic of the coffee chain. The TNCs that came to dominate the coffee chain were large coffee roasting companies (who also produced instant coffee). They bought their green coffee from importers, manufactured it, and sold it to retailers. There were several reasons for the absence of vertical integration: the risks involved in coffee growing, the predominance of small coffee growers, the control exercised over coffee production and export by peripheral states, the collective action of the producing states, and the prior existence of TNC importing companies with expertise in handling coffee.

As Arrighi notes, the U.S. TNCs expanded internationally as soon as they consolidated control over the national market (Arrighi 1994: 294-95). But this happened relatively late for coffee. At the beginning of the cycle, the one transnational coffee company was Nestlé, a Swiss

---

[18] Latin America produced arabicas almost exclusively at this time, although a number of Latin American countries later began to grow robusta. East African countries in the area where coffee originated (Ethiopia, Kenya, Tanzania) produced arabica coffee. Robusta coffee was native to West and Central Africa, but was not widely commercially cultivated there until the mid-1900s. The only significant Asian coffee producers at this time were India, which produced a mix of arabica and robusta, and Indonesia, which produced mainly robusta. Java, the original European coffee outpost, began as a producer of arabica. But after the coffee plantations were devastated by the coffee leaf rust in the late 1800s, the Javanese switched to robusta, which was resistant to the leaf rust.

company. The major U.S. companies did not really consolidate control over the national market until the 1970s, and during the 1980s, they began to go global, quickly gaining dominant positions in the major consuming markets of the U.S., Europe, and Japan. The market power resulting from this dominance enabled the TNC roasters to get the upper hand on the trading companies and squeeze their profit margins to the minimum. This was part of a larger process of concentration of commodities trading companies, in which the companies that survived switched from specialization in one commodity to dealing in many different ones (Chalmin 1987).

For a while, during the material expansion and stretching into the beginning of the financial expansion, the power of the TNCs was checked to some extent by the collective power of coffee exporting states. A series of International Coffee Agreements (ICAs) between all major producing states and most major consuming states regulated the world market through a system of export quotas similar to what had existed during World War II. The impetus for these agreements came from the interaction of increasing demand and the ecology of coffee production. As world demand for coffee grew rapidly after World War II, and shortages developed, world market prices spiked in 1954, stimulating a huge increase in planting of coffee, particularly in Africa and Asia. Because of the nature of coffee as a tree crop, the output of these new trees did not begin to reach the market until the late 1950s; thus there was over-planting. As the new coffee began to reach the market, prices fell, coffee growers turned to their states for protection, and the major Latin American coffee producers started to make plans to hold coffee off the market in order to hold the price up.

In this context, U.S. geopolitical interests dictated cooperation with the plan. The U.S. state had been shocked by the Cuban revolution, and was worried about the spread of communism through Latin America, which despite the spread of coffee production to Africa and Asia, was still the source of 70% of the world's coffee. At the same time, the European colonial powers were worried by the growing militancy of the anti-colonial movements in Africa. Under these conditions, the states of the major consuming countries were willing to enter into an agreement with peripheral states to regulate the world coffee market and create a price floor. This was seen as a disguised form of economic aid to the Third World to stop the spread of communism and keep the countries in the capitalist bloc. The series of ICAs regulated the world coffee market for most of the period 1962-1989, assuring coffee growers of reasonable prices for their coffee despite the growing dominance of TNCs over the chain. The export quotas of the ICAs also required coffee producing states to manage their coffee sectors to control exports. The ICAs were thus the culmination of a process of state intervention begun by Brazil in 1906. As was the case with the Inter-American Coffee Agreement, the geopolitical interest of the U.S. state and the long-term interests of U.S. capital (the coffee TNCs) coincided. Now, however, the peripheral states had a much more direct interest, because they regulated their domestic coffee sectors and obtained significant incomes from coffee exports, sometimes at the expense of their own coffee growers.

By 1989, many of these interests had changed. Under the pressure of the IMF/World Bank structural adjustment programs, peripheral states were seeking to expand their exports, creating a structural condition of oversupply of coffee. Coffee TNCs began to feel that the ICA was preventing them from getting the best coffee at the cheapest price. And with the Soviet bloc collapsing, the U.S. state no longer saw such strong geopolitical reasons for supporting the price of coffee. Efforts to renew the ICA failed. Under the new neoliberal orthodoxy, the capacities of most coffee producing states to manage their coffee sectors and intervene in the world coffee

market were quickly dismantled. World market prices crashed, and since 1989, coffee prices have been at historic lows, with the exception of a brief price spike in 1994-97.[19] Growers have been pressuring their states for protection from the low prices, but under current conditions, in which each country must compete for niches in the world market, the coffee producing states have been unable to recover the degree of solidarity that allowed them to cooperate in the regulation of the market during the 1960s and 1970s. Meanwhile, the tremendous market power of the TNC roasters has allowed them to maintain or even increase the wholesale prices they charge for their roasted coffee, even as world market prices for green coffee have fallen to historic lows. This price spread is one major source of capitalist super-profits in the U.S. cycle.

The motive force behind the relocation of coffee production and the reorganization of the coffee commodity chain seems to have gradually shifted from the level of material life to the level of capitalism. During the Genoese and Dutch cycles, the uses of coffee in material life – the coffeehouse phenomenon – provided the major impetus. During the British cycle, the spread of consumption to the working classes was again the motive force, but behind this spread of consumption was the capitalist reorganization of the material lives of the mass of the population. And this prompted the working classes themselves to take a more market-oriented view of coffee consumption. During the U.S. cycle, although the spread of coffee consumption to new consumers again played an important role, the increasing demand for coffee was itself largely a creation of the advertising and demand-creation strategies of the TNCs

First, the demand for the new product, instant coffee, after the war, was largely a creation of big capital and the U.S. state. Brazilian coffee officials, seeking new ways to use the surplus coffee that was piling up in Brazil during the 1930s, had consulted with Nestlé technicians, who modified the spray drying machinery they used to produce powdered milk, and produced instant coffee. Instant coffee had been produced and sold before, but it had not been very good. This new process could produce large quantities of instant coffee relatively cheaply, which were superior in taste to previous products. Before Nestlé could commercialize the new process, the war intervened. But during the war, the U.S. government added instant coffee to the rations provided to its troops, simultaneously creating a huge new demand and bringing into existence a new industry to meet it. After the war, people who had gotten used to the taste and convenience of instant coffee in the armed services formed a ready-made market, and the new instant coffee industry advertised vigorously to spread the demand. Second, even the spread of the coffee habit to new consumers outside of the U.S. and Europe was driven much more by the advertising campaigns of the globalizing TNCs than had ever been the case in previous cycles. They were the ones spreading what Leslie Sklair (2002) calls the culture-ideology of consumerism: you are what you consume. Coffee became one element of a lifestyle that had to be purchased in the market, necessitating increased hours and intensity of work to enable people to purchase their desired lifestyle.

The reorganization of the coffee chain in response to these new increases in demand once again had impacts on the material lives of the people who grew the coffee. One major change

---

[19] Coffee prices began to rise slowly in about 2006, and by October 2010 had reached levels not seen since the end of the price spike in 1997. This was a result of prolonged low prices since 1997, causing many small growers to lose or abandon their land, or pull out their coffee trees and plant other crops. Under present conditions, however, this period of higher prices is likely to also be short-lived, as the rising prices will stimulate new planting, causing a new oversupply in a few years.

grew out of the transition from colonial production to production by independent nations, which began with growing Latin American production in the 1820s, and continued with the decolonization of Africa and Asia that peaked in the 1960s. This was a shift from plantation production to smallholder production. Coffee production is very labor intensive, with few economies of scale; thus small-scale producers can be just as efficient as large-scale ones. When slaves were freed, or when peasants were released from their obligations to labor on the plantations, they much preferred to grow their own coffee on their own land wherever possible. Thus by the end of the material expansion of the U.S. cycle, most of the world's coffee was being grown by small peasant producers, or by small-to-medium-sized, market-oriented farmers. Coffee production was clearly established as part of the economic life of the producers; it was grown for sale on the market. This shift had two important implications. First, swings in coffee prices had enormous implications for the economies of coffee producing countries, because so many small rural producers were involved. Second, because of this, when prices fell and small producers began to organize to demand protection from the destructive forces of the market, their states were likely to be responsive. This was the dynamic behind the ICAs, but after structural adjustment, peripheral states lost the capacity to respond, even if they wanted to.

During the financial expansion, and particularly since the end of regulation in 1989, prices have become more unstable. Coffee consumption and world demand for coffee continue to grow slowly. But production, now uncontrolled and driven by pressures from the IMF/World Bank debt regime (McMichael 2004), has generally exceeded demand. World market prices have been at historic lows, despite brief price spikes, but retail prices in the major consuming markets are high. As the TNC roasters reap enormous profits from this price gap, they cannot profitably reinvest them in the coffee trade. One symptom of the financial expansion has been the explosion of trading on the futures markets, and the introduction of new financial instruments, options on futures contracts. The TNC roasters as well as the TNC commodities traders can now reinvest some of their profits in these financial instruments. Further, they can coordinate their purchases of physical coffee and of financial instruments based on coffee, to manipulate markets and further increase their profits. But much of the increased trading volume on the futures markets has been driven by the involvement of speculators, particularly institutional speculators such as commodities funds. As the volume of futures trading has grown, the futures market prices for coffee have become the benchmarks used to set the prices used in the trade of physical coffee, the tail wagging the dog. These developments have greatly increased the price instability. TNCs, with their financial resources and global information networks, can profit from this instability, and this is the other major source of capitalist super-profits. Small coffee growers, unprotected by their states, lose. Similar trends can be seen across many other sectors of the world economy.[20] The result is a growing polarization of incomes and wealth between countries and regions of the world, leading to growing political instability.

At the opening of the 21st century, there are signs that a countermovement against the hegemony of the U.S. and its TNCs is beginning to take shape. Some of the signs are the growing

[20] Coffee prices were also influenced by the commodity price bubble that caused rapid increases in food prices and then equally rapid price declines during 2008. While there has been much debate over the causes of this bubble, most analysts agree that massive flows of speculative capital into commodity futures and options, and creation of even more complex financial derivatives based on commodities, played an important role.

protests against the World Bank/IMF, the protests that have dogged the WTO and slowed progress of the millennium round of negotiations since Seattle in 1999, and the World Social Forum. In coffee, the most visible sign is the fair trade movement. It is no longer simply a movement of coffee growers organizing for protection against the penetration of market forces, but a movement combining coffee growers, consumers, NGOs, and small coffee trading and roasting companies. Their analysis is that the "free" trading system that has been established by governments, primarily the U.S., in alliance with the TNCs, is inherently unfair. That is, instead of focusing their attacks on market forces, they are going after the top layer of the system. And although coffee is the main fair trade commodity, the movement is expanding to other tropical products such as chocolate and bananas. These movements, as well as the growing political instability, may be part of the increasing systemic chaos that signals the coming end of the U.S. cycle, if Arrighi's analysis is correct.

CONCLUSION

I conclude by drawing out some of the implications of this analysis for Arrighi's systemic cycles and their articulation with Braudel's layers of analysis. This excursion into the lower layers of Braudel's schema suggests some additional mechanisms underlying the systemic cycles, and it also suggests some additional factors that merit consideration. Similarly, viewing Braudel's three layers in the context of Arrighi's systemic cycles also suggests new forms of connection between the layers.

Coffee consumption, and therefore the demand for coffee, seems to increase cyclically. It grows more rapidly during material expansions, and then slows or stagnates during financial expansions. This makes sense at two different levels. During material expansions, the production and trade of most commodities grows. More people are drawn into the market economy, and so more people purchase commodities, such as coffee. More generally, the material expansion is a period when commodity production is reorganized on a new and expanded basis. New classes emerge, some classes that previously existed grow in size, while still others wither or disappear. These new or growing classes are a major source of new demand. The cultural meanings of coffee to these classes in the particular historical periods play an important role in stimulating demand. During the Genoese cycle, coffee consumption was confined to small groups of elites in Europe. With the beginning of the Dutch cycle, the huge expansion in the volume and distance of trade brought an increase in the number of merchants and businessmen, as well as professionals to serve them, such as lawyers and accountants. These were precisely the classes that frequented the early European coffee houses. The British cycle brought the industrial revolution and the rise of the working class, and the expansion of coffee consumption during this period was among this class (although in the U.S. and not Britain). This generalization may not fit the U.S. cycle as well. The U.S. cycle did not really bring a new class into existence in the same way as the Dutch and British cycles. Part of the expansion in coffee consumption during the U.S. cycle resulted from the rise of professional and middle classes in new countries, outside the core of the world-economy. But another part was also created by the advertising efforts of the transnational corporations. The massive nature of this demand-creation may be a defining feature of the U.S. cycle.

During financial expansions, production and trade may continue to grow, but at a slower rate, as capital is diverted into financial deals. Coffee consumption may continue to increase, but slowly. More generally, during the course of the material expansion, the coffee habit is probably taken up by most of the members of the new class that are predisposed towards it. This means that once the material expansion runs its course, there is little room for the further spread of consumption. The major exception to this generalization is the continued expansion of coffee consumption in the U.S. well into the period of financial expansion during the British cycle. This can be explained by the different timing of U.S. industrialization, and by the fact that the U.S. was the major coffee consuming market, while the British Empire had been built partly on tea.

While consumption and production are growing during the material expansion, prices may be more stable than they are during the financial expansion. This seems to be the case for the last two cycles. During the Dutch cycle, price stability increased with the onset of the financial expansion, but this was due to the establishment of a routinized world market for coffee. Price instability and stagnating demand in the financial expansion reinforce the movement of capital away from production and trade and into financial deals and speculation, as the era's big capitalists seek to capitalize on the instability. Thus the New York coffee futures market was founded during the British financial expansion: and new speculative instruments were introduced, and trading volumes soared, during the U.S. financial expansion. Further, the Brazilians may have been able to pull off their interventions in the market in the early 20th century in part because there was a significant volume of mobile capital seeking financial deals, which was available to finance the valorizations.

The increased coffee demand that accompanies material expansion provides the impetus for a systemwide restructuring of the coffee commodity chain. This is part of the overall reorganization of the world-economy undertaken by the new hegemonic power. This reorganization involves the relocation of the main locus of production, the reorganization of production systems, changes in the types of transactions that move coffee along the chain, and increases in the volumes of coffee flowing through the chain. The Dutch began this process with the establishment of Java as a new source of supply, and they were quickly emulated by their rivals, most notably France. However, the Dutch were content to control the trade in coffee, while the French and British pioneered the control over production by their colonists, and the use of slave labor. What had been market transactions between European traders and the Mocha coffee merchants located *outside* the European world-system were shifted to mercantilist transactions *within* an expanding system. During the British cycle, the center of coffee production moved from Asia to Latin America, particularly Brazil. Here the British interest was not in controlling the trade of coffee, but in seeking profitable investments for exported capital. These investment opportunities were found in the building of rail and port facilities in Latin America that initiated the export boom of 1850-1930. Production systems began to shift (although Brazil lagged behind) from those based on slavery to those based on small farmers. This shift was not completed until decolonization was accomplished during the U.S. cycle. The trade also shifted from a mercantilist trade, based on colonial production, to a market-based trade between nominally independent countries and firms. During the U.S. cycle, production was once again relocated, this time toward Africa and Asia, although the center remained in Latin America. This was in line with U.S. interests in overseeing decolonization in the context of the Cold War, and the competition with the Soviet bloc for the "hearts and minds" of the newly independent nations. Production systems based on small farmers were regulated by the peripheral states, until the 1990s, and market

transactions predominated along the chain. Huge (although not vertically integrated) transnational firms came to control the chain through their control over the major consuming markets.

Here we see a complex interaction between the reorganization of the world-economy as a whole and the reorganization of a specific commodity chain. There is no easy one-to-one correspondence; the organization of the coffee chain enjoys a degree of relative autonomy, as Arrighi (1994: 26) puts it, from the organization of the world-economy. In several instances, the reorganization of the coffee chain seems to be in the lead, allowing rising hegemons the opportunity to test and perfect their organizational innovations. Thus, the French and British pioneered colonial production during the Dutch cycle, and the early decolonization of Latin America allowed for the development of market transactions between coffee exporters and importers during the mercantilist British cycle. It raises the question: which organizational form currently existing in the coffee commodity chain is the new organizational innovation that will propel the next hegemon to power?

In other instances, changes in the coffee chain seem to lag behind developments in the world-economy. Thus, a production system based on slavery persisted in Brazil after it had been abolished elsewhere, and colonial production persisted into the U.S. cycle, particularly in Africa. These holdovers are not too surprising. All social institutions tend to take on a life of their own and to resist change. Other discrepancies may have to do with specific interests of the hegemonic power, the legacy of previous reorganizations, or the nature of the specific commodity. British world power, for example, rested partly on tea rather than coffee, so the U.S. played a key role in reorganizing the chain during the British cycle. And because of the nature of coffee, and the legacy of previous commodity chain reorganizations, the transnational firms that came to dominate the coffee chain during the U.S. cycle were not vertically integrated. While Arrighi's periodization of capitalism is probably correct at the "top" level of the system, if we follow his research program and descend to the lower levels to look at specific commodities, we are likely to find slightly different timing across the systemic diversity of commodity chains. This is not surprising, as Arrighi's systemic cycles are general patterns that have been abstracted from the specific structural changes that occur across each of the commodity chains that comprise the world-economy.

This excursion into the lower layers of material life and the market economy therefore serves to further elaborate some of the mechanisms underlying Arrighi's systemic cycles, but also adds complexity and qualification. The interactions among Braudel's three layers are complex, and they are not determined solely by the structural logic of the top layer; however, this top layer *does* powerfully shape the interactions of the two lower layers. For example, I have argued that the spread of coffee consumption at the beginning of the material expansions of the most recent three cycles provided the impetus for the geographical and institutional restructuring of the chain. However, it was primarily the structural logic of the top layer that determined *where* production would be relocated, and *how* the chain would be reorganized. In addition, the periodic shortages and surpluses that send shocks through the chain are primarily market phenomena. By disrupting the flow of commodities and money along the chain, they create opportunities for subordinate players to struggle to change the structure of the commodity chain, and ultimately, the structure of the top layer of the system. At the same time, the hegemonic power retains the ability to at least shape the outcome of this struggle, if not to entirely defeat it.

The periodic shortages and surpluses also point to the role of a fourth, ecological, layer that should be added to Braudel's three-layer conceptualization. While they are phenomena of the

market, they arise out of the ecology of the coffee tree: its susceptibility to frosts, pests, and diseases; its cyclical bearing pattern, and the lag between planting and production of new coffee. In this analysis, I have only been able to sketch in a few of the connections between this layer and the other three; much more work is needed to fully integrate it into the analysis.

This analysis raises another important addition to Arrighi's theory: the concept of peripheral capitalism. I have argued that actors located in the periphery of the system can develop the same capitalist orientation as the big capitalists located in the core. They can attempt to use their market power, in alliance with their states, to subvert the operation of the market in order to earn super-profits. Because of their location in the periphery, and because their states are not as powerful as the core states, they can rarely hope to compete with the core capitalists and attain the same level of super-profits realized by them. They may be forced into alliances with core capitalists, who are able to appropriate a share of these profits, but they still probably earn higher profits than would be available to them through participation at the level of the market economy. And they may play an important role in the evolution of the systemic cycles, as did the Brazilian capitalists of the British cycle. It would be interesting to see if there were similar instances of peripheral capitalism related to other commodities during earlier systemic cycles. Peripheral capitalists, and their states, have certainly played a role, albeit subordinate, in shaping the evolution of the U.S. cycle

Turning now to the implications of this analysis for the causal connections between Braudel's three layers, one thing that is immediately apparent is the growing strength and reach of capitalism. This is seen in its ability to penetrate and reorganize the two lower layers. During the Genoese and Dutch cycles, the vast majority of the population was confined to the lowest layer of material life. Capitalism began to incorporate them into the market economy in the British cycle, a process that was nearly completed during the U.S. cycle. As this process proceeded, the layer of material life shrank correspondingly, and became increasingly shaped by the forces of capitalism, which began to influence the consumption choices that people made in the market, commodifying even the process of identity formation. Ironically, Braudel, whose analysis focuses on the period of the Genoese and Dutch cycles, sees most of the influence flowing from the top layer of capitalism down to the other two layers. But this may have been precisely the time when material life could actually exert some independent effect on the top layer of capitalism. I have argued that it was changes at the level of material life – the coffeehouse phenomenon – that opened possibilities for capitalism to reorganize the coffee commodity chain in order to earn super-profits during the first two cycles. The subsequent increases in coffee consumption during the British and especially the U.S. material expansions, in contrast, were more driven by the independent operation of capitalism as the top layer of the world-system.

However, we should not conclude that material life only shrinks and loses power over time; it can also rejuvenate and grow in new directions. Thus, revolts of enslaved people against their intolerable material lives helped to force the end of slavery, and people's general preference for growing coffee on their own small plots rather than working on plantations led to a reorganization of production on a peasant smallholder basis. I have also argued that what we now call civil society was, at least in part, an outgrowth of material life in the coffeehouses, and it has grown into a counterweight against the worst excesses of capitalism. Further, as Braudel notes, the "new" informal economy which began to grow during the financial expansion of the U.S. cycle can be seen as a sign of resistance against the incursions of market forces into material life (McMichael 2000: 217-20).

Once again, it is important to distinguish between core and periphery. While the top layer of capitalism may dominate material life in the core, the process lags behind in the periphery. Large segments of the populations there have still not been completely incorporated into the market economy. This means that the layer of material life in the periphery may still retain some capacity to influence the unfolding of the systemic cycles at the top layer of the system. In fact, a major impetus behind the fair trade movement in coffee, and behind the movement for globalization from below more generally, is the struggle by the poor and marginalized peoples of the periphery to prevent their material lives from being colonized and reshaped by the forces of capitalism.

This study of the coffee commodity chain has focused on one small segment of the world-economy. Many more studies of this nature will be needed before we can begin to get a complete picture of the interactions among all three (or four) of Braudel's layers and the ways in which they have shaped the evolution of the systemic cycles of accumulation. The commodity chain as unit of analysis and the method of incorporated comparison seem to be useful tools for this type of investigation. The breadth of the research program that flows from Arrighi's *The Long Twentieth Century* is one measure of its enduring importance.

REFERENCES

Arrighi, Giovanni. 1994. *The Long Twentieth Century: Money, Power, and the Origins of Our Times* London: Verso.

_____ . "Braudel, Capitalism, and the New Economic Sociology" *Review* 24(1): 107-23.

Braudel, Fernand. 1981. *The Structures of Everyday Life: Civilization & Capitalism 15th-18th Century, Volume 1* New York: Harper and Row. Translated from the French by S. Reynolds.

_____ . 1982. *The Wheels of Commerce: Civilization & Capitalism 15th-18th Century, Volume 2* New York: Harper and Row. Translated from the French by S. Reynolds.

_____ . 1984. *The Perspective of the World: Civilization & Capitalism 15th-18th Century, Volume 3* New York: Harper and Row. Translated from the French by S. Reynolds.

Campbell, Guryn. 2003. "The Origins and Development of Coffee Production in Réunion and Madagascar, 1711-1972" in Steven Topik and William Gervase Clarence-Smith (eds.) *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* Cambridge: Cambridge University Press.

Chalmin, Philippe. 1987. *Traders and Merchants: Panorama of International Commodity Trading* Chur: Harwood Academic Publishers.

Clarence-Smith, William Gervase. 2003. "The Coffee Crisis in Asia, Africa, and the Pacific, 1870-1914" in Steven Topik and William Gervase Clarence-Smith (eds.) *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* Cambridge: Cambridge University Press.

Dean, Warren. 1969. *The Industrialization of Sao Paulo 1880-1945* Austin: University of Texas Press.

Delle, James A. 1998. *An Archeology of Social Space: Analyzing Coffee Plantations in Jamaica's Blue Mountains* New York: Plenum Press.

Fernando, M. R. 2003. "Coffee Cultivation in Java, 1830-1917" in Steven Topik and William Gervase Clarence-Smith (eds.) *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* Cambridge: Cambridge University Press.

Font, Mauricio. 1990. *Coffee, Contention, and Change in the Making of Modern Brazil* Cambridge: Basil Blackwell.

Hattox, Ralph S. 1985. *Coffee and Coffeehouses: The Origins of a Social Beverage in the Medieval Near East* Seattle: University of Washington Press.

Heise, Ulla. 1987. *Coffee and Coffee Houses*. West Chester, PA: Schiffer Publishing Ltd. Translated from the German by Paul Roper.

Holloway, Thomas H. 1975. *The Brazilian Coffee Valorization of 1906: Regional Politics and Economic Dependence* Madison: The State Historical Society of Wisconsin.

Hopkins, Terrence, and Immanuel Wallerstein. 1986. "Commodity Chains in the World-Economy Prior to 1800" *Review* 10(1):157-70.

Jimenez, Michael F. 1995. "'From Plantation to Cup': Coffee and Capitalism in the United States, 1830-1930" in William Roseberry, Lowell Gudmundson, and Mario Samper Kutschbach (eds.) *Coffee, Society, and Power in Latin America* Baltimore: The Johns Hopkins University Press.

McMichael, Philip. 1990. "Incorporating Comparison Within a World-Historical Perspective: An Alternative Comparative Method" *American Sociological Review* 55: 385-97.

_____ . 1992. Rethinking Comparative Analysis in a Post-Developmentalist Context" *International Social Science Journal* 44: 351-65.

_____ . 2004. *Development and Social Change: A Global Perspective* Thousand Oaks: Pine Forge Press.

Mintz, Sidney. 1985. *Sweetness and Power: The Place of Sugar in Modern History* New York: Penguin Books.

Moore, Jason W. 2003. "Capitalism as World Ecology: Braudel and Marx on Environmental History" *Organization and Environment* 16(4): 431-58.

Pendergrast, Mark. 1999. *Uncommon Grounds: The History of Coffee and How It Transformed Our World*. New York: Basic Books.

Roseberry, William. 1995. "Introduction" in William Roseberry, Lowell Gudmundson, and Mario Samper Kutschbach (eds.) *Coffee, Society, and Power in Latin America* Baltimore: The Johns Hopkins University Press.

Samper, Mario and Radin Fernando. 2003. "Appendix: Historical Statistics of Coffee Production and Trade from 1700 to 1960" in Steven Topik and William Gervase Clarence-Smith (eds.) *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* Cambridge: Cambridge University Press.

Schivelbusch, Wolfgang. 1992. *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants* New York: Vintage Books.

Sklair, Leslie. 2002. *Globalization: Capitalism and Its Alternatives*. Third Edition. Oxford: Oxford University Press.

Talbot, John M. 2004. *Grounds for Agreement: The Political Economy of the Coffee Commodity Chain* Lanham: Rowman and Littlefield.

Tilly, Charles. 1984. *Big Structures. Large Processes, Huge Comparisons*. New York: Russell Sage Foundation.

Topik, Steven. 2003. "The Integration of the World Coffee Market" in Steven Topik and William Gervase Clarence-Smith (eds.) *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* Cambridge: Cambridge University Press.

_____ . 1998. "Coffee" " in Topik and Allen Wells (eds.) *The Second Conquest of Latin America: Coffee, Henequen, and Oil during the Export Boom, 1850-1930* Austin: University of Texas Press.

_____ . 1987. *The Political Economy of the Brazilian State, 1889-1930* Austin: University of Texas Press.

Topik, Steven and Allen Wells. 1998. "Introduction: Latin America's Response to International Markets During the Export Boom" in Topik and Wells (eds.) *The Second Conquest of Latin America: Coffee, Henequen, and Oil during the Export Boom, 1850-1930* Austin: University of Texas Press.

Trouillot, Michel-Rolph. 1982. "Motion in the System: Coffee, Color, and Slavery in Eighteenth-Century Saint-Domingue" *Review* 5(3):331-88.

Tuchscherer, Michel. 2003. "Coffee in the Red Sea Area from the Sixteenth to the Nineteenth Century" in Steven Topik and William Gervase Clarence-Smith (eds.) *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* Cambridge: Cambridge University Press.

Tucker, Richard. 2000. "The Last Drop: The American Coffee Market and the Hill Regions of Latin America" in Tucker, *Insatiable Appetite: The United States and the Ecological Degradation of the Third World* Berkeley: University of California Press.

Ukers, William. 1935. *All About Coffee*. New York: The Tea and Coffee Trade Journal Company.

Wild, Antony. 2004. *Coffee: A Dark History* New York: W. W. Norton.

Wrigley, Gordon. 1988. "The History of Coffee," chapter 1 in Wrigley, *Coffee* Essex: Longman Scientific and Technical and New York: John Wiley.

CUTTING THE GORDIAN KNOT OF WORLD HISTORY: GIOVANNI ARRIGHI'S MODEL OF THE GREAT DIVERGENCE AND CONVERGENCE

Jan-Frederik Abbeloos
History Department (Research Group Communities Comparisons Connections)
Ghent University
janfrederik.abbeloos@ugent.be

Eric Vanhaute
History Department (Research Group Communities Comparisons Connections)
Ghent University
eric.vanhaute@ugent.be

ABSTRACT

This essay evaluates the new road Giovanni Arrighi paves in Adam Smith in Beijing *(2007) in relation to the scholarly debate on Europe's Great Divergence and the remarkable resurgence of East Asia in the global economy at the end of the twentieth century. At the center of* Adam Smith in Beijing *is the argument that the probability has increased that we are witnessing the formation of an "East Asian-centered world-market society," rivaling the historical "capitalist world-economy". We show how Arrighi's discovery of East Asia has led him to supplement the analysis of historical capitalism he presented in* The Long Twentieth Century *(1994). This brings about uncertainties and problems. On the one hand, Arrighi is clear in his view on the different paths of economic development followed by the Europe-centered capitalist world-system, and the Chinese-centered market-oriented world-system. These paths remained largely separate until deep into the nineteenth century. On the other hand, Arrighi is less clear on how the Asian market-oriented legacy survived its incorporation into a globalizing capitalist world-economy, a crucial precondition for Arrighi's political message. Characterized as a process of subordination, hybridization, or fusion, it remains difficult to extract from Arrighi an unambiguous understanding of the place of China and East Asia within the capitalist world-system. It is just as hard to understand the nature of that "interstitial" system itself. These conceptual and theoretical uncertainties suggest a central question and problem that hangs over* Adam Smith in Beijing*: What remains of the capitalist world-system as an analytical category that allows us to understand economic history and our possible futures?*

INTRODUCTION

In this paper we focus on the "Asian turn" that Arrighi has taken on his long march to historical sociology, a turn that became visible with *The Long Twentieth Century* (1994) and which came full circle in *Adam Smith in Beijing*.[1] At the center of Arrighi's Asian turn is the debate over what

[1] For an evaluation of the long march to historical sociology see Arrighi 2009.

Copyright ©2011, American Sociological Association, Volume XVII, Number 1, Pages 89-106
ISSN 1076-156X

Pomeranz (2000) calls the "Great Divergence" between the economic growth trajectory of the industrializing economies (often labeled as the West) and The Rest since 1800, a divergence that started "big time" after 1870 (Pritchett 1997). This divergence broke through after England and other national economies made the transition from an organic to a mineral-based fossil-fuel economy and unbounded the Prometheus of technology-based and capital-intensive persistent economic growth (Landes 1969; Wrigley 1988). The mechanization of production not only loosened the Malthusian constraints that typified pre-industrial societies, it also pushed the productive and military strength of the early European industrializers to unprecedented heights, resulting in their worldwide economic and geopolitical dominance by 1900. Around that time, Max Weber wondered "to what combination of circumstances the fact should be attributed that in Western civilization, and in Western civilization only, cultural phenomena have appeared which (as we like to think) lie in a line of development having universal significance and value." (Weber 2003:13). Since Weber, a lot has been written on the combination of circumstances that lay behind "The Rise of the West" (McNeill 1992) or the "European Miracle" (Jones 1981; also see Van Zanden 2008). Nevertheless, opinions differ greatly on whether Europe's development of large-scale mechanized industry was primarily a homegrown achievement or the result of its position within the networks of commerce and empire that have gradually circumscribed the world (for a review see Vries 2009).

For a long time this historical problem suffered from a classic case of Eurocentrism. Whether one searched the origins to the industrial take-off primarily internal to Western-European societies, as did Weber or Marx, or found them in the imperial space that Great Britain commanded, as did Eric Williams (1944), it is clear that lot of studies hardly went beyond the European experience. The problem with this approach is that it left many hypotheses regarding the technological, institutional, social, political or geographical conditions within Great-Britain, Europe or the West unchecked, lacking a comparative framework that could help to identify which conditions were in retrospect necessary or sufficient to set a handful of European economies on the road to industrialization and global domination. Fernand Braudel admitted to this blind spot in his magnum opus *Civilization and Capitalism* (1981, 1982, 1984). Braudel lamented the "historiographical inequality" between Europe and the rest of the world, with a European history that was well-lit versus the history of "non-Europe" that was still to be written:

> And until the balance of knowledge and interpretation has been restored, the historian will be reluctant to cut the Gordian knot of world-history – that is the origin of the superiority of Europe. […] One thing seems clear to me: the gap between the West and the other continents appeared *late in time* […]. By mechanizing, European industry became capable of out-competing the traditional industry of other nations. The gap which then opened up could only grow wider as time went on. The history of the world between about 1400 and 1850-1950 is one of an ancient parity collapsing […]. Compared with this predominant trend, everything else is secondary (Braudel 1982:134; 1984:535).

For many world-systems analysts, the question of industrialization and the subsequent, yet relatively late, "collapsing of an ancient parity" is – almost by definition – endogenous to the long-term operations of an expanding capitalist world-system. As a consequence, industrialization tends to receive short shrift when explaining the major transformations in global economic

history. In the third volume of *The Modern World-System*, Wallerstein reduces eighteenth century British industrialization from one of those "traditional lodestars by which to navigate the misty and turbulent waters of modern historical reality" to a mere footnote in the consolidation and entrenchment of the capitalist world-system (Wallerstein 1989:256). Much like Wallerstein, Arrighi is influenced by John Nef (1934) and claims that there have been different moments of industrial expansion in England (in the fourteenth, sixteenth/early seventeenth, and late eighteenth centuries), all integral to an ongoing expansion, restructuring, and reorganization, of a European capitalist world-economy, in which England was incorporated from the very start (Arrighi 1994:209; Wallerstein 1984:33). Andre Gunder Frank adds to this scheme that the first industrial expansion "improved England's competitive position only relative to Flanders, and the second only relative to northern and southern Europe. The third adjustment finally managed significantly to alter Britain's competitive position worldwide." (Frank 1998:290)

Recent research adds new support to the thesis that the emergence of industrialization in Britain should indeed be understood in the context of Britain's accumulated advantages in an expanding commercial and imperial system, creating a high wage economy in which there was systematic incentive to invent and implement technologies that substituted capital and coal for labor (see Allen 2009; Findlay and O'Rourke 2007; Flynn & Giráldez 2004, 2008; Pomeranz 2000; Sugihara 2003; but compare to Goldstone 2009; Vries 2005, 2008). In doing so, many scholars have looked across Eurasia in order to compare the European developmental trajectory with East Asia's (see Little 2008). Two explanations account for the popularity of these comparisons. First, regarding the historical debate on the Great Divergence, the scientific and economic development of China in the centuries prior to the divergence makes it all the more puzzling why industrialization and the subsequent rise to global power did not happen East but West. Second, the vitality of Euro-American/Western hegemony today seems less secure than ever before. The economic "miracles" of Japan, the Asian tigers, and most recently China, beg the question if we are witnessing "The Rise of East Asia" and to what extent this "Rise" also implies the "Descent of the West" (Ferguson 2006:596-646)? Or does it point to a "Great Convergence", a catch-up process in economic and political development between the two sides of the Eurasian landmass, and perhaps between The West and The Rest (Sachs 2008:24)?[2]

In *Adam Smith in Beijing*, Arrighi takes this scholarship on board to analyze the global origins and consequences of the Great Divergence from the theory of historical capitalism

[2] The idea of an economic "Rise of The East" or a "Great Convergence" can be evaluated in different ways. Andrew Glyn (2005) notes that China doubled its ratio of per capita GDP compared to the USA over the past 20 years. This accounts for all the reduction in the inequality of the distribution of income on a world scale, and makes up for all the collapsed output share of the ex-Soviet Union and Eastern Europe and much of the downward drift in the share of Europe and Japan. Meanwhile, Glyn finds that China's per capita GDP is still as far behind the USA as Korea and Taiwan were before their three decades of rapid catch-up beginning in the late 1960s. The fundamental point to Glyn therefore is the surge in the combined growth of China, India and other developing countries and the fact that since the mid 1990s the majority of world GDP growth has been produced outside the founding OECD countries. The fundamental point for Arrighi could be said to be the key role that China fulfils in this combined surge as an increasingly significant importer of commodities and resources from developing countries, creating thus an alternative market for their products outside the OECD. In both cases, the central point of debate is of course if this relative rise in productivity and market should be interpreted as the first signs of an emerging, Asian or Sino-centered, global economy.

presented in *The Long Twentieth Century*. Arrighi wants to construct a model of the Great Divergence that tells us something, not just about its origins, but also about its development over time, its limits, and its prospects. He goes beyond the history of the widening gap between the European industrializers and The Rest. For Arrighi "the really interesting question is […] how and why China has managed to regain so much ground, so quickly after more than a century of political-economic eclipse" (Arrighi 2007a:32). Arrighi sees an increasingly likelihood that because of the Chinese resurgence we are witnessing the formation of an "East Asian-centered world-market society," rivaling the historical "capitalist world-economy." The central political message is that this change in the nature of the now-global world-economy might bring about a Great Convergence, bringing the different regions of the world closer together into the sort of Commonwealth of Civilizations that Adam Smith dreamt of.

Both propositions are far from self-evident and *Adam Smith* is a sophisticated attempt to substantiate both claims. With good reason, many reviewers have questioned Arrighi's characterization of present-day China as a non-capitalist society that can help to bring about this Commonwealth of Civilizations (Abbeloos 2008; Clark 2008; Coyne 2009; Dyer 2007; Gulick 2009; Trichur and Sherman 2009; Walden 2007). This essay primarily focuses on the analytical side of the story, on Arrighi's model for the Great Divergence and Convergence. What we want to underline is how much Arrighi has modified the original idea of China's "subordination to the Western commands" that was presented in *The Long Twentieth Century*. Instead, he has come to favor "hybridization" between two distinct paths of developments, one capitalist and one not. And within this hybrid construct he stresses the resilience of the market-logic that prevailed in China in particular (despite the active distortion of market forces up until 1979 and the active promotion of profit-seeking after 1979). In other words, Arrighi's hope for an East Asian-centered world-market society motivates a renewed understanding of *The Long Twentieth Century*. His additions and revisions nevertheless can be questioned, and bring new uncertainties and problems with regards to the scale and scope of world-systems research and its analytical concepts. On the one hand, Arrighi is clear that two distinct world-economies, one capitalist and one not, evolved on the East and West of the Eurasian landmass deep into the nineteenth century. On the other hand, he is less clear on what happened afterwards, once the two world-economies came into contact and The Great Divergence ran its course. Characterized as a process of subordination, hybridization, or formal dissolution, it remains hard to get an unambiguous understanding of the place of China and East Asia vis-à-vis the Euro-American networks of power and the expanding markets for capital, goods and services. Equally, it is unclear how Arrighi understands the functioning of these networks of power and markets, of this "interstitial" capitalist system. He sees a world in singular, denoted as "world capitalism", "world market" or "world-trading system" and there are worlds in plural that bear their own dynamic, such as the Global North and Global South. These conceptual uncertainties concerning the juxtaposition and permutation of two world-economies, one capitalist and one not, hinder Arrighi's attempts to cut the Gordian knot of the Great Divergence and Convergence.

FROM THE LONG TWENTIETH CENTURY TO ADAM SMITH IN BEIJING

As Thomas Reifer notes (2009:250), *Adam Smith* can be read as the third instalment of Arrighi's "unplanned trilogy", along with *Chaos & Governance in the Modern World System* (1999) and

The Long Twentieth Century (1994). In *The Long Twentieth Century* Arrighi analyzes the changing relationships between the controllers of mobile capital and state power through the evolution of a capitalist world-economy that emerged some 700 years ago in Europe. According to Arrighi, this world-economy developed through successive systemic cycles of accumulation. Arrighi reconstructs the Genoese, Dutch, British, and American cycles of accumulation and discusses the successive forms of political exchange and the geographies they implied. Each cycle consists of a phase of material expansion, followed by one of financial expansion. During the first phase, the alliance between the governmental and capitalist agencies is based on the superior ability of the leading governmental agency to create a profitable investment regime which attracts capital from across its borders. During the phase of financial expansion, the hegemon looses this ability and gets overtaken by another organizational revolution, sustained by yet another governmental agency. However, before a new round of creative destruction takes place, the "old" capitalists still enjoy their phase of financial expansion. Capital pulls out of the productive, real sphere of the economy, and starts a temporary profitable retreat in the financial sphere, as has been visible during the Florentine Renaissance, the Dutch periwig period of the eighteenth century, the Edwardian Belle Epoque at the end of the nineteenth century and the globalizing nineties. All these episodes proved to be brief, only temporarily masking the underlying crisis in the spheres of production and trade which had in fact motivated the financialization of the economy. Out of such a period of systemic chaos a new regime of accumulation finally emerges and establishes the conditions for another cycle of accumulation (also see Arrighi 1999a). Important to note is that these cycles are cut through by a very important structural transformation of the capitalist world economy. From the United Provinces to the United States, from the merchant communities to the multinational corporations, Arrighi sees the recurrent emergence of new leading complexes of governmental and business agencies, more powerful, both militarily and financially, than the complexes they replace (1994:58,217). This evolution is accompanied by a greater specialization in the functions of state and business organizations. Arrighi in casu notices a transformation from a system in which networks of accumulation were embedded in and subordinate to networks of power into a system in which networks of power are embedded in and subordinate to networks of accumulation (1994:86).

Arrighi underlines that *The Long Twentieth Century* "lumps" together the insights of many intellectuals, amongst others Adam Smith, Karl Marx, Henri Pirenne, Max Weber, Joseph Schumpeter and Charles Tilly. But the book is especially indebeted to Braudel's account of early modern European history in *Capitalism and Civilization* (1981, 1982, 1984). Arrighi builds his analysis on three Braudelian principles that have shaped much of the world-systems paradigm. First is Braudel's idea of a world-economy (économie-monde, Weltwirschaft), which "concerns a fragment of the world, an economically autonomous section of the planet able to provide for most of its own needs, a section to which its internal links and exchanges give a certain organic unity" (Braudel 1984:22). Second is Braudel's insistence on the *longue durée* as the best temporal framework to analyze structural changes (1958). Third, and most important, is Braudel's understanding of capitalism. Braudel agreed "with the Marx who wrote […] that European capitalism […] began in thirteenth-century Italy" (Braudel 1984:57). By this, Braudel means that the Industrial Revolution might have changed the face of the earth, but it did not introduce the world to capitalism. As a consequence, Braudel renounces the reification of capitalism as a certain phase in economic history, triggered by the advent of industrialization. Instead, he regards capitalism to be the antonym of market competition. It is the wielding of monopoly power, the

blocking out of market forces in favor of power relations, the establishment of non-markets or better, *anti-markets*. In that sense, economic activities that are multinational and highly skillful such as long distance trade, foreign exchange and credit arrangements for a long time in world history created much better opportunities vis-à-vis the sphere of production to achieve some sort of monopoly power. Braudel thus offers a critique, or assault as Wallerstein calls it, against the conflation by classical economists of the market and capitalism (Wallerstein 1991, 2004:18; also see Arrighi 2007b:266-267). But his understanding of capitalism also diverts from the Marxist necessity to reduce the concept of capitalism to a defined mode of production, next to other modes such as slavery or feudalism (Brenner 1977; Laclau 1971). What Braudel highlighted, and much of world-systems analysis builds upon, is that capitalism should not be seen as a certain mode of production but as certain mode of rule and accumulation that can, but needs not to, be based on wage labor.

Combining these three guiding principles, Arrighi restructured Braudel's panoramic view of European history into a series of systemic cycles of accumulation.[3] In this recasting of Braudel's perspective, Arrighi however elides one of Braudel's most important contributions. For Braudel, capitalism, since it is little more than the manipulation of market forces towards monopoly power, was never a unique European phenomenon. Long distance trade for Braudel "lay at the heart of the most advanced capitalism in the Far East", although he admits that outside of Europe, "the merchants and bankers never had the stage to themselves", especially in "the aberrant case of China" where the imperial administration blocked any attempts at sustained capital accumulation (Braudel 1982:125, 136-137; 1984:520). In *The Long Twentieth Century* Arrighi, much more than Braudel, shows how in Europe the merchants and bankers also shared the stage of capital accumulation with the territorial and political aspirations of city-states and an emerging inter-state system. But in the end, this relationship between capital and power did create a European capitalist world-economy in Arrighi's view. Only through the consolidation and globalization of this European capitalist world-economy regions outside of Europe come into the picture, discussing their integration and subordination to a "capitalist" system". In this respect, Arrighi's discussion of historical capitalism mirrors Wallerstein's reconstruction of a modern capitalist world-system that globalized out of Europe since the sixteenth century (recapitulated by Wallerstein 1993). In both cases capitalism as a rule of accumulation is *a priori* considered to be a European characteristic. Furthermore, this quality is seen as the cornerstone of a social *system*. Both propositions radicalize Braudel's understanding of a European capitalist world-*economy* that is dependent on the economic spheres of market society and material life but does not dictate them. In the words of Braudel, we need to "think again before assuming that our societies are organized from top to bottom in a 'capitalist system'" (Braudel 1984:630; also see Braudel 1982:239). As we will see now, this a priori equation between capitalism and a European, globalizing, system in *The Long Twentieth Century* creates the problems *Adam Smith* needs to resolve.

---

[3] Or as he said to Harvey: "Braudel is an incredibly rich source of information about markets and capitalism, but he has no theoretical framework. […] You can't simply rely on Braudel; you have to approach him with a clear idea of what you are looking for, and what you are extracting from him" (Arrighi 2009: 71).

Can Capitalism Survive Success?

In the epilogue of *The Long Twentieth Century*, Arrighi poses the same question that Braudel and Schumpeter (1976) have asked before him: "Can capitalism survive success?" To Braudel this was a rhetorical question since he did "not have the impression that capitalism is likely to collapse of its own accord, in some form of 'endogenous' deterioration; for any collapse to take place, there would have to be some external impact of great violence; and a credible alternative would have to be available." (Braudel 1984:626) Both Wallerstein and Arrighi diverge from Braudel on this point. Wallerstein emphasizes how a set of secular trends gradually contradicts the possibilities for accumulation within the capitalist *system*: on the one hand rising costs of production and on the other hand sales prices that do not keep pace due to increased competition - no matter how successful the constant attempts to keep competition at bay (Wallerstein 2004:83). He believes these secular trends already began to reach their limit some forty years ago and that the capitalist world-system has entered an "age of transition". For Wallerstein, the outcome of this crisis is uncertain, stressing the ability and necessity of social forces to stimulate the creation of a more egalitarian system of political economy for the future (Wallerstein 2005:1272-1277).

Arrighi focuses on the systemic expansion of the networks of power and accumulation during the cycles of accumulation we discussed above. Extrapolating this secular trend, Arrighi constructs three scenarios that all mark "the end of capitalism as we have known it." In the first scenario, the extent of the state- and war-making capabilities of the United States and its European allies creates the first true global empire, pacifying interstate relations by appropriating the surplus accumulation worldwide through force, cunning or persuasion. This would terminate capitalist history by terminating inter-state competition, a central drive behind the capitalist world-system. The second option sees the world slipping into a sort of systemic chaos out of which capitalism had emerged some seven centuries ago, again signaling the end of capitalism as a system. In the third scenario capitalist history would come to an end through the re-centering of the world-economy in East-Asia:

> East Asian capital may come to occupy a commanding position in systemic processes of capital accumulation. […] capitalist history […] would come to an end as a result of the unintended consequences of processes of world market formation. Capitalism (the "anti-market") would wither away with the state power that has made its fortunes in the modern era, and the underlying layer of the market economy would revert to some kind of anarchic order (Arrighi 1994:355-356).

The main argument of *Adam Smith in Beijing* is that the third scenario has become increasingly likely: an "East Asian-centered world-market society" is going to replace the present day "capitalist world-economy" (Arrighi 2007a:7). This change in the nature of the world-economy according to Arrighi is triggered by the United States' failed Project for a New American Century (undermining its hegemonic status), and the continuing shift in the epicenter of the global political economy to East Asia. Contrary to *The Long Twentieth Century*, however, East Asia no longer points to the capitalist archipelago of Japan, Taiwan, Hong Kong, South Korea and Singapore. Instead, China has moved to center stage. Given the fact that China was barely touched upon in *The Long Twentieth Century*, Arrighi thus has to "fit" the Chinese ascent into his

analysis of the development of the world-system. Furthermore, he has to demonstrate how this ascent has the potential to steer the very nature of the global economy away from capitalism, and toward a market society. These points were raised most poignantly by his long-time friend Andre Gunder Frank who believed that the resurgence of East Asia caught Arrighi in "an irresolvable contradiction":

> First he claims capitalism began in the Italian cities and from there went through successive cycles of financial revolution […]. At the same time and more so since, Giovanni has discovered China and its central place in world economic development although of course it had little or no part in the institutional development of capitalism based in Europe. The only resolution of Giovanni's knot, I argue, is to cut the Gordian knot of capitalism all together (Frank 2005:s.p.)

In Frank's view, Arrighi's original neglect to put China into the world-historical equation was a direct consequence of his Eurocentric understanding of historical capitalism. According to Frank, Arrighi and Wallerstein unwisely reduced capitalist history to the expansionist transformation of the Eurpean world-economy during the last five or seven centuries, whereas he wanted to stress the existence and relevance of a world system that centered on Asia long before the nineteenth century and might re-center on Asia in the near future (Frank 1998; Frank and Gills 1993). Wallerstein and Arrighi had serious problems with Frank's attempt to slay the Eurocentric demon and pull the rug out from under the feet of Western social theory (Wallerstein 1999, Arrighi 1999b). Arrighi criticized Frank for negating "the undeniable specificity of the modern era, as defined by the extraordinary expansionary thrust of the Euro-centric system both absolutely and relative to the Sinocentric system" (Arrighi 1996:6). But this implies of course that Arrighi needs to contrast the differences between this "Euro-centric" capitalist system and the "Sinocentric" system, and deal with their presumed convergence at present.

REVISITING THE LONG TWENTIETH CENTURY

Arrighi attempts to solve Frank's "irresolvable contradiction" not by abandoning the theory of historical capitalism, but by elaborating the systemic cycles of accumulation perspective articulated in *The Long Twentieth Century*. On the one hand, *Adam Smith* puts stronger emphasis on the characterization of the emerging European world-economy after about 1300 as capitalist, in contrast to an East-Asian *non*-capitalist but market-based world-economy. On the other hand, the East-Asian world-economy is not considered to be subordinated to a globalizing, originally European, capitalist world-economy once the European gunpowder empires gradually unlocked China during the nineteenth century. On the contrary, the convergence of the European and East-Asian "paths of development", in Arrighi's view, creates the opportunity for an emerging non-capitalist, Sino-centered commonwealth of civilizations. We concur that the first supplement convincingly confirms the architecture of *The Long Twentieth Century*. The second revision however is much more problematic as Arrighi assumes but never accounts for the survival of a seeming Asian market-oriented legacy into a European, and later on North-American, political-military interaction network.

Let us start with the first supplement. The contrast between a European capitalist world-economy and an East-Asian market-based society immediately brings us back to Braudel's distinction between market competition and its capitalist antithesis. Arrighi paints the East-West regional contrast by recalling Adam Smith's distinction between a "natural" and an "unnatural," or retrograde, path of economic development. On the natural path, the greater part of capital is directed first to agriculture, next to manufactures, and last of all to foreign commerce. On the unnatural path, the vector of economic development is inverted, as foreign commerce demands finer manufactures that are fit for trade, while manufactures and foreign commerce together give birth to the principal improvements in agriculture. Smith believed the modern states of Europe walked down the unnatural path:

> But though this natural order of things must have taken place in some degree in every such society, it has, in all the modern states of Europe, been, in many respects, entirely inverted. The foreign commerce of some of their cities has introduced all their finer manufactures, or such as were fit for distant sale; and manufactures and foreign commerce together have given birth to the principal improvements of agriculture. The manners and customs which the nature of their original government introduced, and which remained after that government was greatly altered, necessarily forced them into this unnatural and retrograde order (Smith 1991:340).

Arrighi agrees with Smith that Chinese economic development fits the natural path until the nineteenth century. Following the Opium Wars (1839-1860), China was opened up to foreign trade under European pressure. This meant that China was confronted with Smith's identified unnatural order of things. Ideal typical as these classifications are, and despite the fact that they make long-distance trade the mother of all inventions in Europe, Arrighi accepts the distinction. Although he admits that trade was important to both European and East-Asian states, he stresses that the economic and political weight of long-distance trade relative to short-distance trade was far greater in the European than in the East Asian system (Arrighi 2007a:319). He recalls how this long-distance, East-West trade was vital to the fortunes of Venice, instigated the "discovery" of America, and created unseen opportunities for the Dutch and British merchants and chartered companies. In contrast, the Ming dynasty (1368–1644) instigated a policy that privileged the domestic market over foreign trade, a policy that was relaxed now and then, but resumed with the consolidation of Qing rule in 1644. In short, the East Asian system was not directed towards geographical expansion but towards state- and national economy-making. The most frequent acts of war were aimed at safeguarding China's northern border, not at the extension of this border. In sharp contrast to the extraversion and expansionist tendencies of the modern European States, the East-Asian State components did not build overseas empires in competition with one another or engaged in an armament race in any way comparable to the European states (Arrighi 2007a:313-316).[4]

[4] In contrast to Wallerstein, the differences between the East Asian and European system are not painted in terms of a European inter-state system versus a East-Asian world-empire, in which China would act as the imperial centre and concentrates political, economic and cultural power (see Wallerstein 1974:63). As Arrighi points out, Great Britain fulfilled a similar role in the European system during the nineteenth

Arrighi does not deny the presence of profit-seeking agencies in China. However, in line with Braudel (1984), Bin Wong (1997) and Pomeranz (2000), Arrighi postulates that these capitalists were never able to promote their search for the accumulation of capital as the cornerstone of national economic development, which was instead aimed at feeding and protecting the empire. This East Asian path blocked the synergy between militarism, capitalism, industrialization and territorial expansion which characterized European development. This path also made East Asia and China no match for the European states when they forced the opening of China in the south, where the equivalent of a Chinese wall was missing.

This juxtaposition between a European and East-Asian world-economy not only confirms the narrative of *The Long Twentieth Century* on the creation of a European capitalist world-economy, it also allows Arrighi to reconsider the interaction between the two systems. Whereas the longstanding trade between Eastern and Western Eurasia influenced Frank to postulate the existence of a 5000 year old world system, Arrighi reconstructs two different world-economies that rested upon different institutional settings through which this trade took place. East-West trade fitted the capitalist rationale that buttressed the European world-economy, but remained of minor importance to the political economy that ruled the East-Asian inter-state system. This is why long-distance trade may have brought the most advanced capitalism to the shores of the Far East, but never encompassed Eastern society to the extent it did on the Far West of the Eurasian landmass (Braudel 1982:124). What Frank presents as an irresolvable contradiction between China's central place in global economic development and Arrighi's model of the institutional development of capitalism based in Europe, is solved by reaffirming the different political economy structure in Europe and East-Asia. Profit-seeking stimulated European agencies to step outside of the European world-economy but when they did they penetrated another world-economy, they did not act within one Eurasian world system. The difference on this point between Frank and Arrighi is quite clear (Denmark 2009:236).

Beyond the Great Divergence

Up to this point, Arrighi faced few problems in comparing the East Asian trajectory with the European one. The real challenge, as expected, starts once China and East Asia are "subordinated to Western commands", to quote one of the few passages in *The Long Twentieth Century* on China (Arrighi 1994:48). If China in particular, and East Asia in general, walked down a radically different developmental path than Europe, what happens when these paths converge? Does the market logic of the East dissolve within a capitalist world-economy that has become "all powerful and truly global" (Arrighi 1994:11)? In our view, Arrighi has altered this proposition in different ways and on different occasions since *The Long Twentieth Century*. In 1996 he replies to Gunder Frank that "capitalism as a mode of rule and accumulation did become dominant, first in Europe and then globally." But he adds that capitalism "never completely lost its interstitial character, which is as evident in today's emerging center of world capitalism (East Asia) as in its original sixteenth-century center (Western Europe)" (Arrighi 1996: 27-28). The key word here is the rather confusing "interstitial character" of capitalism. What Arrighi refers to is the fact that

---

century. And although this brought about Europe's remarkable Hundred Years Peace (1815-1914), the interstate competition was continued at the outer rims of the by then globalizing European system, as European states scrambled for Africa and knocked down the walls of Imperial China.

capitalism as a rule of accumulation in Europe predates the rise of the modern states and is thus perfectly able to survive in many different political economic configurations, such as city-states, quasi-empires, and business diasporas. The question then is of course how a shift of the economic center to the East would entail "the end of capitalism as we knew it", given the fact that capitalism always had an "interstitial character" and as mode of rule and accumulation has become dominant?

Three years later, in *Chaos and Governance in the Modern World-System*, Arrighi, Ahmad and Shih (1999:248-49) underscore the "formal dissolution" of the China-centered world-system under European expansion. But they add that despite the formal dissolution of the structures and norms of the East Asian system, these structures nevertheless persisted, and "continued to shape and influence interstate relations within East Asia". Despite the incorporation of East Asia into the global circuits of power, Arrighi and Silver maintain that Western intrusion destabilized and transformed a China-centered world system, "but never managed to destroy and create it in the Western image":

> All the region's most important nations that were formally incorporated in the expanded Westphalia system – from Japan, Korea, and China, to Vietnam, Laos, Kampuchea, and Thailand – had all been nations long before the European arrival. What's more, they had all been nations linked to one another, directly or through the Chinese center, by diplomatic and trade relations and held together by a shared understanding of the principles, norms, and rules that regulated their mutual interactions as a world among other worlds (Arrighi and Silver 1999:287).

Chaos and Governance never makes clear what East Asia's shared principles, norms, and rules exactly are, nor how they survived a century of "destabilization". Instead, Arrighi and Silver conclude with the vague proposition that "the leading states of the West are prisoners of the developmental paths that have made their fortunes, both political and economic" and that "East Asia must open up a new path of development for [itself] and the world that departs radically from the one that is now at a dead end." (Arrighi and Silver 1999:288-289) *Adam Smith* rephrases the same propositions in a more sophisticated manner, making use of Adam Smith's proposition on the natural and unnatural paths of development. Whereas *Chaos and Governance* posited that the subordinate incorporation of the China-centered world-system did not destroy the pre-existing Sino-centric system of international relations, *Adam Smith* additionally argues that this survival of the Sino-centric system "contributed to the ongoing transformation of the incorporating Western system itself" (Arrighi 2007a:313). In conclusion, it is clear that Arrighi considerably modified the original idea of China's "subordination to the Western commands" that was presented in *The Long Twentieth Century*. Instead he has come to favor "hybridization" between the two distinct paths of developments, one capitalist and one not. And within this hybrid construct he stresses the resilience of the market-logic that prevailed in China in particular (despite the active distortion of market forces up until 1979 and the active promotion of profit-seeking after 1979).

THE FUTURE OF THE WORLD ECONOMY

The analytical reconstruction of The *Long Twentieth Century* is motivated by Arrighi's present political concerns. Especially the resilience of the market-logic, still prevailing in East Asia despite a century of convergence with the "unnatural" capitalist path, serves as a crucial precondition for Arrighi's hope for a future market-based commonwealth that is no longer dominated by the endless accumulation of capital. The future will of course show whether Arrighi's utopistics holds any validity or if, East Asia's economic growth (when, or if, continued) will bring little systemic change about.[5] But already within the analytical architecture of *Adam Smith*, the connection between its historical narrative and contemporary examination is, to use the expression by Abu-Lughod, "provocative but filled with hypothetical conjectures and unproven reasoning" (Abu-Lughod 2009). Even if one agrees that a shift in the epicentre of the global political economy is taking place from North America to East Asia, few people interpret this shift as the end of capitalism as we know it, despite the different economic trajectory the region might have walked down in the past (for a discussion see Abbeloos 2008; Clark 2008; Coyne 2009; Dyer 2007; Gulick 2009; Trichur and Sherman 2009; Walden 2007). There are few signs that China's recent economic development challenges a capitalist logic of power and accumulation. Joel Andreas agrees that the economy was indeed non-capitalist in the distant and recent past, both in the Marxist sense as a mode of production and in the Braudelian sense as a mode of rule and accumulation, but argues that because of "the radical reforms carried out in recent years, the non-capitalist market economy that existed in the 1980s has been transformed into a capitalist economy:

> There is no longer a socialist sector and virtually all enterprises that employ more than a handful of people, whether they are publicly or privately owned, now operate according to capitalist principles. […] a distinctive characteristic of the present-day Chinese system is the extent to which capital is organized around the state apparatus, an intricate web in which influence runs in both directions. […] as things stand, this development would refashion rather than transcend the existing capitalist order (Andreas 2008:133,139,141).

A new type of "political exchange" within China between governmental and business agencies does not seem to be one in which the former can still keep the latter in check. Or put in a more Marxist fashion, Arrighi admits that it is difficult to assess "whether the Chinese government is in the process of becoming a committee for managing the common affairs of its national bourgeoisie." (Arrighi 2007a:359) Concerning its role in world politics, China seems to look beyond its borders for much the same reasons rising powers have done so in the past. China is hungry for Latin American, and especially African, natural resources (such as copper) to fuel its rapidly growing economy. It is true that African political leaders themselves do not always look at China as the new imperial power on the block, but sometimes welcome its investments as a

[5] As is clear from *Adam Smith*, Arrighi never seriously considers the possibility that an Eastern shift in the epicentre of the global political economy might simply ignite another cycle of accumulation. When David Harvey in an interview confronted Arrighi with this possibility, his answer is, as Bair noted, "somewhat elusive". (Bair 2009:225; for the interview see Arrighi 2009).

wave of South-South cooperation that is not subject to the same conditional ties which characterize Western investments (Sautman and Hairong 2007). On the other hand, this suggested *Beijing consensus* and its emphasis on national sovereignty and multilateralism may be little more than a pretext to do business with both democratic and authoritarian regimes, serving as a legitimization of the type of hands off policy China has applied to the human rights crisis in Sudan. Looking back half a century, this Beijing consensus and its positive acceptance in peripheral countries seems to resemble both the message and acceptance of the United States' "right to self-determination" after the Second World War:

> The United States was thus able to pose during the Second World War as the natural ally of the emergent nationalism in the colonial empires, and as the guarantor of the promises of self-determination and national independence […], the model of the 'Revolution of 1776' was not merely an American propaganda weapon for use in the colonial world, but also a spontaneous source of inspiration for the colonial peoples themselves. […] Towards the end of the 1940's, however, the nationalist tendencies of the colonial world began to diverge from the expansionist tendencies of the United States (Arrighi 1978:93-94).

Analogous to the American example of the mid-twentieth century, a Chinese hands off policy is easy to uphold as long as the African countries are in no position to push for a number of developmental obligations that conflict with the expansionist tendencies of the Chinese economy. It remains to be seen what Beijing will do once African states will seek to drive up the bargain in meeting the Chinese demand for resources (for an in depth discussion see Alden 2007).

To conclude, Arrighi knows he is making uncertain projections into an uncertain future. *Adam Smith* for example ends with the warning that, "by relying too heavily on the energy-consuming Western path, China's rapid economic growth has not yet opened up for itself and the world an ecologically sustainable developmental path" (Arrighi 2007a:398). The political message of *Adam Smith* in Beijing holds that the future of the world will not be determined by the Euro-American powers, and that this future might be bright if China and other Southern states reorient their policies towards a path of balanced development, socially and ecologically. Straightforward as it may be, it feels a bit uncomfortable to see an ambitious book that practically suffers from too much sophisticated theoretical reflections end in such a circumspect conclusion. Or put in another way, if Arrighi's model of The Great Divergence and Convergence proves to be a hard template to understand the place of China within an integrating global economy, the model gives even less guidance to understand the prospects of this global economy.

CONCLUSION: WHAT REMAINS OF THE CAPITALIST WORLD-SYSTEM?

Adam Smith in Beijing is an attempt to answer the question that Arrighi left hanging at the end of *The Long Twentieth Century*: "Can capitalism survive success?" We may now rephrase the question: "What remains of the capitalist world-system?" The question runs in two directions, past and present. First, Arrighi hopes that at present, the capitalist world-system might give way to Adam Smith's commonwealth of civilizations (Arrighi 2007a:10). Regarding these utopistics, we emphasize that Arrighi knows he makes uncertain projections into an uncertain future.

Second, and more fundamental to world-systems analysis, these projections are based on, or rather motivate, a model of the Great Divergence and Convergence that aims to supplement *The Long Twentieth Century* but creates new ambiguities in doing so. Given that the aim of world-systems analysis, in the words of Wallerstein, is about offering "more plausible explanations of historical reality" (2007:19), Arrighi's conceptual struggles with capitalism and the world-economic unit do not seem to lead to a better understanding of the Gordian knot of World History. We agree with Christopher Chase-Dunn that Arrighi "does far better than Frank" in seeing that until deep in the nineteenth century East Asia and Europe threaded down different developmental paths, and that there was a substantially independent East Asian international system prior to the nineteenth century (Chase-Dunn 2009). However, the real problem is Arrighi's assumption that Asia's market-oriented legacy survived within a European, and later, a North American, political-military interaction network. Characterized as a process of subordination, formal dissolution or hybridization, it is difficult to understand the place of China and East Asia within the world during the long 20th century. *Adam Smith* presents an impressive historical analysis to remind us that world history is not a teleological march towards Fukuyama's *End of History* (1993), but this does not automatically render Arrighi's speculations on the "End of Capitalism" more credible. East Asia may not have had an inherent tendency to generate the capital- and energy-intensive developmental path opened up by Britain, but one could argue that it is emulating this path today to the full extent.

In sum, what stimulated much of Arrighi's research but finally turned against him is his "presentist" approach to historical sociology (Moore 1997:105). Ever since *The Geometry of Imperialism* (1978), Arrighi's main concern lay with the future directions of the world economy and how to understand the economic downturn of/since the seventies. Moore stresses that this attitude allowed Arrighi to discern long-run cycles with tremendous clarity but made him vulnerable to the very problem World-Systems Analysis aims to remedy: an ahistorical analysis of the evolution of capitalism. The problem with *Adam Smith* is not so much that the analysis once more risks to ahistorical argument, but that this time around, the analysis has lost some of its tremendous clarity. Instead of fine tuning the rigorous model Arrighi presented in *The Long Twentieth Century*, we are offered a supplement that does fairly little to cut The Gordian knot of the Great Divergence and Convergence. Nor does *Adam Smith* address other problems with *The Long Twentieth Century* such as its underestimation of technological factors in the study of the global economy (Elvin 2008:92-93). Despite these problems, *The Long Twentieth Century*'s analysis of "long centuries" of converging and diverging relationships between the production of wealth, power and space in the history of capitalism stands as one of the most stimulating in the historical sociological literature. It deserves to be criticized, updated and tested, but "unthinking" it in the light of an East Asian development with an unclear outcome seems a big risk to take – and it might not be the most promising option to understand much of this development itself.

ACKNOWLEDGEMENTS

An earlier version of this text was used for a roundtable discussion of *Adam Smith in Beijing* and Arrighi's intellectual legacy, organized by Eric Vanhaute during the 2009 World Economic History Conference in Utrecht. We thank the participants to this discussion, Peer Vries, Kenneth

Pomeranz, Patrick O'Brien and Kaoru Sugihara, for their reflections. The writing of this article also benefited from the suggestions made by the reviewers.

REFERENCES

Abbeloos, Jan-Frederik. 2008. "La Chine, dernière chance du capitalism?" *La Revue Internationale des Livres et des Idées* 8:28-31.

Abu-Lughod, Janet. 2008. "Review of Adam Smith in Beijing." *Trajectories, Newsletter of the Comparative and Historical Sociology Section of the ASA* 20(1):15-18.

Alden, Chris. 2007. *China in Africa*. London: Zed Books.

Allen, Robert C. 2009. *The British Industrial Revolution in Global Perspective*. New York: Cambridge University Press.

Andreas, Joel. 2008. "Changing Colours in China." *New Left Review* 54:123-142.

Arrighi, Giovanni. 1978. *Geometry of Imperialism. The Limits of Hobson's Paradigm*. London: Verso.

_____ . 1994. *The Long Twentieth Century. Money, Power and the Origins of Our Times*. London: Verso.

_____ . 1996. "The Rise of East Asia and the Withering Away of the Interstate System." *Journal of World-Systems Research* 15(2):1-28.

_____ . 1999a. "Globalization, State Sovereignty, and the `Endless' Accumulation of Capital." Pp. 53-73 in *State and Sovereignty in the World Economy*, edited by David Alden Smith, Dorothy J. Solinger and Steven Topik. London: Routledge.

_____ . 1999b. "The World According to Andre Gunder Frank." *Review: A Journal of the Fernand Braudel Center* 22(3):327-354.

_____ . 2000. "Globalization and Historical Macrosociology." Pp. 117-133 in *Sociology for the Twenty-First Century. Continuities and Cutting Edges*, edited by Janet Abu-Lughod. Chicago: Chicago University Press.

_____ . 2007a. *Adam Smith in Beijing. Lineages of the Twenty-First Century*. London: Verso.

_____ . 2007b. "States, Markets, and Capitalism, East and West." *Positions* 15(2):251-284.

_____ . 2009. "The Winding Paths of Capital. Interview by David Harvey." *New Left Review* 56:61-94.

Arrighi, Giovanni and Beverly J. Silver. 1999. "Conclusion." Pp. 271-289 in *Chaos and Governance in the Modern World System*, edited by Giovanni Arrighi and Beverly J. Silver. Minneapolis: University of Minnesota Press.

Arrighi, Giovanni, Iftikhar Ahmad and Miin-wen Shih. 1999. "Western Hegemonies in World-Historical Perspective." Pp. 217-270 in *Chaos and Governance in the Modern World System*, edited by Giovanni Arrighi and Beverly J. Silver. Minneapolis: University of Minnesota Press.

Bair, Jennifer. 2009. "The New Hegemon? Contingency and Agency in the Asian Age." *Journal of World-Systems Research* 15(2):220-227.

Bin Wong, Roy. 1997. *China Transformed: Historical Change and the Limits of European Experience*. New York: Cornell University.

Braudel, Fernand. 1958. "Histoire et sciences sociales: La longue durée." *Annales. Histoire, Sciences Sociales* 13(4):725–753

_____. 1981, 1982, 1984. *Civilization and Capitalism 15th-18th Century Volume I: The Structures of Everyday Life, the Limits of the Possible*. *Volume II: The Wheels of Commerce*. *Volume III: The Perspective of the World*. London: Collins.

Brenner, Robert. 1977. "The Origins of Capitalist Development: a Critique of Neo-Smithian Marxism." *New Left Review* 104:25-92.

Chase-Dunn, Christopher. Forthcoming. "Adam Smith in Beijing: A World-Systems Perspective." *Historical Materialism*.

Clark, Gregory. 2008. "China as the Antidote to Oppression and Exploitation?" *The Chronicle Review* 54(27):B16.

Coyne, Gary. 2009. "Natural and Unnatural Paths." *Journal of World-Systems Research* 15(2):228-232.

Denmark, Robert. 2009. World System History: Arrighi, Frank, and the Way Forward." *Journal of World-Systems Research* 15(2):233-242.

Dyer, Geoff. 2007. "Enter the Dragon." *Financial Times*, November 2.

Elvin, Mark. 2008. "The Historian as Haruspex." *New Left Review* 52:83-109.

Ferguson, Niall. 2006. *The War of the World*. *Twentieth-Century Conflict and the Descent of the West*. New York: The Penguin Press.

Flynn, Dennis O. and Arturo Giráldez. 2004. "Path Dependence, Time Lags, and the Birth of Globalisation: A Critique of O'Rourke and Williamson." *European Review of Economic History* 8(1):81-108.

_____. 2008. "Born Again: Globalization's Sixteenth Century Origins (Asian/Global Versus European Dynamics)." *Pacific Economic Review* 13(3):359-87.

Frank, Andre Gunder and Barry K. Gills. 1993. "The 5000-year World System: An Interdisciplinary Introduction." Pp. 3-55 in *The World System. Five Hundred Years or Five Thousand?*, edited by Andre Gunder Frank and Barry K. Gills. London: Routledge.

Frank, Andre Gunder. 1998. *ReOrient. Global Economy in the Asian Age*. Berkeley: University of California Press.

_____ . 2000. "Immanuel and Me With-Out Hyphen." *Journal of World-Systems Research* 6:216-231.

_____ . 2005. *Changes in My View about Dependence and Capitalism* [http://www.rrojasdatabank.org/agfrank].

Fukuyama, Francis. 1993. *The End of History and the Last Man*. New York: Avon Books.

Ganesh, Trichur and Steven Sherman. 2009. "Giovanni Arrighi in Beijing." *Journal of World-Systems Research* 15(2): 256-263.

Glyn, Andrew. 2005. "Imbalances of the Global Economy." *New Left Review* 34:5-37.

Goldstone, Jack A. (2009). "From Sociology and Economics to World History." *Österreichische Zeitschrift für Geschichtswissenschaften* 20(2):75-90.

Gulick, John. 2009. "Giovanni Arrighi's Tapestry of East & West." *Journal of World-Systems Research* 15(2):243-248.

Jones, Eric L. 1981. *The European Miracle: Environments, Economies, and Geopolitics in the History of Europe and Asia*. Cambridge: Cambridge University Press.

Laclau, Ernesto. 1971. "Feudalism and Capitalism in Latin America." *New Left Review* 67:19-38.

Landes, David S. 1969. *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*. Cambridge: Cambridge University Press.

Little, Daniel. 2008. "Eurasian Historical Comparisons. Conceptual Issues in Comparative Historical Inquiry." *Social Science History* 2:235-261.

McNeill, William H. 1992. *The Rise of the West: A History of the Human Community*. Chicago: University Of Chicago Press.

Moore, Jason W. 1997. "Capitalism over the Longue Duree*:* A Review Essay." *Critical Sociology* 23(3):103-116.

Nef, John U. 1934. "The Progress of Technology and the Growth of Large-Scale Industry in Great Britain, 1540-1640." *The Economic History Review* 5(1):3-24.

Pomeranz, Kenneth. 2000. *The Great Divergence. Europe, China, and the Making of the Modern World Economy*. New York: Princeton University Press.

Pritchett, Lant. 1997. "Divergence, Big Time." *The Journal of Economic Perspectives* 11(3):3-17.

Reifer, Thomas. 2009. "Histories of the Present: Giovanni Arrighi & The Long Duree of Geohistorical Capitalism." *Journal of World-Systems Analysis* 15(2):249-256.

Sachs, Jeffrey D. 2008. *Common Wealth. Economics For a Crowded Planet*. New York: The Penguin Press.

Sautman, Barry and Yan Hairong. 2007. "Friends and Interests: China's Distinctive Links with Africa." *African Studies Review* 50(3):75-114.

Schumpeter, Joseph. 1976. *Capitalism, Socialism, and Democracy*. New York: Allen & Unwin.

Smith, Adam. 1991. *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: Everyman's Library.

Sugihara, Kaoru. 2003. "The East Asian Path of Economic Development: A Long-term Perspective." Pp. 78-123 in *The Resurgence of East Asia. 500, 150 and 50 Year Perspectives*, edited by Giovanni Arrighi, Takeshi Hamashita and Mark Selden. London and New York: Routledge.

Van Zanden, Jan Luiten. 2008. "The Road to the Industrial Revolution: Hypotheses and Conjectures about the Medieval Origins of the 'European Miracle'." *Journal of Global History* 3:337-359.

Vries, Peer. 2005. "Is California the Measure of All Things Global? A Rejoinder to Ricardo Duchesne." *World History Connected* 2(2):s.p.

_____ . 2008. "The California School and Beyond: How to Study the Great Divergence?" *Journal für Entwicklungspolitik/Austrian Journal of Development Studies* 24(4):6-49.

_____ . 2009. "Global Economic History: A Survey." *Österreichische Zeitschrift für Geschichtswissenschaften* 20(2):133-169.

Walden, George. 2007. "Adam Smith Goes to China, Marxists Cheer in Dodgy New Orthodoxy." *Bloomberg News*, November 18.

Wallerstein, Immanuel. 1974, 1980, 1989. *The Modern World-System. Volume I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century. Volume II: Mercantilism and the Consolidation of the European World-Economy, 1600-1750. Volume III: The Second Ear of the Great Expansion of the Capitalist World-Economy, 1730-1840s*. New York: Academic Press.

_____ . 1989. *Historical Capitalism*. London: Verso.

_____ . 1991. "Braudel on Capitalism, or Everything Upside Down." *Journal of Modern History* 63:354-61.

_____ . 1993. "World System versus World-Systems." Pp. 292-296 in *The World System. Five Hundred Years or Five Thousand?*, edited by Andre Gunder Frank and Barry K. Gils. London: Routledge,.

_____ . 1999. *"Frank Proves the European Miracle." Review: A Journal of the Fernand Braudel Center* 22(3):355-371.

_____ . 2004. *Introduction to World-Systems Analysis*. Durham: Duke University Press.

_____ . 2005. "After Developmentalism and Globalization, What?" *Social Forces* 83(3):1263-1278.

Weber, Max. 2003. *Protestant Ethic and the Spirit of Capitalism*. New York: Dover Publications.

Williams, Eric. 1994. *Capitalism and Slavery*. New York: The University of North Carolina Press.

Wrigley, E.A. 1988. *Continuity, Chance and Change: The Character of the Industrial Revolution in England*. New York: Cambridge University Press.

ECOLOGY, CAPITAL, AND THE NATURE OF OUR TIMES: ACCUMULATION & CRISIS IN THE CAPITALIST WORLD-ECOLOGY

Jason W. Moore
Umeå Studies in Science, Technology, and Environment
Department of Historical, Philosophical, and Religious Studies
Umeå University
jasonwsmoore@gmail.com
http://www.jasonwmoore.com

ABSTRACT

In this essay, I elaborate the possibilities for a unified theory of historical capitalism – one that views the accumulation of capital and the production of nature (humans included!) as dialectically constituted. In this view, the modern world-system is a capitalist world-ecology, a world-historical matrix of human- and extra-human nature premised on endless commodification. The essay is organized in three movements. I begin by arguing for a reading of modernity's "interdependent master processes" (Tilly) as irreducibly socio-ecological. Capitalism does not develop upon global nature so much as it emerges through the messy and contingent relations of humans with the rest of nature. Second, the paper engages Giovanni Arrighi's handling of time, space, and accumulation in The Long Twentieth Century. *I highlight Arrighi's arguments for a "structurally variant" capitalism, and the theory of organizational revolutions, as fruitful ways to construct a theory of capitalism as world-ecology. I conclude with a theory of accumulation and its crises as world-ecological process, building out from Marx's "general law" of underproduction. Historically, capitalism has been shaped by a dialectic of underproduction (too few inputs) and overproduction (too many commodities). Today, capitalism is poised for a re-emergence of* under*production crises, characterized by the insufficient flow of cheap food, fuel, labor, and energy to the productive circuit of capital. Far from the straightforward expression of "overshoot" and "peak everything," the likely resurgence of underproduction crises is an expression of capitalism's* longue durée *tendency to undermine its conditions of reproduction. The world-ecological limit of capital, in other words, is capital itself.*

INTRODUCTION

"The history of capitalism shows us," Giovanni Arrighi wrote in the spring of 1972, "that the periodic recurrence of crises is not a function of… 'mistakes' in economic management… The tendency towards crisis is indissolubly linked to the existence of capitalism itself" (1978a:3). Today, we find ourselves in a moment of global crisis that overshadows even the turning point of the early 1970s, from whence neoliberalism emerged. It is a moment that has brought forth, from some sections of the left, explanations of crisis premised on the "mistakes" of neoliberal (de)regulation and calls for more effective state management of the world-economy – above all, for a renovated Keynesianism that would discipline finance capital (e.g. Mason 2009). Arrighi's

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 107-146**
ISSN 1076-156X

approach to historical capitalism offers an indispensable alternative to these explanations and proposed resolutions. From his early formulations of accumulation crisis in the 1970s to his death in 2009, he developed the era's most sophisticated analysis of systemwide accumulation crises over the *longue durée*. (Much of it in collaboration with Beverly Silver.) This essay takes Arrighi's accounts of capitalism over the *longue durée* as a guiding thread to elaborate the next wave of world-historical crisis theory – one that finds its point of departure in the material and symbolic relations of humans with the rest of nature.

Central to Arrighi's thinking is capitalism's remarkable capacity for adaptation. Cautioning against the temptation to engage capitalism as a set of "structurally invariant" processes (2004), he argues powerfully for internalizing spatio-temporal dynamics in the theory of capitalist development. Capitalism does not act upon time and space. *It actively produces these*.[1] Nowhere do we find a more compelling world-historical articulation of this argument than in *The Long Twentieth Century* (Arrighi 1994).

Drawing on this articulation, I focus on the conceptual and methodological possibilities for a unified theory of historical capitalism – one that views the accumulation of capital and the production of *all* nature (humans included!) as dialectically constituted. This argument is closely intertwined with, yet distinct from, narrative construction, which I pursue elsewhere (Moore 2000b, 2002a, 2003b, 2007a, 2007b, 2009, 2010a, 2010b, 2010d, 2010e).

The work of adding "environmental factors" to those of class, capital, empire, and civilization is now largely complete in world-systems analysis, and across the historical social sciences. It is now time to move beyond this grafting of biophysical change onto the body of historical social science. In what follows, I show how Arrighi's relational and contingent construction of capitalism opens the door to a theory of the modern world-system *as* ecological regime. As such, the view that the "*real barrier* of capitalist production is *capital itself*" (Marx 1967 III:250) – a phrase that Arrighi was fond of quoting – becomes a way of transcending Cartesian reckonings of "capitalism *and* nature" in favor of capitalism-*in*-nature.[2]

This reconstruction emphasizes the socio-ecological constitution of capitalism's value form – as subjective project no less than objective process. In privileging labor productivity over land productivity, capital reconfigures the relations between humans and the rest of nature (Marx 1967). Value, Marx argues, *internalizes* nature through the alienated elevation of human labor power to primacy. Labor power, as abstract social labor (which might be thought of as the average labor time inscribed in the average commodity), becomes the decisive metric of wealth in capitalism. At the same time, capital *externalizes* nature through the appropriation of extra-human nature as "free gift" (Marx 1967 III:745). Nor are nature's free gifts limited to minerals, soil, and so forth: they also include human labor power (re)produced outside the circuit of capital (Marx 1976:377-378).

Historically, value emerges in and through Braudel's "market economy" (1982). It weaves together the ethereal valences of finance capital and the prosaic routines of everyday life

---

[1] Yes, there is a "nature" that exists independently of what one thinks of it. Of course, thinking is itself a "natural" process. Nature is knowable only through the conceptual frames and modes of inquiry that humans create and transcend in successive historical eras (Young 1985). Our best guide to the relation between signifier (nature) and signified (the biological, geological, etc.) is historically-grounded theory (Moore 2011a).

[2] Adapted from Araghi's important essay on labor-*in*-nature (2009).

in new crystallizations of power and profit, pivoting on the commodity. In this light, the apparently external relations of capitalism *to* nature – captured in the popular concepts of metabolic rift, ecologically unequal exchange, and the ecological footprint – are revealed as inner relations, constitutive of new, and profoundly restless, socio-ecological configurations (Moore 2011a).

As we move from the logic of capital to the history of capitalism, the multiform tension between the internalization and externalization of nature comes to the fore. The logic of capital compels it to ignore nature as historically variant webs of life; the history of the capitalist era reveals the dynamism and degradations inscribed in this logic as it reorganizes human- and extra human nature, liberating and limiting accumulation in successive eras. Capital's dynamism turns on the exhaustion of the very the webs of life necessary to sustain accumulation; the history of capitalism has been one of recurrent frontier movements to overcome that exhaustion, through the appropriation of nature's free gifts hitherto beyond capital's reach.

The rise of value to the commanding heights of the early modern world-economy was concurrent with the incessant revolutionizing of time and space that we have come to associate with neoliberal globalization. Far from a 20th century invention, "time-space compression" has been central to capitalism from its origins (Harvey 1989; Moore 2003b, 2007a). That these revolutions were fundamentally socio-ecological is easily overlooked. And yet, the universalization of money capital as a storehouse of value is unthinkable except as a part of a world-ecological revolution that enabled European states and capitals to see time as linear, space as flat and homogenous, and "nature" as external to human relations (Cosgrove 1985; Crosby 1997; Moore 2007, 2010a, 2010b; Merchant 1980; Mumford 1934).

It is no coincidence that the most powerful radical theories of capitalist crisis in the neoliberal era have turned on the production of time and space as a unified and differentiated process. We can see the powerful synergies on offer from Arrighi's long dialogue with David Harvey. The demand to accelerate turnover time, so central to Harvey's theory of spatial fix (1982), shapes not only built environments and business organizations, but also the systemwide rhythm of capitalist development. (Every phase of capitalism moves *faster* than the one before it.) The drive to innovate, so central to Arrighi's account of capitalist dynamism, not only produces new markets, new commodities, new statemaking and accumulation capacities, but also recurrent waves of geographical restructuring, global expansion, and the growing spatial compass of the hegemons that lead and coordinate great waves of economic growth. (Every phase of capitalism is *bigger* than the one before it.)

I therefore begin with two premises. The first is Harvey's observation that all social projects are ecological projects and vice-versa (1993). All moments of the spatial fix and its corollaries are irreducibly socio-ecological. The second is Arrighi's inherently open methodological vision of a structurally variant capitalism that is, nevertheless, characterized by definite patterns of recurrence, evolution, and rupture.

I mobilize these insights to engage the great unasked question of the world-historical perspective in the Age of Transition: When it comes to the history of capitalism, what difference does ecology make? What does it mean, for conceptualizing and bounding the systemic phenomena under investigation, to say that all social projects are ecological projects and vice-versa? And if time and space are themselves produced through the agencies of historical capitalism, in what sense is world-systems analysis positioned to transcend the Nature/Society binary?

These questions are especially relevant to the task of interpreting the ongoing crisis of neoliberalism. Is it probable, possible, or unlikely that the world-system's leading territorial and capitalist powers will re-establish the conditions for a new long wave of accumulation? Arrighi's Three Questions provide an indispensable means of exploring, and answering, this question. What are the secular trends within which innovations in the relations between humans and the rest of nature might deliver a new material expansion? What are the cyclical movements of socio-ecological innovation, especially in agriculture and energy, indicating possibility and constraint for such a renewed expansion? In what ways does the recent history of socio-ecological innovation indicate continuity with older patterns, and in what ways have we witnessed a rupture with longstanding cyclical and cumulative movements?

My response to these questions emphasizes the ontological, methodological, and conceptual-historical elements of a theory of capitalism that unifies the accumulation of capital and the production of nature. The argument is organized in three movements. I begin with a consideration of world-systemic investigations of environmental change, pointing to the possibilities offered by transcending the Cartesian binary of "world-system *and* environment." This alternative views the meta-concepts of "social" change as socio-ecological. The ambition is to rethink capitalism as world-ecology… and not capitalism only. My intention is to implicate the widest range of meta-processes in the modern world as socio-ecological, from family formation to racial orders to industrialization, imperialism, and proletarianization. From this perspective, capitalism does not develop *upon* global nature so much as it emerges *through* the messy and contingent relations of humans with the rest of nature.

The second section engages Arrighi's supple handling of time, space, and accumulation in *The Long Twentieth Century*. My reading of Arrighi's history of capitalism in world-ecological perspective highlights its methodological implications. Especially relevant are his arguments for a "structurally variant" capitalism, and the theory of organizational revolution and exhaustion, as fruitful ways to construct a theory of capitalism as ecological regime.

In the final section, I conceptualize accumulation and its crises as world-ecological process.[3] The outlines of this crisis theory take shape through Marx's account of *under*production crises (1967 III). Historically, I argue, capitalism has been shaped by a dialectic of underproduction (too few inputs) *and* overproduction (too many commodities). Today, capitalism is primed for a re-emergence of *under*production crises – early capitalism's dominant crisis tendency – characterized by the insufficient flow of cheap food, fuel, labor, and energy to the productive circuit of capital (M-C-M+) (Moore 2010c, 2011a, 2011b). Far from the straightforward expression of "overshoot" and "peak everything," the likely resurgence of underproduction crises is an expression of capitalism's *longue durée* tendency to undermine its conditions of production.[4] The ecological limit of capital, it appears, is capital itself.

---

[3] In a companion essay, I place this model of accumulation and crisis in the capitalist world-ecology into dialogue with rise and ongoing signal crisis of neoliberalism (Moore 2011b; also Moore 2009a, 2010c).

[4] Beyond Marx, the original sources for this perspective include also Polanyi (1957), Worster (1990, 1992), and O'Connor (1998).

THE WORLD-HISTORICAL IMAGINATION: BEYOND HUMAN EXEMPTIONALISM

The Long Twentieth Century coincided with an explosion of world-system interest in the environment. Given this synchroneity, it is something of a puzzle that the world-historical perspective has yet to locate the spatio-temporal coordinates and relations of the system *within* the nature-society relation.[5]

The world-historical perspective has broken two sorts of new ground in environmental studies. First, world-systems analysts have shed light on the ways that biophysical transformations have *enabled* accumulation, and capitalist development as a whole (Foster 1994; Moore 2000a). Perhaps most famous is Bunker's elaboration of staple theory, showing how "modes of extraction" (largely in the South) were intertwined with "modes of production" (largely in the North) (1984, 1985; Bunker and Ciccantell 2005; Ciccantell, Smith, and Seidman 2005). Dutch world hegemony was impossible without timber to build commercial fleets; British hegemony, impossible without coal to fire steam engines. A second group of studies takes up the *consequences* of capitalism upon biophysical nature. This is the "ecological footprint" approach in spirit as well as letter (e.g. York, et al. 2003; Jorgenson 2003; Chew 2001; Amin 2009), overlapping with studies of ecologically unequal exchange (Jorgenson and Clark 2009a, 2009b).

These studies represent a signal contribution to recent world scholarship. They have deepened our understanding of capitalism and environmental change, historically and in the neoliberal conjuncture. They have not, however, moved to rethink the major categories of analysis through the nature-society relation. So far, the "greening" of world-systems analysis has left untouched the core conceptual and methodological premises guiding the investigation and explanation of historical capitalism. The "endless accumulation of capital" has, by and large, remained an irreducibly social process rather than a socio-ecological project. It is a fine example of what Dunlap and Catton once called "human exemptionalism" in their early formulation of environmental sociology (1979). Capitalism, for much of the world-historical perspective, remains a social process that is either enabled by, or imposes terrible degradations upon, external nature. In either case, "nature" is rendered passive, the object of "social" forces, externalized symbolically in many of the same ways that capital seeks to externalize its costs of production.

What would an alternative that transcends such Cartesian binaries look like? I propose that we move from the "environmental history *of*" modernity, to capitalism "*as* environmental history." In the first approach, scholars investigate the environmental consequences *of* social relations. Many of environmental history's classic texts take this approach.[6] The alternative turns on unthinking social reductionism. This questions the very category of social relations by asking how modernity itself constitutes a socio-ecological project and process. This is capitalism, imperialism, hegemony *as* environmental history. It is the search for a single dynamic inquiry in which nature, social and economic organization, thought and desire are treated as one whole. And this whole changes as nature changes, as people change, forming a dialectic that runs through all of the past down to the present (Worster 1988:293).

---

[5] Promising explorations include Quark 2008; O'Hearn 2005; Gellert 2005; Araghi 2009; and Biel 2006.

[6] For example, Cronon (1991), Merchant (1989), McNeill (2000). An extraordinary exception is Donald Worster (1990, 1992), whose conception of regional modes of production as the crystallization of local environmental conditions and political-economic relations at larger scales prefigures the present argument.

"Environmental history *as*" reorients our line of questioning to the repertoire of modernity's "interdependent master processes" (Tilly 1984). It opens new questions about how imperialism, commodification, state formation, industrialization, patterns of gender and family relations, and urbanization (*inter alia*) represent distinctive weaves of human and extra-human nature. From such a perspective, we can see Arrighi's successive hegemonic alliances, and the broader accumulation regimes they pioneered, as constitutive moments in modernity's recurrent world-ecological revolutions. Systemic cycles of accumulation do not create systemic cycles of environmental transformation so much as they represent differentiated moments of a singular world-historical process – the capitalist world-ecology. Could one write a history of the 17th century Atlantic without reference to the Spanish Empire's socio-ecological reshaping of the Andes in the service of the silver mining frontier, and the dilapidation of Castile's agricultural regime (Moore 2010a:46-48; Moore 2010e)? Or of British hegemony in the late 19th century, without an analysis of botanical imperialism, or the Empire's role in the catastrophic famines that swept through the colonial and semi-colonial world (Davis 2001; Brockway 1979)? Or of American hegemony without considering successive agro-ecological revolutions from the Midwest to California to the Punjab (Friedmann 1978; Walker 2004; Perkins 1997)?

Sure. Such histories are produced all the time. But if environmental history is not merely consequential to, but also constitutive in, the making and unmaking of historical capitalism, new possibilities appear. If Wallerstein (1974) provides insights into the socio-ecological crises and conditions of the transition from feudalism to capitalism (Moore 2003a), Arrighi's narrative of successive, progressively globalized accumulation regimes points towards an active, dialectical incorporation of nature-society relations since 1450.

Capitalism as *Oikeios*: Conceptual-Linguistic Challenges

Such a dialectical incorporation poses two great challenges, in successive turns conceptual-linguistic and methodological. The first is a problem of conceptual language deployed in global environmental studies. From its origins, conceptual language has been central to world-systems analysis. Scholars often discuss "world-systems *theory*" as if it is primarily a body of theoretical claims about the world. It is too often overlooked that world-historical theorizing emerges through a mode of *analysis*, a "knowledge movement" that seeks to discern the "totality of what has been paraded under the labels of the… human sciences and indeed well beyond" (Wallerstein 2004a; 2004b:62). "We must invent new language," Wallerstein rightly insists, to transcend the illusions of the "three supposedly distinctive arenas" of society/economy/politics (1991:14). This trinitarian structure of knowledge is grounded in another, even grander, modernist architecture – the alienation of biophysical worlds (including those within bodies) from social ones. "One question, therefore, is whether we will be able to justify something called social science in the twenty-first century as a separate sphere of knowledge" (Wallerstein 1995:855).

We can immediately detect two conceptual-linguistic difficulties in critical environmental studies. The first is a tendency to deploy "ecology," "environment," and "nature" (and all manner of cognates) as interchangeable. Not for nothing did Raymond Williams describe nature as "perhaps the most complex word in the language" (1985:219). (In *any* language, one might add.)

There is little question that we "need a much more unified language for the social and biological/physical sciences than we currently possess" (Harvey 1993:38). I am struck by how little progress environmental studies has made in this direction over the past two decades. If new

vernaculars are needed, however, it would be impractical to ignore the old. For the moment, I retain the language of Nature/Society and "socio-ecological," but emphasize from the outset that these terms represent the *results* of an underlying relation – what I call, following Theophrastus (Hughes 1994:4), the *oikeios*. This signifies the *relation* that produces manifold environments and organisms as irreducibly plural abstractions. To take the Nature/Society binary as a point of departure confuses the origins of a process with its results. The plethora of ways that human and biophysical natures are intertwined at every scale – from the body to the world market – is obscured to the degree that we take nature and society as purified essences rather than tangled bundles of human- and extra-human nature.

Feudalism, capitalism, and other historical systems emerge and develop through this *oikeios*. World-ecologies signify successive configurations of nature-society relations from which no aspect of human experience is exempt. Far more than a simple act of discursive re-branding, the world-ecological perspective seeks to illuminate what is often invisible in environmental studies. In place of a thought-structure that posits the "economic" as independent (or relatively so) from the "environment," would it not be more fruitful to view financialization, industrialization, imperialism (old and new), and commercialization, among many others, as socio-ecological projects and processes in their own right?

In what follows, the shorthand "ecological" speaks to a holistic perspective on the society-*environment* relation. Each dialectical movement is actively constructed by (and through) the other. If society and environment constitute the parts, *ecology* signifies the whole that emerges through these relations (Levins and Lewontin 1985). In place of environmental crisis, I therefore embrace the language of *ecological* transformation. I do so because a singular object, *the* environment, "does not exist and… because every species, not only the human species, is at every moment constructing and destroying the world it inhabits" (Lewontin and Levins 1997:98).

A second conceptual-linguistic difficulty in global environmental studies implicates the "common sense" of environmental crisis today. The signifier "crisis" is rarely deployed with less historical and conceptual precision than in critical environmental studies. The argument for crisis is too often built out from a catalogue of environmental problems, whose gravity cannot (I agree) be overestimated (e.g. Foster 2009). Unfortunately, such empiricism works against a theory that includes unconventional sites of environmental history – say, financial centers or factories or suburban sprawls *as* environmental history. Nor is it conducive to a world-ecological rethinking modernity's greatest contradictions – between powerful and weaker states, between capital and the direct producers, between town and country.

Capitalism as World-Ecology: Conceptual-Methodological Visions

We have become accustomed to thinking of capitalism as a social, even economic, system. There is some truth the characterization. But it rests upon a profound falsification. It is impossible to discern, in a non-arbitrary fashion, the boundary between capitalism, the social system, and "the environment." These realities are so intertwined that it is impossible, as Williams might say, "to draw back and separate either out" (1980:83).

The point is not to do away with distinctions, but to highlight the often-invisible frames within which distinctions are formed. The Cartesian ontology that shapes the distinctions of "economy/society" and "environment" is fast losing its heuristic edge. These abstractions – Nature/Society – are the product of a long history of modern thought, one premised on the search

for "basic units" that could be defined substantially rather than relationally. The basic problem with this is that "all previously proposed undecomposable 'basic units' have so far turned out to be decomposable" (Levins and Lewontin 1985:278). And there is an even deeper problem. The *symbolic* enclosure and purification of "nature" (nature without humans) and "society" (humans without nature) is, historically and in the present crisis, instanciated in the *material* enclosures of actually existing capitalism.[7]

As Levins and Lewontin underscore, the empirical and conceptual decomposition of basic units – Nature/Society in this instance – entails more than critique. Analytical decomposition, revealing the relations forming basic units, also reconstructs. Such deconstruction necessarily "open[s] up new domains for investigation and practice" (Levins and Lewontin 1985:278). This enables a shift from the privileging of basic units to the relations that form them. This is the methodological core of world-systems analysis (Hopkins 1982; McMichael 1990; Tomich 1990), emphasizing a relational method through which modernity's "master processes" unfold as a "rich totality of many determinations" (Marx 1973:100).

Our tradition's longstanding critique of societal development as *the* basic unit of social change – positing that the real relations of national units operate through multilayered local-global dialectics – can now be radically extended. The basic units Nature/Society may now be transcended on the terrain of world history. If capitalism is a matrix of human- and extra-human nature, premised on endless commodification, no domain of human experience is exempt from socio-ecological analysis. Modern world history may then be reimagined, away from the Cartesian basic units – Nature/Society – and towards the socio-ecological constitution of modernity's strategic relations. This constitutive dialectic extends far beyond *earth-moving*, comprising commodity-centered resource extraction, cash-crop agriculture, energy complexes, pollution, and so forth. The production of nature has been every bit as much about factories as forests, stock exchanges and securitization, shopping centers, slums, and suburban sprawls as soil exhaustion and species extinction.[8]

It has been one thing to argue this theoretically, and another matter entirely to deploy theory in reconstructing these historical master processes *as* nature-society relations. There is no royal road, as Marx would remind us, connecting "green" social theory to a "green" world history. There is little question that we now enjoy a series of extraordinary literatures: on the social theory of the environment, on regional political ecology, on environmental history, on the global political economy of environmental change. For all their groundbreaking contributions, however, the theory of historical capitalism as constituted through a mosaic of socio-ecological projects and processes has made little headway within the world-historical perspective.[9]

---

[7] As if it is possible to separate out the material and symbolic. Even Marx likened theory to "a material force" (1926:17).

[8] "The production of nature is in no way synonymous with a social constructionist vision of nature. While the best constructionist accounts emphasize the combined material and discursive construction of nature, and often invite a discussion of race, gender, sexuality and other forms of social difference in relation to nature, the connection between materiality and discourse often remains vague, the social origins of discourses are underspecified, and the source of change in given social constructions of nature is obscure" (Smith 2006:25).

[9] The closest we come is the historiography of state formation (Scott 1998; Foucault 2003; Appuhn 2009). But it is one thing to "scale up" from regional political ecology to the nation-state; from one part to another. It is a different enterprise to situate state formation as a world-historical and world-ecological process.

While it is difficult today to learn social theory without engaging "the environment," the spectrum of "green" social theory has not (yet!) given rise to a "green" history of capitalism. Yes, there is an enormously rich literature on world environmental history. But the master processes remain resolutely social – industrialization colonialism, commercializing imperatives, civilizing projects large and small (e.g. Ponting 1991; McNeill 2000; Richards 2003; Hughes 2001). Instead of colonialism or commercialization or capitalism *as* environmental history, these processes are ceded to the Cartesian binary. They are treated as purified social entities that inflict more or less unsavory impacts on the rest of nature.[10] In much the same manner, the world-systems perspective has offered a remarkable body of work that clarifies capitalism's manifold forms of environmental degradation (*inter alia*, Clark and York 2005; Goldfrank et al. 1999; Hornborg et al. 2007; Jorgenson and Clark 2009a). As in environmental history, however, there is little attention to the ways that these master processes are themselves products, as well as producers, of far-flung and unruly relations between human and extra-human nature.

Nevertheless, this grafting of "social" and "environmental" change has been enormously productive, and was the environment (if you will) within which my interpretation of capitalism emerged. I arrived at The Johns Hopkins University to study with Arrighi in 1999, already confident that environmental transformation had played a central role in the rise of capitalism (Moore 2000b). The environmental history of the early modern sugar "commodity frontier" indicated not only that staples remade environments (Innis 1956). It also indicated that environmental degradation played a key role in compelling geographical expansion as a recurrent global ecological fix. I was already familiar with *The Long Twentieth Century* (Moore 1997). It was not until I had the chance to rub elbows with Arrighi, however, that I began to come to grips with unusual vitality of his conceptual-methodological approach (Arrighi and Moore 2001). Even then, it took time. Initially, I misunderstood how he deployed the "angles of vision" shaping the spectacular narratives of *Chaos and Governance in the Modern World-System* (Arrighi and Silver 1999). Taking the conflicts of empires, the struggles of classes, the competitions of business enterprises, and the clashes of civilizations as distinctive, partially overlapping optics, Arrighi, Silver, and their colleagues revealed these moments as mutually constituting. This aspect of Arrighi and Silver's narrative of capitalism is still underappreciated, even within world-systems analysis. My own underappreciation led me to graft two weakly connected intellectual traditions (at the time) – world-systems analysis and environmental history. Drawing on Marx, Foster, and Wallerstein, I argued (2000a) that "systemic cycles of agro-ecological transformation" complemented Arrighi's systemic cycles of accumulation. It was a useful point of entry. Over the next decade, however, I grew progressively less satisfied with this grafting procedure.

There are plenty of theoretical contributions, even regional empirical studies, arguing that all social projects are ecological projects and vice versa (e.g. Harvey 1993, 1996; Braun and Castree 1998). But it was never clear to me – nor, I should guess, to Left Ecology[11] – how relational ontology in theory might translate into world-historical practice. After a certain point,

---

[10] An extraordinary exception is White (1995).

[11] Major points of reference in Left Ecology include Altvater 1993; Benton 1989; Blaikie and Brookfield 1987; Braun and Castree 1998; Bunker 1984, 1985; Burkett 1999, 2006; Enzensberger 1974; Foster 2000; Harvey 1974, 1993, 1996; Levins and Lewontin 1985; Martinez-Alier, 1987; O'Connor, 1998; Peet and Watts, 1996; Peluso, 1992; Peluso and Watts, 2001; Schnaiberg, 1980; Smith 1984; Watts, 1983; Williams 1980, 1985; Worster 1990. Recently, Panitch and Leys 2006, Heynen et al. 2007, and Foster, Clark, and York 2008a, 2008b, bring together important clusters of perspectives within this current.

the Cartesian approach that identifies *social* causes and *environmental* consequences obscures more than it clarifies. Yes, capitalism has done many bad things to living creatures and the environments in which they live. Evidence can be collected and analyzed to document these depredations. There is no question that this has produced a wealth of empirical studies, not least those clustering around the "ecological footprint." But so long as these studies operate within a Cartesian frame, the active relations of all nature in the making of the modern world remain not just unexplored, but invisible. The impressive documentation of environmental problems in the capitalist era is theoretically disarmed as a consequence, unable to locate the production of nature within the strategic relations of modernity.

We do need an analysis of impacts. The difficulty is that the Cartesian scheme narrows the empirical phenomena under investigation. The Nature/Society binary offers a view of nature that thoroughly exempts humans – "ecological" pressures might include loss of habitat for polar bears but not the loss of habitat for millions of Americans evicted from their homes in the (still-unfolding) "subprime crisis." It is a view of nature that confuses specific episodes of earth-moving for environmental history as a whole. Farming, mining, and toxification are indeed central to environmental history, but so is the housing question, financialization, state sovereignty, and family policy. If we take the theory of metabolic rift, one of the most dynamic perspectives in critical environmental studies today, topics such as agriculture, global warming, and resource consumption loom large (Foster 2000, 2009). There is nothing inherently problematic about these emphases. But to stop there, and to treat the accumulation of capital and capitalism's remaking of *human* natures as exogenous, is to miss the greatest promise of the metabolic rift perspective (Moore 2011a) – the transition from environmental histories *of*, to capitalism *as* environmental history.

From the standpoint of world-ecology, we can bring to light what is typically elided by the Cartesian binary. For example, even so perceptive a thinker as Salleh argues recently that "the signs of this [metabolic] rift are deforestation, loss of soil nutrients, poor air quality, water pollution and erosion, toxic wastes, depleted ocean stocks, and so on" (2010:206). But the "so on" does not include home foreclosures, the globalization of industrial production, or the "financialization of daily life" (Martin 2002). A world-ecological reading of the metabolic rift – through which urban-centered capital exhausts the surplus-producing capacities of agrarian spaces – extends the argument to the reconfiguration of human flows as pivotal. Early capitalism appropriated and quickly exhausted African and Amerindian labor power, the proximate agents of New World deforestation and soil exhaustion (Moore 2007, 2010a, 2010e). The mass production capitalism of the long 20th century was built atop the "late Victorian holocausts," from whose East and South Asian flashpoints flowed millions of workers to the Americas (Davis 2001; Northrup 1995). From the other side of the world, we find tens of millions of immigrants moving towards the same destination, as European peasantries were systematically disorganized by agricultural free trade and cheap American grain (Wolf 1982).

Is it so different today? Yes and no. Successive waves of neoliberal agro-food restructuring have engorged the world's reserve army of labor, but without the productive dynamism of previous eras. Neoliberalism's engine of accumulation has depended upon the creation of a "surplus humanity" for whom capitalist civilization has nothing to offer (Davis 2004). Could there be a more foundational socio-ecological category of our times? From the sacrifice zones of American cities to the mega-slums of the Global South, the reconfiguration of human natures in neoliberalism is of a piece with its redistributionary impulse, fueled by

financialization and the cannibalization of capital's (re)productive dynamism (Moore 2010c; Soederbergh 2010). I read the theory of metabolic rift to encompass, rather than exclude, the mechanisms of capital's reproduction – mechanisms that are not just quantitatively adjusted, but *qualitatively* remade in successive long centuries (Arrighi 1994). This includes the financial circuit of capital in recent history, from collateralized debt obligations to private equity firms to the "shareholder value" revolution as fundamental moments of capitalism's ordering of human and biophysical natures.

There is a productive tension between the parts and the whole of capitalism and its generative master processes. The key task is to find a means of relating metabolic rift approaches (Foster 2000, 2009), agro-food regime theory (Friedmann 1993; Friedmann and McMichael 1989), energy and resource regime studies (Bunker and Ciccantell 2005; Podobnik 2006), and many more, with *longue durée* movements of recurrence and evolution in the capitalist world-ecology. The greatest virtue of these approaches is, I believe, rarely noted. At their core, they argue that the relation between human and extra-human nature undergoes periodic, revolutionary shifts that are fundamental to the restructuring of power, capital, and empire in the world-system. They are, at once, partial totalities, and expressive of the booms and crises of the whole. Are we dealing with a set of regimes (accumulation, energy, demographic, etc.) that interact in an essentially contingent fashion, or are there specifiable "laws of motion" that influence their movements? My working proposition is that the law of value, privileging labor productivity as the metric of wealth, goes far towards explaining the patterned relations between the realities signified by these and other regime concepts.

There is an "adding up problem" involved here. On the one hand, we construct totalities through successive "tacking" movements between parts and wholes (Moore 2007, 2010b). This necessitates a fluid approach that transcends the Hobson's choice of local particularity and global determination, when the reality is that both constitute world-historical process – the world-*system* is something quite distinct from world-*scale* relations. (How often this is forgotten!) On the other hand, the parts do not "add up" to the whole. For this reason, I part ways with empiricist approaches to ecological regimes that cobble together multiple long-run trends (e.g. Costanza et al. 2007).

Ecology and ecological (as *oikeios*), then, signify the relations of the whole. These are mediated through the partial totalities of capital accumulation and the shifting mosaics of nature-society relations ("master processes"). This poses a different set of questions from the Cartesian model. In place of environmental histories *of* capitalism, in which landscape transformation (earth-moving) moves to center stage, the focus shifts towards an open-ended tacking between earth-moving and broader repertoires of socio-ecological change. These expansive repertoires include the obvious, such as the production of botanical and genetic knowledge, and the less-than-obvious, such the introduction of new financial techniques. This captures the difference between "capitalism *and* nature" and capitalism-*in*-nature, whereby the accumulation of capital and the production of nature become so intertwined that the one is unthinkable without the other. "Nature" is no longer a passive substance upon which humanity leaves its footprint. Rather, it becomes an inclusive and active bundle of relations formed and re-formed through the historically- and geographically-specific movements of humans with the rest of nature.

Capitalism as world-ecology is therefore a protest against, and an alternative to, the Cartesian worldview that puts nature in one box, and society in another. This alternative views the great movements of modern world history – industrial and agricultural revolutions, successive

"new" imperialisms, social revolutions, world markets – as socio-ecological projects and processes. These processes are each aimed at reconstructing the nature-society relations within their respective fields of gravity. At the relational core of this audacious reconstruction, we find the commodity.

If biophysical and human natures are distinctive moments within a dialectical unity, just what are the conceptual frames and methodological premises necessary to illuminate these relations? This will be the focus of our next discussion.

TIME/SPACE/CRISIS: THEORY AND METHOD IN ARRIGHI'S 'STRUCTURALLY VARIANT' CAPITALISM

The Long Twentieth Century begins with a set of orienting concepts that would be alien to many scholars working in environmental studies. Arrighi posits capitalism as the shadowy, global zone of money dealing, rather than the sphere of commodity production and exchange. He privileges the relations of global space. He emphasizes long waves in accumulation and world power over the temporalities of region, state, and empire. Further, Arrighi not only has little to say about environmental change, his very meta-theory appears to rule out environmental history as endogenous, or even relevant, to capitalist history. In this respect, *The Long Twentieth Century* replicates Braudel's disjuncture between capitalism and material life (Moore 2003c). It is difficult to see how Arrighi could guide us towards an understanding of capitalism as world-ecology.

And yet, this is precisely what *The Long Twentieth Century* enables. Arrighi's theory of successive "organizational revolutions" in the governing structures of capitalist and territorial power is especially important. Arrighi locates the spatio-temporal contradictions of capital *within* the agencies and the hegemonic alliances that propel, reproduce, and eventually undermine successive "material expansions." In so doing, he opens conceptual space for a theory of crisis that renders nature-society relations endogenous, indeed pivotal, to historical capitalism.

The World-Historical Method: Concept Formation in the Bounding of a Structurally Variant Capitalism

The Long Twentieth Century is a crucial moment of synthesis for the world-historical method. Premised on the selection of relevant "angles of vision" derived from the observation of *longue durée* patterns of recurrence and evolution, and situating time and space internal to capitalist development, Arrighi delivers the elements of an ecohistorical method. His Three Questions – What is cumulative? What is cyclical? What is novel? – combine with a relational and constructivist view of time and space in ways that inform the great methodological question of global environmental studies today: How do we bound biophysical and human natures, and what are we doing when we bound them?

I am proposing that we respond to this question by jettisoning the ideal types Nature/Society, a binary that answers the question through meta-theoretical fiat. Wallerstein's insistence on *historical* capitalism emerged out a similar objection to ideal type definitions of capitalism, on the left as well as the right (1983). (Let us note that *historical* does not invoke a past/present dichotomy but a way of seeing the emergence of patterned relations.) Such ideal type conceptions were problematic because they short-circuited the very research necessary to

comprehend that messy and evolving web of relations we call capitalism. In much the same fashion, the Nature/Society binary short-circuits research into the cumulatively- and cyclically-evolving configurations of human and extra-human nature over the *longue durée*, including the movements of the present crisis.

The problem with taking history seriously is that it "continually messes up the neat conceptual frameworks and the more or less elegant theoretical speculations" we've worked so hard to construct (Arrighi 2000:117). The relation of theory and history is of course at the center of a vast literature in historical sociology, and I will not reprise the debates here.[12] I do wish, however, to place the methodological and theoretical implications of Arrighi's accounting of historical capitalism into dialogue with the challenges of rethinking modernity as a socio-ecological process and project.

If history has its way of "messing up" our models, how do we respond? We can begin with a reflexive approach to specificity, in two principal ways. The first involves the conceptual-*historical* task; the second, a *historical*-conceptual challenge. We may consider these in turn.

The conceptual-*historical* task implicates the reflexive interrogation of the relation between theory and history in successive phases of capitalist development. A concept of imperialism appropriate to the analysis of world power in the 17th century is unlikely to be adequate for explaining the "new imperialisms" of subsequent eras.[13] Arrighi often reminded students that while the signifier, "imperialism," had remained constant over the 20th century, the bundle of relations that it *signified* had changed substantially.[14] This sensibility informs his first rule for the conceptual mapping of historical capitalism:

> The idea still dominant in world-system analysis of a quantitatively expanding but structurally invariant world capitalist system must be abandoned, including and especially the notion of Kondratieff cycles, hegemonic cycles, and logistics as empirical manifestations of such a structural invariance (2004:38).

The temptations of "structural invariance" find traction beyond world-systems analysis. In the closely related field of world environmental history, commercialization often appears as a primary form of structural invariance, through which market forces inflict great damage to landscapes (e.g. Richards 2003; Hughes 2001). But this forgets that world markets are not created equal. The world market of the long 16th century, and the world market today, are not only quantitatively, but also qualitatively variant. Conceptual specificity and empirical specificity are dialectically bound. There is, then, good reason – for environmental historians and world-systems analysts both – to revisit the kind of conceptual-historical sensibility Marx evinced in observing that "every particular historical mode of production has its own special laws of population" (1976:784). Can we not also include, alongside population, specific socio-ecological configurations of market exchange, industry, business enterprise, class structure, imperial power, and urbanization in successive eras of capitalism? This observation poses new questions

---

[12] Classic texts are Abrams (1982), Burke (1980), and Skocpol (1984).

[13] This is not to rule out the cross-fertilization of concepts. Consider Chase-Dunn and Hall's classic work on comparing world-systems over the *longue durée* of civilization (1997).

[14] An argument Arrighi developed throughout his career (1978b, 2007, 2009).

regarding the constitution, reproduction, and eventual crises of capitalism's strategic socio-ecological relations in successive phases of development.

A second issue is the historical-*conceptual* task. A critical historical method goes beyond examining the degree to which our categories appear to explain socio-ecological change. A reflexive and critical method will also interrogate (and with luck, reveal) the uneven and variable correspondences and ruptures between our conceptual frames and contemporary structures of power (Bourdieu and Wacquant 1992).

The uneven development of such a reflexive historical social science is a matter of some consequence, to critical environmental scholarship no less than to politics, and to the relations between them. Within environmental and world history, it is difficult to deny a rough-and-ready correspondence between the meta-theoretical insistence on the primacy of markets (Cronon 1991) and neoliberalism, or between resource constraint approaches (Pomeranz 2000) and neo-Malthusian conceptions of peak oil. In observing this homology, my intention is to direct our focus to the "reflexive" specificity of the concepts deployed, in Bourdieu's sense. This is what I have called the historical-*conceptual* moment, intertwining doxic and heterodoxic moments at once. Viewed in this light, "ecological footprint" approaches (Wackernagel and Rees 1996) – installing human exemptionalism as a mechanical and uni-directional impress upon an externally-constituted and singular "environment" – may be fertile ground for such reflexive examination.

The Theory of Organizational Revolution: Organizational Exhaustion as Ecological Limit

This methodological rethinking may be fruitfully paired with Arrighi's theory of historical capitalism. The general framework runs along these lines. Innovations, centered in and effected by emergent hegemonic complexes, lead to phases of material expansion. These are phases of expansion both in terms of the rising physical output of commodities and the geographical expansion of the system. Characterized by rising returns to capital in the "real" economy, these phases of material expansion mark the beginning of each systemic cycle of accumulation. Over time, the material expansion sets in motion new competitors from outside the hegemonic center, eroding the latter's surplus profits, equalizing profit rates across the core, and exhausting the profit-making opportunities within the productive circuit (M-C-M+). Within the hegemonic center, diminishing returns to capital leads to a rising volume of surplus capital that cannot be (re)invested profitably in material expansion. As profitability falters, capitalists quite sensibly reallocate capital from production to finance (M-M+). It is this reallocation that brings about financial expansions, sustained by the escalating inter-state competition that accompanies the exhaustion of material expansion. These financial expansions set the stage for a new round of innovations, brought about by new alliances of territorial and capitalist agencies in geographically more expansive hegemonic centers.

Two elements of this theory are especially relevant to the present exploration. In both cases, time and space are recast through the dialectic of world power and world accumulation. Arrighi's first contribution brings to the fore the sociology of power and accumulation on a world-scale. This is no "structuralist" account – if by structure we refer to one pole of a structure/agency binary. Those long centuries of capitalist development at the center of *The Long Twentieth Century* did not just happen; *they were made*. Systemic cycles emerge and stabilize through the innovation and generalization of new forms of world leadership and business organization, revolutionized by specific state-capitalist alliances, after which Arrighi names each

systemic cycle (Iberian-Genoese, Dutch, British, and American.) Transitions from one cycle to the next are contingent – "chaotic" – with indeterminate outcomes (Arrighi and Silver 1999). The crises that occasioned these transitions were not provoked by exogenous limits or otherwise caused by exogenous forces. Rather, these systemic crises emerge, cyclically and cumulatively, through the exhaustion of the very "organizational structures" that had initially liberated "material" accumulation (1994:226).

The exhaustion of these organizational structures creates new spaces for the creative responses ("organizational revolutions") of classes, states, and business organizations to the great crises of their times. We have seen plenty of these creative responses in the neoliberal era, although without the revolution in labor productivity that five centuries of capitalist history leads us to expect (Balakrishnan 2009; Moore 2010c). In directing our attention to successive hegemonic state-capital complexes, Arrighi extends Gramsci's dialectic of coercion and consent to the world-historical stage (1994:27-84). These hegemonic organizational revolutions possess a dual character. On the one hand they produce a competitive edge in the exercise of politico-military and economic power. On the other hand, they create a development model emulated by rivals. In so doing, these hegemonic revolutions make possible renewed and expanded accumulation over successive long centuries, only to generate renewed and expanded contradictions. As a hegemon reaps the rewards of the regime forged through organizational revolution, its very success leads rival to emulate, then to innovate, with increasingly greater success. The very successes of the initial revolution become an iron cage from which the hegemon cannot escape. Flexibility in youth turns to sclerosis in old age. The decisive moment of systemic crises – from their signal to terminal moments – is driven by the erosion of the declining capacity of the hegemonic center not only to sustain its own power, but to continue to "deliver the goods" to the system. (There are vital ecohistorical implications, which I outline in the next section.)

Arrighi's second contribution is the internalization of spatio-temporal transformation as central to the making and unmaking of systemic cycles. This brings to light a central *longue durée* contradiction – between the endless accumulation of capital (possible within the logic of capital) and the endless conquest of space (impossible within the nature-society dialectic). The *longue durée* therefore frames an emphasis on middle-run crises to demonstrate that systemic restructuring is at once cumulative and cyclical. Innovation and organizational revolutions unfold within the constraints and possibilities of the system's cumulative development. New forms of commodification, for instance the early modern sugar plantation or biotech property-rights in neoliberalism, reproduce the secular trend. Each systemic cycle, initiated by variable ensembles of world-historical innovation, differs from the preceding one in two main respects: the greater concentration of organizational capabilities wielded by the hegemonic state in comparison with its successor, and the higher volume and dynamic density of the system that is being reorganized by the hegemonic state (Arrighi and Silver 1999:34).

Thus the qualitative dimension of world-historical innovations does not erase the trend line. *Innovation, in other words, cannot proceed indefinitely*. First, the limits to capital's self-expansion manifest geographically, and these geographical limits are produced by the accumulation regime itself. Metropolitan rivals "catch up" by emulating the hegemon's developmental model. Second, declining investment opportunities within the extant divisions of labor signal overaccumulation. Both moments set in play mounting pressures for restructuring through market-deepening and market-widening. To overcome the crises implicated in the

system's always-rising "dynamic density," the organizational revolutions effected by successive hegemonic complexes pioneered a quantum leap forward in the scale of the organizing center – from Genoa to the United Provinces to the United Kingdom to the United States.[15]

These organizational revolutions give rise to new accumulation regimes that move through long, and overlapping, systemic cycles of material expansion and financial expansion. Such revolutions achieve their qualitative shifts in response to – and on the basis of – the accumulating (quantitative) contradictions of the previous era. How do we bring a production of nature perspective into this scheme of things? For starters, we might observe that the financial circuit of capital and the commodity-centered transformation of human and extra-human natures are more tightly linked than Arrighi appears to suggest. This hardly undermines the vitality of the argument, however.

In painting capitalism as that zone where money-dealing and world power link up, Arrighi executes a necessary bounding maneuver in *The Long Twentieth Century*. Without it, clearly identifying the alternation of material and financial expansions over the *longue durée* would have been impossible. But I would caution against elevating this provisional conceptualization of capitalism – as that "shadowy zone" in which the "possessor of money meets the possessor, not of labor power, but of political power" (1994:25) – into a general principle. Arrighi's interpretation of recurrent financial expansions allows us to see a cyclically-deepening relation between financialization and material life. Braudel's "Age of the Genoese" (1984), for example, was directly linked to the commodity-centered remaking of Andean life, and closely bound to the world-ecological revolution of the 17th century, which stretched from Brazil to Poland to Southeast Asia (Moore 2010a, 2010b). The financialization of neoliberal capitalism has, likewise, been realized through a revolution in socio-ecological relations unrivaled in scale and scope. The "conversion of the global South into a 'world farm'" (McMichael 2009), the industrialization of the South (Arrighi, Silver, and Brewer 2003), and the radical externalization of biophysical costs, giving rise to everything from cancer epidemics to Global Warming (Davis 2007; Monbiot 2006) – all figure prominently in the unusually expansive character of finance capital's appropriations of the *oikeios* during the neoliberal era.

This observation on the relation between financialization and material life is only a beginning. We might consider a further, ecohistorical, twist on Arrighi's fruitful notion that systemic cycles of accumulation pivot on the vitality of "particular organizational structure[s], the vitality of which [is] progressively undermined by the expansion itself" (1994:226). Once we bring the production of nature into such a world-historical frame, it becomes clear that something more than competition and antisystemic movements cuts into the high rate of profit in the waning moments of material expansion. Indeed, competition, interstate rivalry, and antisystemic struggles are revealed as socio-ecological contests. It is not the absolute exhaustion of an abstract and ahistorical nature that "causes" such crises of profitability, whether through a falling rate of profit owing to overcompetition, or through realization crises owing to overexploitation, to take Arrighi's classic formulation (1978a). Rather, it is the exhaustion of specific complexes of nature-society relations – including the tendencies of overcompetition and overexploitation – that induce transitions from one systemic cycle to the next. Put simply, there is at once an absolute exhaustion of those organizational structures specific to the systemic cycle and a relative

[15] The hypothetical transition to a China-led phase of capitalist development is therefore problematized by the scale issues required for its realization (see Gulick 2011, this issue).

exhaustion of the relations governing the reproduction of biophysical and human natures initiated by the old accumulation regime.

This allows for a theory of accumulation crises as transitions within the specifically capitalist *oikeios*. The world-ecological limits that precipitate these transitions are historical and endogenous. Broadly speaking, crises materialize as a system's capacity to maintain homeostasis breaks down. In critical environmental studies, this moment of breakdown is often framed in language of "natural limits" (e.g. Clark and York 2008). Presumably, this is paired with "social limits," but it is far from clear how we might discern the two in a non-arbitrary way. This is especially true for the history of agriculture, where great revolutions in earth-moving have been bound up with fiercely contested moments of class restructuring and world market formation (Moore 2008; 2010c). The enduring "social" conflict between peasant moral economies and capitalist political economies is in fact a contest over whose valuation of nature – human nature included – will govern socio-biological reproduction and the distribution of surpluses. Is this not at the heart of the global conflict today between advocates of a democratic and polycentric "food sovereignty," and those of a "food security" defined by market participation (McMichael 2005)?

There is an even more problematic aspect to the Cartesian binary of limits. If "natural limits" are often conceptualized as capitalism's tendency to "overshoot" something resembling a global carrying capacity (Catton 1980) – itself a deeply problematic concept (Sayre 2008) – "social limits" are conceptualized as internal. This also strikes me as arbitrary. In world-ecological perspective, all "social" and "natural" limits are irreducibly socio-ecological. These limits assume multiple forms, from state regulation and antisystemic movements to deforestation and climate change. The point – and this is what Marx underscores in arguing that the limit of capital is capital itself[16] – is that all limits are historically constituted through the relations between human- and extra-human natures. The problem is not the "separation" of humans from extra-human nature but rather how the two fit together. These configurations emerge through specific human projects to remake *all* of nature. To say that such projects inevitably encounter limits that emerge through the inner contradictions of these projects is much different from invoking "natural necessity" and "absolute limits" (Foster 2008:125, 129).

Recall that for Arrighi, accumulation crises occur when the organizational structures formed at the onset of a systemic cycle exhaust their capacity to generate rising returns to capital. The question is one of the exhaustion of the relations organized at the beginning of the cycle. While Arrighi's account is resolutely sociological, there is every reason to resituate his favored axes of change – geopolitical rivalry, inter-capitalist competition, and class conflict – as partial totalities within the *oikeios* of historical capitalism. This is a far cry from "adding on" environmental factors. World hegemonies did not merely organize resource and food regimes; the hegemonies of historical capitalism *were* socio-ecological projects. Dutch hegemony emerged through a world-ecological revolution that stretched from Canada to the spice islands of Southeast Asia; British hegemony, through the coal/steampower and plantation revolutions;

---

[16] Marx does use the language of "natural limits" (1973:399) and "natural barriers" (1976:785). Interestingly enough, Marx often deploys this language in reference to *human* nature. For instance, the self-expansion of capital, in the "infancy" of capitalist production, "came up against a natural barrier in the shape of the exploitable working population; this barrier could only be swept away by the violent means we shall discuss later," that is to say, by primitive accumulation (1976:785). Here, Marx locates this "natural barrier" exogenous to *capital's* self-expansion, and at the same time, endogenous to capital*ism*.

American hegemony, through oil frontiers and the industrialization of agriculture it enabled. In each era, old limits were transcended. A socio-ecological limit for one civilization or phase of capitalism, Benton reminds us, "may *not* constitute a limit for another" (1989:79).

This is the kind of historical thinking that Arrighi's perspective encourages. I am surprised by the vigor with which "ecological crisis" is so frequently asserted, and so rarely historicized. Arrighi's Three Questions are strongly relevant here: What is cumulative? What is cyclical? What is new? How does the present conjuncture differ from previous socio-ecological crises? A reluctance to engage this way of thinking has undermined the development of a historically-grounded theory of capitalist crisis within critical environmental studies. Too often, the terrain of socio-ecological crisis theory has been surrendered to neo-Malthusians such as Diamond (2004; e.g. George 2010).

A world-historical alternative identifies the two major types of ecological crisis that we have known since the long 14th century (c. 1290-1450). On the one hand, in late medieval Europe we have an *epochal ecological crisis* – a crisis so serious that it gave way to a fundamentally new way of ordering the relations between humans and the rest of nature. On the other hand, we have seen a succession of world-ecological revolutions in response to accumulation crises since the 16th century. These are *developmental ecological crises* from which new ways of commodifying the *oikeios* have emerged.

Political economists have given considerable attention to comparing the crisis today with the crisis of the 1970s, as well as the crisis of the 1930s (Eichengreen and O'Rourke 2009; McNally 2009; Harman 2009). I am not convinced that these are the most useful comparisons, primarily because they are premised on the notion that we are dealing with an economic crisis that is relatively autonomous from the web of life. A world-ecological perspective directs our attention to the earlier crises of the late 19th century, and of Dutch hegemony in the second half of the 18th century. This latter deserves special attention. At this time, early capitalism, premised on horizontal frontiers, gave way to industrial capitalism's vertical frontiers, whose most prominent manifestation was the coal seam. Between 1763 and 1815, the progressive exhaustion of the English agricultural revolution threatened the rise of industrial capital. England, the breadbasket of early 18th century Europe, became a major food importer by century's end. Food prices increased 200 percent, four times faster than the industrial price index (O'Brien 1985:776). England's agro-ecological woes were, moreover, linked up with a systemwide agrarian depression that reached from the Valley of Mexico to Scandinavia.

This agrarian depression was a crucial moment of developmental ecological crisis; that is, a crisis of the capitalist *oikeios* that could be resolved through more commodification and new commodity strategies. At the time, as today, agricultural productivity growth had slowed or stagnated. It could have been increased, using the best practices of the period, but only through labor intensification. But this was the very shift that could not be tolerated. Such intensification would have reduced labor productivity, and contracted the reserve army of labor, just when each was needed most for industry and empire (Moore 2010c). The solution was ultimately found in two frontiers of appropriation, yielding two sources of windfall profit. The first frontier was vertical, moving *into* the earth to extract coal. The second frontier was horizontal, moving *across* the earth to produce wheat, especially in North America. When another Great Depression rolled around, in the 1870s, the ensuing rapid industrialization was made possible by cheap food delivered by the cooperative labors of both frontiers.

The other major point of comparison to the present crisis is the crisis of late medieval Europe. This was an *epochal* ecological crisis. There are striking parallels between the world-system today and a broadly feudal Europe at the dawn of the 14th century – agriculture, once capable of remarkable productivity gains, stagnated; a growing layer of the population lived in cities; vast trading networks connected far-flung economic centers (and epidemiological flows between them); climate change began to strain an overextended agro-demographic order; resource extraction faced new technical challenges, fettering profitability and investment. After some six centuries of sustained expansion, by the 14th century, it became clear that feudal Europe had reached the limits of its development (Moore 2003b).

Is capitalism today facing a developmental or epochal ecological crisis?

THE PRODUCTION OF UNDERPRODUCTION

My early responses to this question built out from a dual cycle approach, that of capitalism *and* the environment (Moore 2000a). Arrighi's systemic cycles of accumulation were joined to my "systemic cycles of agro-ecological transformation." Eventually, I came to understand these as distinctive angles of vision on a singular, if differentiated, process. Arrighi both helped and hindered this journey towards a unified theory of capital accumulation and the production of nature. On the one hand, Arrighi's meta-theory and method pointed straight towards such a unified theory. On the other hand, his Cartesian understanding of value pointed in the opposite direction. Rejecting Marx's value theory, premised on the active and alienated relation of human- and extra-human natures, Arrighi favored a model of capitalism premised on investment in specific "input-output combinations" (1994:5, 252, 284). It is a value theory that looks suspiciously close to capital's treatment of all nature as mere factors of production. Here was one of Arrighi's rare "doxic" moments, to borrow Bourdieu's language (Bourdieu and Wacquant 1992). It is a theory of value at odds with his ontological insistence that the history of capitalism can be comprehended as a self-forming whole, one emerging through successive analytical optics that illuminate new and mutually constitutive moments in the formation of modernity.[17]

Arrighi's break with Marx's value theory limited rather than expanded the explanatory potential of his theory. This is so in two principal respects. First, Marx's theory of value, grounded in socially-necessary labor time, offers a non-arbitrary means of grounding the "commodification of everything" in an active relation between humans and the rest of nature. As such, it offers an *eductive* method, one that draws out and clarifies the complexity of the capitalist *oikeios* without ignoring value relations as its gravitational center.[18] Second, Marx's value theory points towards a specifiable historical proposition concerning the nature of crises in the capitalist world-ecology. This is the world-historical tension between capitalism's dialectical antagonism of overproduction *and* underproduction.

The accumulation of value – the substance of which Marx calls abstract social labor (1976) – is not everything. It is, however, a necessary point of departure for constructing the

[17] In conversation, Arrighi emphasized that the angles of vision he had selected were not the only ones possible and that others might well prove more important.

[18] My approach to global value relations as a methodological proposition is indebted to the groundbreaking work of McMichael (1999) and Araghi (2003).

cumulative and cyclical movements of the capitalist world-ecology. I found it impossible to reach this conclusion, however, by theoretical fiat. Rather, my research on the rise of capitalism led me directly towards the history of commodification, and thence to the production of nature. The production of nature is above all a labor process; this includes knowledge production no less than commodity production directly. As a result, I was unable to see where the "social" moment of the labor process ended, and where its "environmental" moment began.

Modern slavery, for instance, the subject of a great volume of social history, made little sense abstracted from the earth-moving activities of the sugar frontier (Moore 2000b). Indeed, this form of labor mobilization and its attendant labor processes created plantation landscapes. It was through this historical relation that I began to understand a pivotal fact of modernity: the degradation of extra-human nature was the basis for high and low labor productivity, decisive to competitive fitness in the world market. It was not deforestation or soil exhaustion, as historical facts, that caused one great commodity producing region to give way to another – as when Brazilian sugar yielded to the Caribbean in the 17th century. Rather, the decisive relation was labor productivity, *mediated through the production of nature and the accumulation of capital* (Moore 2007: chapter six; 2009; 2010d).

Nor was the sugar frontier exceptional. Human labor and extra-human wealth do not appear to be interchangeable in the history of capitalism. (Even as I recognize land and labor as the "original sources" of wealth [Marx 1976:636-638]). From its origins in the 16th century, the history of capitalism is one of relentless commodification through which labor productivity has been systematically privileged over the well-being of extra-human nature. (A murderous logic that exhausts labor power as well.) For all the green objections to Marx's value theory, confusing the critique of capitalism's value form as an endorsement (e.g. Bunker 1984), a centerpiece of green thinking since the 1970s has been the critique of industrial society's monstrous energy inefficiencies. Nowhere is this more evident than in agriculture. The Green Revolution as world-historical process, from its origins in the U.S. during the 1930s to the Punjab in the 1960s, achieved an epochal leap in labor productivity through the profligate consumption of energy, water, fertilizers, and other inputs (Bairoch 1989; Pimentel et al. 1973, 2008). The "efficiency" of labor and the "inefficiency" of inputs is a staple of environmental critique; because of capitalism's value relations, they are dialectically bound to each other. From the sugar and timber frontiers of early capitalism to the coal and wheat frontiers of the long 19th century, capitalism's ecological revolutions were not only acts of enclosing and plundering nature's "free gifts," but also of mobilizing these free gifts in the service of maximal labor productivity.

Early capitalism, we have seen, was gripped by a developmental ecological crisis in the later 18th century. And while Arrighi's notion of overaccumulation and "declining returns to capital" is an accurate description, it says little about the mechanism of this process. This was a crisis of overaccumulation, to be sure, but one driven by *underproduction*. Allow me to explain.

Developmental ecological crises have assumed two major forms in the capitalist era (Moore 2010c, 2011a), overproduction crises and underproduction crises. Since the 1830s, overproduction crises – too few customers for too many commodities – have been the overarching form of accumulation crisis. For Arrighi, these are "overaccumulation" crises (1994:94): too much capital seeking too few investment opportunities. It would be a mistake to link overaccumulation and overproduction too closely, however. In early capitalism, the dominant crisis tendency was *under*production. While realization problems (the sale of commodities) did exist, the era's greatest challenge was found in delivering labor and raw materials to the "factory

gates." The delivery of heat energy (primarily charcoal), for example, was especially important, and especially difficult. The history of fuel-intensive industries in this era – in particular, sugarmaking and metallurgy, the vanguards of commodity production – is one of unceasing geographical movement in search of cheap energy (Moore 2007, 2010a, 2010b; Williams 2003).

Once the coal-steampower nexus hit critical mass, sometime around 1830, the dominant crisis tendency shifted from underproduction to overproduction. This was definitively illustrated by the Anglo-American depression of 1837-42 (Lloyd-Jones and Lewis 1998; Post 1995). The coal-steampower nexus found creative synthesis with the rationalization and reorientation of British imperial and financial power to effect a double transformation – a quantum leap in labor productivity and a quantum leap in the expanse of *all* nature (humans included) that could now be freely appropriated at minimal cost. Coal and steampower linked up with capital and empire to radically extend frontiers of appropriation, and thereby secure a radically augmented ecological surplus (cheap food, labor, and inputs). There was a significant long-run expansion of consumer markets as a result. Cheap coal made possible "ever increasing levels of consumption" in a manner roughly analogous to cheap oil in post-1945 capitalism (Araghi 2009).

The really remarkable story is how the generalization of the fossil fuel revolution kept the underproduction tendency at bay, right up to the present conjuncture. So successful was "fossil capitalism" in overcoming the earlier problems of underproduction that most Marxists view the transition from underproduction to overproduction as a relic of bygone days, rather than a recurrent tension in the history of capitalism (e.g. Foster 2009; Burkett 2006). Among other things, such an approach cedes the terrain of scarcity to the neo-Malthusianism of "peak everything" (Heinberg 2007).

The General Law of Underproduction and the Capitalization of Nature

Marx's "general law" of underproduction identifies the circuit of capital *as* a socio-ecological relation, albeit one whose substance (value) is necessarily blind to "natural distinctiveness" (1967 III:111; 1973:141). In this model, "the rate of profit is inversely proportional to the value of the raw materials" (1967 III:111). The cheaper the raw materials and energy, the higher the rate of profit, since constant capital consists of not only fixed capital (machinery that outlasts the production cycle) but also inputs. These inputs, raw materials and energy used up during the production cycle are what Marx calls *circulating* capital. (Not to be confused with the circulation of capital in its monetary forms.) The dynamism of capitalist production leads the "portion of constant capital that consists of fixed capital… [to] run significantly ahead of the portion consisting of organic raw materials, so that the demand for these raw materials grows more rapidly than their supply" (ibid:118-119). Here, the "overproduction" of machinery (fixed capital) enters a dialectical antagonism with the "underproduction" of raw materials (circulating capital) (Marx 1967 III:119). This law, like the falling rate of profit tendency, is a dialectic of tendencies and counter-tendencies. (The counter-tendencies are not exogenous to the law's operation.) The issue is not overproduction *or* underproduction. It is how the two movements *fit together* in successive eras of accumulation.

Metropolitan capital has been hugely successful in securing cheap inputs since the 19th century. This has an awful lot to do with the productive and transport efficiencies enabled by cheap fossil fuels. Nevertheless, for all their undeniable contributions to the appropriation of nature's free gifts, fossil capitalism eased, but did not resolve, the basic contradiction. Marx's

theory of underproduction basically says two things. First, capital seeks to drive down the value composition of raw materials (circulating capital) relative to machinery and buildings (fixed capital),[19] even as it geometrically expands the material mass of commodity production. Second, capital's inner dynamism undermines the conditions of reproduction that allow it to deliver cheap inputs. This is why new frontiers of appropriation have been central to launching, and sustaining, long waves of accumulation.

With some help from Arrighi, Marx's theory of underproduction can be situated within the shifting configurations of the capitalist *oikeios*. Arrighi is at his most persuasive in revealing how new long centuries of accumulation take shape on the basis of qualitative innovations in business organization and territorial power. Just as the imperialism and great firms of the 17th century are not equivalent to the imperialism and great firms of the 21st century, neither are we dealing with a structurally invariant nature. There *is* a quantitative moment that merits careful scrutiny: the exponential growth curves of 20th century resource use are a powerful illustration (e.g. McNeill 2000; Costanza et al. 2007). In sum: not only has capital sustained itself on the basis on cheap inputs (the quantitative moment); it has also revolutionized the socio-ecological relations of production (the qualitative moment). In this fashion, hegemonic alliances have mobilized a succession of "great leaps forward" in the relative ecological surplus. The point I wish to underscore is that the *cumulative* moment of geometrically rising material throughput is embedded in a *cyclical* moment of producing new configurations of the *oikeios*. "Nature" is a historically variant category. Industrial capitalism gave us Darwin and the Kew Gardens; neoliberal capitalism, Gould and biotechnology firms.

World-ecological revolutions deliver a relative ecological surplus. The "surplus" represents the gap between appropriated and capitalized natures. This surplus becomes "revolutionary" to the degree that accumulation by appropriation issues a significant middle-run (40-60 years) reduction in the value composition of food, labor, and inputs. Just as capital benefits from employing workers located in semi-proletarian households, where a decisive share of income is located outside the wage relation (Wallerstein 1983), so does capital prefer to mobilize extra-human natures capable of reproducing themselves relatively autonomously from the circuit of capital. A large ecological surplus is found whenever a relatively modest amount of capital sets in motion a very large mass of use-values. When the volume of appropriated natures is sufficiently large, it reduces the share of the systemwide *oikeios* that depends on the circuit of capital for its daily and inter-generational reproduction. An ecological revolution occurs when capital's share of reproducing the *oikeios* within its field declines significantly and quickly. This creates a "golden age" of cheap food, energy, and inputs. These always involve technological innovations in earth-moving, but depend on system-making organizational revolutions for the full effect.

We can see these revolutions in the ecological surplus at work in modernity's great energy transitions: from peat and charcoal to coal (1750s-1850s), and from coal to oil (1900-1950). The revolutionary increase in the ecological surplus realized through these transitions was not primarily one of "energy returned on energy invested," but rather "energy returned on *capital* invested" (Moore 2011a). In securing cheap energy, capital can increase labor productivity without a corresponding increase in capital intensity, what Marx calls the rising organic

[19] Falling input prices usually reduce the value composition of fixed capital too.

composition of capital (1967). Cheap energy, in other words, powerfully checks the falling rate of profit.

Before turning to the falling rate of profit as a world-ecological dynamic, let us take a moment to consider the capitalization and appropriation of nature. Capitalized nature depends on the circuit of capital – crudely, either M-C-M+ or M-M+ – for its daily and inter-generational reproduction. For these natures, including humans, the circuit of capital directly determines the rules of reproduction. A good example is the capital-intensive family farm that first developed in the U.S. after 1865, and which was progressively globalized as the Green Revolution model after World War II. An Iowa corn farm producing for ethanol refineries is highly capitalized biophysical nature. As for highly capitalized human natures, these can be found in the proletarianized households of metropolitan accumulation – households that depend on wages for most income.

Accumulation by appropriation signifies a range of processes through which capital appropriates the *oikeios* to maximize labor productivity, without however capitalizing the relations of reproduction for those webs of life. At its core, appropriation is less about the mechanism of extraction – neoliberal privatizations, colonial taxation, enclosures old and new – and more about how capitalism reduces its basic costs of production: food, energy and raw materials, labor. Appropriation and capitalization, then, are not directly implicated in the share of machinery relative to labor power in production (Marx's *technical* composition of capital). The capital-intensive farming of the American Midwest developed through the epoch-making appropriations of cheap water, cheap soil, and cheap oil. These appropriations are now coming to an end (Weis 2010), as the cost of securing these vital inputs moves closer to the systemic average. Costs rise because appropriation imposes a peculiar temporal logic on nature. This temporal discipline, tightly linked to the spatial remaking of nature into a storehouse of interchangeable parts, undermines the daily and inter-generational reproductive conditions by enforcing the systemic disciplines of "*socially-necessary turnover time*" (Harvey 2001:327). The spatio-temporal compulsions of the law of value drive capital to accelerate the extraction of use-values, but at the cost of destabilizing the webs of relations necessary to sustain such value production in the first place. This temporal revolution was present from the origins of capitalism, revealing itself in rapid and large-scale landscape changes – such as deforestation – that moved in decades, not centuries, as was the case for feudalism (Moore 2007, 2010b). Interestingly enough, as Marx recognizes in his treatment of the working day (1976:377-378), these frontiers of appropriation have been as necessary for labor power as they have been for energy, food, and raw materials.

By driving down the capitalized share of world nature and increasing the share that can be freely appropriated, ecological revolutions have worked in two major ways. First, they expanded the relative ecological surplus specific to the ongoing transformation of production (e.g. coal for steam engines). Second, they produced new configurations of global nature, as in the "massive taxonomical exercise[s]" of early capitalism that culminated with Linnaeus (Richards 2003:19).These taxonomical and other symbolic revolutions were crucial to successive reimaginations of global nature as a warehouse of free gifts. Identifying and quantifying new sources of extra-human wealth, these successive scientific, cartographic, and metrical revolutions enabled that crucial achievement of world-ecological revolutions: an increase in the share of appropriated relative to capitalized nature (the capitalized composition of global nature). By reducing the systemwide capitalization of production through global appropriations, allowing a

rising volume of nature's bounty to attach to a given unit of capital, these revolutions directly and indirectly checked the tendency towards the rising organic composition of capital. This happened directly through the cheapening of raw materials (circulating capital), and indirectly through the effects of cheap inputs on fixed capital (e.g. cheaper steel meant cheaper fixed capital). In so doing, these revolutions created the conditions for new long waves of accumulation.

This dialectic of appropriation and capitalization may give us pause to turn inside-out our usual thinking of capitalism's long waves. The great problem of capitalism, in effect, has not been too little capitalization, but *too much*. The socio-technical innovations associated with capitalism's long history of industrial and agricultural revolutions were so successful because they dramatically expanded the opportunities for the appropriation of human and extra-human nature. It is true that one finds concentrations of highly-capitalized production in each of these revolutions, from Amsterdam to Manchester to Detroit. These technological revolutions, however, became epoch-making only when joined to imperial projects that revolutionized world-ecological space. This is an important implication of Arrighi's emphasis on organizational revolutions. If technological dynamism alone was decisive, it is likely that Germany would have won out over Britain *and* the U.S. in the late 19th century. Instead, the American vertically-integrated firm with its continental geography, and British commercial and financial supremacy, combined to make Germany the odd man out.

The essential logic of capitalism's ecological revolutions therefore combines capitalization and appropriation so as to reduce the share of the *oikeios* that directly depends on the circuit of capital. One of the most spectacular examples of this logic is the global railroad and steamship revolution of the "second" 19th century (c. 1846-1914), the apogee and *belle époque* of British hegemony (Headrick 1988; Arrighi 1994). Its crowning achievement was a great leap forward in accumulation by appropriation, as capital's steel tentacles grabbed hold of far-flung peasant formations from South Asia to Eastern Europe, shaking loose vast rivers of cheap labor (Northrup 1995; Wolf 1982). Within North America, railroads made the antebellum revolution in property relations a continental reality (Page and Walker 1991; Post 1995; Moore 2002b). The capital-intensive family farm, integrated into international markets, was of a piece with railroadization – the latter making possible the former's world-historical appropriation of soil and water, formed over millennia (Friedmann 1978, 2000). The epoch-making character of railroadization consequently turned on its capacity to radically extend the appropriation of world nature – it created the conditions for cheap food and resources. Cheap food disorganized European peasantries and sent millions to North America and beyond. Once arrived, they worked in factories that were competitive on the basis of cheap (highly appropriated) energy and resources mobilized through railroadization. Here was the *appropriation* of space by time that was central to American hegemonic ascent.

Re-reading Marx in this fashion extends Wallerstein's longstanding argument about rising costs and systemic crisis (2004c). For Wallerstein, three movements in the history of capitalism have propelled a secular rise in the costs of production: 1) the rising costs of labor power apace with proletarianization, as a growing share of world households come to depend on wages; 2) the rising costs of taxation, as democratization compels rising expenditures on education, health care, and other social programs; and 3) the rising costs of input procurement and waste disposal, as capital exhausts the possibilities for appropriating nature. How have these tendencies been constrained, even at times reversed, in the history of capitalism? We can identify a series of interlinked responses in the neoliberal era – the reassertion of coercive-intensive

income redistribution from poor to rich (Klein 2007; Harvey 2005), the industrialization of the Global South (Arrighi, Silver and Brewer 2003), the temporal deferments of financialization.

These responses directly implicate the dialectic of overproduction and underproduction. On the one hand, competition drives capital to expand geographically, to zones where commodification is low, and the opportunities for appropriation high. To the degree that capital can "jump scale," it can, in one fell swoop, drive down the cost of inputs and increase the rate of profit. On the other hand, competition compels individual capitals to innovate through rising capital intensity, such that relatively less labor (human nature) and relatively more extra-human nature is embedded in every commodity. This accelerates the uptake of external natures into a geometrically expansive production process, which intensifies the drive towards geographical expansion as input and labor costs rise in established zones of production. In this way, capitalism's ever-accelerating transformation of biophysical and geological natures (the conquest of time) is joined to its voracious appetite for new frontiers of appropriation (the conquest of space).

Rising capital intensity – Marx's rising organic composition of capital – places downward pressure on the general rate of profit.[20] If expansion across space (appropriation) represents one fix to the falling rate of profit; innovation through time (capitalization) represents the second. The first moment extends the net of resource consumption ever more widely, driving down the costs of circulating capital (inputs); the second enables fewer workers to produce more commodities in less time, driving down the costs of variable capital (labor power). Neither can be amplified endlessly.

What are the conditions for a revival of accumulation after a long downturn? Marxists usually respond by emphasizing the role of crises in propelling creative destruction. In these accounts there are three big themes. One is the devaluation of fixed capital, as when factories close. Another is the introduction of productivity-maximizing technical innovations that increase the rate of exploitation. A third is the implementation of coercive-intensive policies that redistribute wealth from the direct producers to the accumulators of capital, Harvey's accumulation by dispossession (Harvey 1982, 2003; Mandel 1975; McNally 2009; Walker 2000).

To these three moments, I would add a fourth. This turns on circulating capital (inputs), but with important implications for variable capital (labor power) as well. What I wish to underscore is that Marx's "most important law" (1973:748) can be more fully grasped – and its explanatory power radically extended – by taking *as a whole* the contradictions between "second" and "first" nature (machinery relative to inputs) as well as those within second nature (constant relative to variable capital). I am tempted to say that the crucial weakness in falling rate of profit arguments has been the overemphasis on one moment of constant capital – on fixed rather than circulating capital.[21]

There is, of course, enormous debate over the relation between accumulation crisis and the falling rate of profit. For the purposes at hand, I wish to bracket these, and simply point to the

[20] "Why [do] profit rates fall? The argument is simple. It is because the numerator in the profit equation, surplus value, is outrun by the denominator, capital stock (both measured in annual terms)…That is, too much capital stock builds up in factories and equipment around the world, pitting companies against each other in an ever-fiercer competitive brawl for markets. This holds prices down, leads commodity output to outrun demand at prevailing prices, and/or lowers capacity utilization rates – thereby lowering profit margins, leaving goods unsold, and running equipment at less efficient levels" (Walker 1998).

[21] We are, naturally, dealing with shifting configurations among the three elements of capital.

possibilities of recasting the inner contradictions of capital accumulation as dynamic socio-ecological forces (Burkett 1999). These possibilities can be realized by treating Marx's "progressive tendency" towards a "*gradual fall in the general rate of profit*" (1981:318-319) as a historical proposition on the long-run relation between the overproduction of machinery and the underproduction of inputs. This illuminates a decisive point of fracture in the *longue durée* of historical capitalism, locating biophysical disequilibria *within* the circuits of capital. In so doing, it provides a basis for a much broader conceptualization of cyclical and cumulative crises in the modern world-ecology than hitherto possible.

Could it be that since the 1830s, capitalism's technological dynamism has forged agro-extractive complexes capable of outrunning the tendency towards the underproduction of inputs? If a sufficient mass of cheap energy and raw materials can be mobilized, the rising organic composition can be attenuated; especially if "capital saving" innovations run strongly alongside labor saving movements.[22] This not only checks, but (for a time) reverses, the tendency towards a falling rate of profit.

A similar argument can be made for variable capital (human nature.) If a sufficient volume of cheap food can be supplied to workers the rate of surplus value may be augmented in a manner roughly analogous to wage freezes and technical innovations. The most spectacular booms in the capitalist era have combined cheap labor and cheap inputs – think of English industrialization with its heavy reliance on cheap energy (coal) and cheap calories (sugar) (Wrigley 1988; Mintz 1985).

I have argued that underproduction and overproduction are dialectically bound, and that our investigations ought to focus on their shifting configurations. The late 19th century's long depression offers a promising illustration of the possibilities. World prices for raw materials imported by Britain began to rise sharply during the 1860s and '70s, at the very moment of its peak industrial supremacy (Hobsbawm 1975; Rostow 1938; Mandel 1975). This inflationary moment was quickly turned inside-out, as prices in general declined quite sharply (Landes 1969). At the same time, an inflationary undercurrent was at play. The era was punctuated by successive (if partial) moments of underproduction in such key raw materials sectors as cotton, indigo, rubber, palm oil, copper, nickel, lead, tin, jute, and sisal (Headrick 1996; Mandel 1975; Brockway 1979; Bukharin 1929; Magdoff 1969:30-40). These inflationary undercurrents were set in motion by the rise of new industrial powers, Germany and the United States above all. They were amplified further still by the qualitative shifts of the "second" industrial revolution, premised on the auto, steel, petrochemical, and electrical industries (Barraclough 167:45-63; Landes 1969).

The underproductionist tendency was consequently checked, but not abolished, by the second industrial revolution. Insofar as we restrict our attention to the new industrializers, the inner contradiction between value accumulation and the production of inputs was intensified. The contradiction was resolved through the dialectic of plunder and productivity characteristic of capitalism's successive global ecological fixes: 1) the radical enlargement of the geographical arena, with the rapid acceleration of colonial and white settler expansion; and 2) the "massive penetration of capital into the production of raw materials," especially in the newly-incorporated zones (Mandel 1975:61). There is no question that steam power augmented the capacities of capitalist agencies to transform space. A modest amount of capital mobilized a relatively vast

[22] Between 1980 and 2005, for example, the "relative price of capital goods" declined 25-40 percent in the U.S. and Japan (BIS 2006:24).

energy surplus. This enabled capital to appropriate new frontiers faster than its productive dynamism could exhaust extant reserves of resources and labor power. At the dawn of the long 20th century, Malaysian rubber and tin, Chilean nitrates, Australian copper and gold, Canadian nickel, all entered the world-historical stage as key moments in an ecological revolution that was "far quicker, far more prodigious in its results, far more revolutionary in its effects on people's lives and outlooks" than anything previously known (Barraclough 1967:44). What I wish to underscore is that the delivery of crucial ecological surpluses was achieved through the combined movement of capital-intensive and labor-intensive processes, productivity and plunder. State-of-the-art Canadian nickel smelters were of a piece with Malaysia's tin sector, where nearly a quarter-million Chinese miners "equipped with little more than shovels and simple pumps" fed the growing appetites of the new industrializers (Huff 2007:i131.). One needn't take a resource-determinist view of the 19th century's "new imperialism" to understand that the reorganization of world-ecology – at times coercive-intensive, at times capital-intensive – was central to the trajectory of power and progress in the long century that followed.

Capital's world-historical challenge has been to strike the right balance between regularizing supply (which is always rising) and making those supplies cheap enough to permit expanded accumulation. Rising capital intensity tends to regularize supply but does so by accelerating the place-specific exhaustion of profitability. Capitalism has been remarkably adept at finding ways to overcome the basic tendency. Through capital intensification and socio-technical innovation, capitalist agencies have found ways to make more out of less. More out of less, however, is not something for nothing. The counter-movement to input underproduction has therefore been a frontier movement. From the 16th century, the appropriation of biophysically rich frontiers, combined with cheap labor and sufficiently mobile capital, has periodically resolved the underlying contradiction.

These periodic resolutions, underpinning successive waves of world accumulation, have been realized through varying combinations of the global ecological fix, with its constitutive dialectic of productivity and plunder. If one part of this twin-process falters, the whole edifice erodes, calling forth the need for additional stimuli. Does there exist today a field of appropriation sufficiently large to revive world accumulation?

The history of neoliberalism suggests rocky terrain ahead. Neoliberal capitalism was built by returning to the "scenes of the crime," ruthlessly appropriating wealth from the long-plundered zones of the Global South, with eastern Europe thrown into the mix after 1989. These extractions did not, as previously, revive labor productivity growth, the real basis of accumulation (Gordon 2010). Is not this failure to revive productivity growth closely linked to an accumulation regime notable more for its enclosures than for its productive dynamism? The Fordist "compromise" of postwar North Atlantic capitalism, through which rising productivity gains were partially shared with workers, was impossible after 1971, precisely because those gains have been so slight. Thus neoliberalism's "class project" has been one of accumulation by dispossession (which is usual) without a revolution in productivity (which is not) (Harvey 2005; Moore 2010c, 2011b). As a result, neoliberalism has been about *taking* first, and *making* second. This is rooted in a specific world-historical contradiction: relative to capital as a whole, the opportunities for appropriation have never been fewer, while the demand for such appropriations has never been greater. This is a precious clue to understanding the ongoing transformation of capitalism as it confronts the *longue durée* exhaustion of frontiers.

BY WAY OF CONCLUSION: ECOLOGY AND THE WORLD-HISTORICAL IMAGINATION:

> We need now to go further, along paths hitherto little explored, to see the successive synchronous patterns of historical social systems within the ecological whole that is the earth – Wallerstein (1980:159).

I have argued three propositions, in turn ontological, methodological, and historical-analytical. First, ecology as *oikeios* stands as a signifier of the whole and not the parts. This *oikeios* is the relation that gives rise to the mythic categories Nature/Society. This peculiarly modern ontology says, in effect, that some things humans do are social, and can be analyzed as such, abstracting from biophysical process. I avoid the term "hybrid" for this very reason, since hybridization rests on a purity of essence that does not exist. If there is something resembling a fundamental ontological relation, it is between humans and the rest of nature – the *oikeios*. No domain of human experience is off limits. Capitalism as world-ecology, unifying the production of nature and the accumulation of capital, becomes a means of re-reading the diversity of human experience in the modern world-system as unavoidably socio-ecological. This stems from a paradigmatic contention that: 1) capitalism as a whole is most effectively interpreted through the totality of its conditions of reproduction and not merely commodity production and exchange; and 2) the most fruitful entry into such holistic considerations is to move from the logic of capital to the history of capitalism and back again (and vice versa).

The upshot is that "nature" (however one defines it), like capitalism, is not an invariant structure. It is a *historical* structure – although I am not sure that "structure" is the right word for it. World-systems analysis has produced a remarkable body of scholarship in environmental studies. But little attention has been given to "incorporating" nature into the mode and method of analysis. There has been too little investigation into how nature-society relations constitute modernity's patterns of recurrence, evolution, and rupture. The impression is that modernity makes environmental history. Yet, a more nuanced proposition is more tenable: modernity *as* environmental history. For many, nature remains, as in the old days of state-centric social science, a neat and tidy container within which one can identify all manner of unsavory footprints (e.g. Clark and Jorgenson 2009a).

There are still too few studies that tell us how that container undergoes qualitative transformation. This speaks to my second, methodological, proposition, which turns on the bounding of socio-ecological relations. Once we acknowledge that the old containers (Nature/Society) may need to be radically refashioned, we can read modernity's world-historical patterns – soil exhaustion and deforestation, unemployment and financial crashes – as expressions of an underlying bundle of relations (the *oikeios*). Some of these expressions operate at ground level, others at the scales of accumulation, and of course many more work in-between. Many of these expressions do not appear to be socio-ecological – financialization, the creation of cultural distinction, the prison-industrial complex. And this is precisely the point of world-ecology as eductive method. A methodological choice that begins by *narrowing* the field of vision may not be the most fruitful choice in an era when an elusive logic of financial calculability rules the roost of global capitalism, and shapes, as never before, the structures of everyday life – *including* the "everyday lives" of birds and bees and bugs, alongside human beings.

The alternative is a part-whole approach through which *concrete totalities* emerge. This approach "says to keep moving out by successive determinations, bringing successive parts – themselves abstract processes – in continuous juxtaposition and in this way form the whole which you need for interpreting and explaining the… historical changes or conditions under examination" (Hopkins 1982:147; also Marx 1973; Tomich 1990; McMichael 1990). For example, one might take the metabolic rift (Foster 2000) as a historically concrete relation that emerges through the "continuous juxtaposition" of various parts (e.g. episodes of resource exhaustion and urbanization), stabilized provisionally in "successive determinations" over the *longue durée* (Moore 2000a). Deforestation and resource depletion become meaningful only through such historically concrete relations. In other words, *historical* nature merits incorporation into the emergence of successive world capitalisms in the spirit of McMichael's contention that "*neither* whole *nor* parts are permanent categories or units of analysis" (1990:386).

If historical nature and historical capitalism form a dialectical unity, we can investigate the modern world-system as a matrix of commodity-centered relations that transforms and re-forms through the *oikeios*. Note that the logic of commodification is a gravitational field that owes its success as much to the extension of appropriation as it does to the penetration of capital into production – this, the dialectic of plunder and productivity (Moore 2008, 2010c). The generalization of the commodity form is a project that instanciates a specifiable, yet contingent, bundle of human and extra-human relations. The (non-arbitrary) contingency of the world-ecological conjuncture is important here, for so much of the discourse on ecological crisis presents this is an external limit. It asserts the very question that merits investigation, the adaptability and evolution of the relation between humans and the rest of nature. My view is therefore one that extends to the *oikeios* Arrighi's emphasis on capitalism's essential flexibility: "One of the major problems of the left, but also on the right, is to think there is only one kind of capitalism that reproduces itself historically; whereas capitalism has transformed itself substantively – particularly on a global basis – in unexpected ways" (2009:92).

Can we not say the same thing about nature-society relations in the modern world-system? (My third, historical-analytical proposition.) The nature produced through early capitalism and its scientific revolution was not the same nature produced through American-led monopoly capitalism and the scientific management revolution (Merchant 1980; Foster 1994).[23] And the nature of the post-World War II "golden age" differs from the nature produced through neoliberalism and its project to create, in Cooper's delicious phrase, "life as surplus" (2008).

---

[23] This is no call for idealist constructivism. Yes, there are geological and evolutionary processes that have shaped the contours of the earth and the species who live here. These processes long outstrip the lifespan of capitalism. *And*, there is a relation through which humans move to comprehend all natures, including their own: "Dialectical enquiry is not itself outside of its own form of argumentation but subject to it. *Dialectical enquiry is a process that produces things in the form of concepts, abstractions, theories and all manner of institutionalized forms of knowledge which stand in their own right only to be supported or undermined by the continuing processes of enquiry*. There is, furthermore, a certain relationship implied between the researcher and the researched, a relationship which is not construed in terms of an 'outsider' (the researcher) looking in on the researched as an object, but one between two subjects each of which necessarily internalises something from the other by virtue of the processes that operate. Observation of the world is, Heisenberg argued, inevitably intervention in the world, in much the same way that deconstructionists will argue that the reading of a text is fundamental to its production" (Harvey 1993:36, emphasis added).

Here is a way to engage the popular and scholarly debate over socio-ecological limits without invoking neo-Malthusian or millenarian notions – a discourse that has recently enjoyed a renaissance around peak oil and climate change. (This is hardly to deny the evidence for both!) To be perfectly clear: There *are* limits. But just what is the best way to identify, to narrate, and to explain the emergence of these limits, historically and in the present conjuncture?

It is not my intention to chart any single "best way," but rather to argue for the internalization of nature-as-*oikeios* into the fundamental methodological and conceptual frames of world-historical studies. I am doubtful that either the world-systems perspective or Left Ecology can effectively engage the present global crisis without engaging in a creative dialogue over the most productive ways to move from red-green theory to red-green histories of capitalism that transcend the Cartesian divide. Now that a metabolic rift has been discovered on the land, Left Ecology and the world-historical tradition can proceed to transcending its own, deeply-rooted, "epistemic rifts" (Schneider and McMichael 2010; Moore 2011a).

Arrighi's conceptualization of time and space as active and endogenous moments in the theory of capitalism opens the possibility for such a transition. Arrighi's world-historical imagination pivots on the tensions between time and history, space and geography – between the theory of capital and the history of capitalism. Incorporating such tensions is crucial to incorporating nature as not only empirically consequential to, but as relationally constitutive of, modernity's master processes. Grounding time, space, and power in the theory of organizational revolutions and the accumulation regimes they construct, Arrighi clears a path to integrating Braudel's three socio-historical layers of capitalism, market exchange, and material life. The spatio-temporal configurations of geopolitics and finance are "only relatively autonomous from the logics of the lower layers and can be understood only in relation to these other logics" (Arrighi 1994:26). The tension can be resolved – "if that is possible" – only by returning to these "lower layers of market economy and material life with the knowledge and questions brought back from the journey and into the top layer [of capitalism]" (ibid).

Is such an endeavor possible? The possibility of integrating Braudel's capitalism, market economy, and material life is the premise of much work in critical environmental studies, taking seriously the interplay between political economy and environmental change. The challenge is to revise without simply adding more. Arrighi is emphatically correct: "[W]e cannot do everything at once" (1994:25).

My prescription for cutting through this Gordian Knot turns on value theory as eductive method. By this, I emphasize a method that draws out, and clarifies, the complexities of the *oikeios* within a relational rather than Cartesian frame. This allows for three ways of seeing modernity as world-ecology. First, capital is "value in motion" deriving from human labor on the ground and the sale of the resulting commodities in a multi-layered world market. This offers a non-arbitrary way of synthesizing earth-moving (necessarily local) with more expansive repertoires of producing nature, incorporating financial transactions, resource legislation, agricultural science, geopolitical arrangements such as the Westphalia system, and so on. The inner connections between earth-moving and the rest of the world-ecology do not need to be established in *a priori* fashion. Rather, they can be allowed to emerge through the analysis of the *oikeios* as a "self-forming whole" (McMichael 1990:386). There are many ways to do this. I have found useful a "tacking" approach, moving between pivotal changes and conflicts at multiple geographical scales, from the body to forests to factories to financial centers *and back again* (e.g. Moore 2000a, 2002b, 2007a).

Second, a historical value relation approach privileges the irremediable tension between the "economic equivalence" and the "natural distinctiveness" of the commodity (Marx 1973:141). It bears repeating that these are not Cartesian categories but distinct vantage points on a singular process. It allows a complementary form of "tacking" to the geographical argument above. If we take value as a guide to the decisive "stakes of the game" in modernity (Bourdieu 1990:110), then a conscious tacking back and forth between the surficially "social" (bourgeois property relations, new credit mechanisms) and the apparently "ecological" (soil exhaustion, pollution, deforestation) becomes a means of revealing their inner connections.

Finally, the perspective of global value relations opens a new way of comprehending what is arguably the decisive middle-run contradiction of capitalism as it moves into the 21st century – the "end" of cheap food, energy, water, metals, and (it seems) everything else. This turns crucially on the resurgence of the underproduction tendency that we explored in the last section.

The events of 2008 – the inflationary crescendo of the commodity boom and the near-meltdown of world's financial system – marked the *signal crisis* of the neoliberal era. By signal crisis, with Arrighi (1994), I refer to the moment when a phase of capitalism reaches its tipping point in the delivery of "cheap" food, energy, raw materials, and not least, labor power. These four "cheaps" are essential to establishing the conditions for any great wave of accumulation (Moore 2010c). They are *cheap* to the degree that these vital commodities – decisive forms of the ecological surplus – are delivered in sufficient volumes and sufficiently cheaply that they reduce systemwide production costs.

There is a good reason why such relative cheapening has been a recurrent condition for the renewal of world accumulation. All things being equal, a decline in these costs of production favors a higher rate of profit, because labor costs fall (cheap food is crucial to determining the costs of reproducing labor power), because the costs of machinery and inputs fall, or both. Historically, new socio-technical innovations in production, and new innovations in the appropriation of nature's free gifts, have generated revolutions in labor productivity. This was the foundation for successive long centuries of accumulation, from the factories in the field of early capitalism's plantation revolutions, to the rise of large-scale industry in the 19th century, to the mass production systems of the 20th century. The neoliberal era marks a historic rupture with this *longue durée* pattern of revolutions in labor productivity.

Here I distinguish between *neoliberalism* as a phase of capitalism and *neoliberalization* as a set of policy orientations and institutional practices (Moore 2010c). The institutional practices and policy initiatives of neoliberalization – from structural adjustment to the shifting governance of finance to privatization – represent an often unconscious response to the progressive slowdown of labor productivity since the 1970s. After three decades of seemingly breakneck technological innovation, there remains little prospect of a revival of labor productivity growth compared to the first part of the long 20th century – in agriculture and the wider economy (Ruttan 2002; Gordon 2010). The upshot? The cheapness of these vital commodities (energy, food, etc.) in the neoliberal era has relied less on rising efficiencies in production, and more on the coercive dispositions of the state-finance nexus, driving the interlinked processes of "accumulation by dispossession" (Harvey 2003) and "forced *under*consumption" (Araghi 2009).

The erosion of these four "cheaps" invariably signals a cascading collapse of investment opportunities. This is why overaccumulation may coexist with overproduction *or* underproduction as the dominant crisis tendency. Hence, financial expansions typically coincide

with new and ruthless initiatives to appropriate extra-human nature (resources), which entail new and ruthless initiatives to exploit human nature (labor power). Historically, this establishes new conditions for a revival of profitability in the productive circuit, a material expansion in Arrighi's language. This was true for the "Age of the Genoese" in the century after 1557 (Moore 2010a, 2010b), and it has been true for the neoliberal era. The instructive contrast with the Age of the Genoese and its successors is the non-appearance of a productivity revolution in the neoliberal era (Balakrishnan 2009; Moore 2010c).

The signal crisis of neoliberalism, punctuated by the near-meltdown of North Atlantic finance in 2008 and rippling outwards still (as the Eurozone periphery's financial woes in 2010 indicated), speaks to the ongoing resurgence of underproductionist tendencies. Overproduction retains the crown from the time being, although for how long is uncertain. The ongoing transition in favor of underproduction is suggested by three major developments (Moore 2010c, 2011b):

> 1) *The arrival of peak appropriation*. The capitalization of nature has reached a *longue durée* tipping point, signaling the irreversible contraction of opportunities to appropriate nature's free gifts, especially in energy, metals, and water;
>
> 2) *The rise of the superweed*. Capital's reworking of biophysical natures through new forms genetic-chemical manipulation is producing a cascading series of unpredictable biological responses (superweeds) in the most capitalized zones of world agriculture;
>
> 3) *The financialization of nature-as-oikeios*. The rules of reproduction for biophysical and human natures are increasingly determined by the financial rather than productive circuit of capital. This favors the interlinked phenomena of high commodity prices and the progressive stagnation of labor productivity, especially in world agriculture.

This prospect for seeing capitalism as "world-ecology" is one of many possibilities for navigating the transition from a red-green synthesis in social theory to red-green narratives of historical capitalism and its crises. If this argument merits any traction, we can thank Giovanni Arrighi for opening our eyes to the dialectics of time and space in actually existing capitalism, and in the possible futures we make.

ACKNOWLEDGEMENTS

Very special thanks to my friends and colleagues for discussions on the issues explored in this essay. Benjamin D. Brewer, Diana C. Gildea, Holly Jean Buck, and MacKenzie Moore delivered incisive and comprehensive critiques on successive drafts of this argument; Henry Bernstein, Brenda Baletti, Brett Clark, Jennifer Casolo, Harriet Friedmann, Diana C. Gildea, John Gulick, Andrew Gunnoe, Pernille Gooch, Erik Jönsson, Shiloh R. Krupar, Rebecca Lave, Andreas Malm, Jessica C. Marx, Phil McMichael, Bruno Portillo, Cheryl Sjöström, Dale Tomich, Djahane Salehabadi, Laurel Mei Turbin**,** Richard A. Walker, Eron Witzel, Richard York, Anna Zalik, and an anonymous reviewer all offered comments and discussion that improved this essay.

REFERENCES

Abrams, Phillip. 1982. *Historical Sociology*. Ithaca: Cornell University Press.

Altvater, Elmar. 1993. *The Future of the Market*. London: Verso.

Appuhn, Karl. 2009. *A Forest on the Sea*. Baltimore: Johns Hopkins University Press.

Araghi, Farshad. 2003. "Food Regimes and the Production of Value," *Journal of Peasant Studies* 30(2):41-70.

_____ . 2009. "Labor in Nature." Paper presented to the conference, "Food, Energy, Environment," Binghamton University, 9-10 October.

Arrighi, Giovanni. 1978a. "Towards a Theory of Capitalist Crisis." *New Left Review* I/111:3-24.

_____ . 1978b. *The Geometry of Imperialism*. London: New Left Books.

_____ . 1994. *The Long Twentieth Century*. London: Verso.

_____ . 2000. "Globalization and Historical Macrosociology." Pp. 117-133 in *Sociology for the Twenty-First Century*, edited by Janet Abu-Lughod. Chicago: University of Chicago Press.

_____ . 2004. "Spatial and Other 'Fixes' of Historical Capitalism." *Journal of World-Systems Research* 10(2):527-539.

_____ . 2007. *Adam Smith in Beijing*. London: Verso.

_____ . 2009. "The Winding Paths of Capital." *New Left Review* II/56:61-94.

Arrighi, Giovanni, and Beverly J. Silver. 1999. *Chaos and Governance in the Modern World-System.* Minneapolis: University of Minnesota Press.

Arrighi, Giovanni, Beverly J. Silver, and Benjamin D. Brewer. 2003. "Industrial Convergence, Globalization, and the Persistence of the North-South Divide." *Studies in Comparative International Development* 38(1):3-31.

Arrighi, Giovanni, and Jason W. Moore. 2001. "Capitalist Development in World Historical Perspective." Pp. 56-75 in *Phases of Capitalist Development*, edited by Robert Albritton, Makotoh Itoh, Robert Westra, and Alan Zuege. New York: Palgrave.

Bairoch, Paul. 1989. "Les Trois Révolutions Agricoles du Monde Développé." *Annales: É.S.C* 44(2):317-353.

Balakrishnan, Gopal. 2009. "Speculations on the Stationary State." *New Left Review* II/61:5-26.

Baran, Paul A., and Paul M. Sweezy. 1966. *Monopoly Capital*. New York: Monthly Review Press.

Barraclough, Geoffrey. 1967. *An Introduction to Contemporary History*. New York: Penguin.

Benton, Ted. 1989. "Marxism and Natural Limits." *New Left Review* I/178:51-86.

Biel, Robert. 2006. "The Interplay between Social and Environmental Degradation in the Development of the International Political Economy." *Journal of World-Systems Research* 12(2), 109-147

BIS [Bank for International Settlements]. 2006. *76th annual report*. Basil: BIS.

Blaikie, Piers, and Harold Brookfield. 1987. *Land Degradation and Society*. London: Methuen.

Bourdieu, Pierre. 1990. *In Other Words*. Stanford: Stanford University Press.

Bourdieu, Pierre. and Loïc J.D. Wacquant. 1992. *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press.

Braudel, Fernand. 1981. *The Structures of Everyday Life*. New York: Harper & Row.

_____ . 1982. *The Wheels of Commerce.* New York: Harper & Row.

_____ . 1984. *The Perspective of the World*. New York: Harper & Row.

Braun, Bruce, and Noel Castree, eds. 1998. *Remaking Reality*. New York: Routledge.
Brockway, Lucile H. 1979. *Science and Colonial Expansion*. New York: Academic Press.
Bunker, Stephen G. 1984. "Modes of Extraction, Unequal Exchange, and the Progressive Underdevelopment of an Extreme Periphery." *American Journal of Sociology* 89(5):1017-1064.
_____ . 1985. *Underdeveloping the Amazon*. Urbana: University of Illinois Press.
Bunker, Stephen G., and Paul S. Ciccantell. 2005. *Globalization and the Race for Resources*. Baltimore: Johns Hopkins University Press.
Burke, Peter. 1980. *Sociology and History*. Boston: Allen & Unwin.
Burkett, Paul. 1999. *Marx and Nature*. New York: St. Martin's Press.
_____ . 2006. *Marxism and Ecological Economics*. Leiden: Brill.
Bukharin, Nikolai. 1929. *Imperialism and World Economy*. New York: International Publishers.
Cain, P.J., and A. G. Hopkins. 1980. "The Political Economy of British Expansion Overseas, 1750-1914." *Economic History Review* 33(4):463-490.
Catton, jr., William R. 1980. *Overshoot*. Urbana: University of Illinois Press.
Chase-Dunn, Christopher, and Thomas D. Hall. 1997. *Rise and Demise: Comparing World-Systems*. Boulder: Westview.
Chew, Sing. 2001. *World Ecological Degradation*. Walnut Creek: Alta Mira Press.
Ciccantell, Paul S., David A. Smith, and Gay Seidman, eds. 2006. *Nature, Raw Materials, and Political Economy*. Amsterdam: Elsevier.
Clark, Brett, and Richard York. 2005. "Carbon Metabolism." *Theory & Society* 34:391-428.
_____ . 2008. "Rifts and Shifts." *Monthly Review* 60(6):13-24.
Cooper, Melinda. 2008. *Life as Surplus*. Seattle: University of Washington Press.
Cosgrove, Denis. 1985. "Prospect, Perspective and the Evolution of The Landscape Idea." *Transactions of the Institute of British Geographers* (10):145-162.
Costanza, Robert, L. Graumlich, W. Steffen, C. Crumley, J. Dearing, K. Hibbard, R. Leemans, C. Redman, and D. Schimel. 2007. "Sustainability or Collapse." *Ambio* 36(7):522-527.
Cronon, William. 1991. *Nature's Metropolis: Chicago and the Great West.* New York: W.W. Norton.
Crosby, Alfred W., jr. 1997. *The Measure of Reality*. Cambridge: Cambridge University Press.
Davis, Devra. 2007. *The Secret History of the War on Cancer*. New York: Basic Books.
Davis, Mike 2001. *Late Victorian Holocausts*. London: Verso.
_____ . 2004. "Urbanization of Empire." *Social Text* 81(4):9-15.
Diamond, Jared. 2004. *Collapse*. New York: Viking.
Dunlap, Riley E., and William R. Catton, jr. 1979. "Environmental Sociology." *Annual Review of Sociology* 5: 243-273.
Eichengreen, Barry, and Kevin H. O'Rourke. 2009. "A Tale of Two Depressions." http://www.voxeu.org/index.php?q=node/3421, accessed 17 July, 2009.
Enzensberger, Hans Magnus. 1974. "A Critique of Political Ecology." *New Left Review* I/84:3-31.
Foster, John Bellamy.1994. *The Vulnerable Planet*. New York: Monthly Review Press.
_____ . 2000. *Marx's Ecology*. New York: Monthly Review Press.
_____ . 2008. Marx's *Grundrisse* and the Ecological Contradictions of Capitalism." Pp. 93-106 in *Karl Marx's Grundrisse*, edited by M. Musto. New York: Routledge.
_____ . 2009. *The Ecological Revolution*. New York: Monthly Review Press.

Foster, John Bellamy, Brett Clark, and Richard York, eds. 2008a. *Ecology: The Moment of Truth*. Special Issue of *Monthly Review* 60(3).

_____ . 2008b. *Beyond Capitalist Ecology*. Special Issue of *Monthly Review* 60(6).

Foucault, Michel. 2003. *'Society Must Be Defended'*. New York: Picador.

Friedmann, Harriet. 1978. "World Market, State, and Family Farm." *Comparative Studies in Society and History* 20(4):545-586.

_____ . 1993. "The Political Economy of Food." *New Left Review* I/197: 29-57.

_____ . 2000. "What on Earth is the Modern World-System? Foodgetting and Territory in the Modern Era and Beyond," *Journal of World-Systems Research* 6(2): 480-515.

Friedmann, Harriet, and Phillip McMichael. 1989. "Agriculture and the state system." *Sociologia Ruralis* 29(2):93-117.

Gellert, Paul K. 2006. "For a Sociology of Socionature." Pp. 65-92 in *Nature, Raw Materials, and Political Economy*, edited by Paul S. Ciccantell, David A. Smith, and Gay Seidman. Amsterdam: Elsevier.

George, Susan. 2010. "Converging Crises: Reality, Fear and Hope."' *Globalizations* 7(1): 17-22.

Goldfrank, Walter L., David Goodman, and Andrew Szasz, eds. 1999. *Ecology and the World-System*. Westport: Greenwood Press.

Gordon, Robert J. 2010. "Revisiting U.S. Productivity Growth over the Past Century with a View of the Future." *Working Paper 15834*. National Bureau Of Economic Research.

Gulick, John. 2011, in press. "*The Long Twentieth Century* and Barriers to China's Hegemonic Accession," *Journal of World-Systems Analysis* 17(1).

Harman, Chris. 2009. "The slump of the 1930s and the crisis today." *International Socialism* 121, web edition, www.isj.org.uk/index.php4?id=506&issue=121, accessed 12 January, 2010.

Harvey, David. 1974. "Population, Resources, and the Ideology of Science." *Economic Geography* 50(3): 256-277.

_____ . 1982. *The Limits to Capital*. New York: Verso.

_____ . 1989. *The Condition of Postmodernity*. Oxford: Basil Blackwell.

_____ . 1993. "The Nature of the Environment." Pp. 1-51 in *Socialist Register 1993*, edited by Leo Panitch and Ralph Miliband. London: Merlin.

_____ . 1996. *Justice, Nature, and the Geography of Difference*. Oxford: Blackwell.

_____ . 2001. *Spaces of Capital*. New York: Routledge.

_____ . 2003. *The New Imperialism*. Oxford: Oxford University Press.

_____ . 2005. *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

Headrick, David R. 1988. *The Tentacles of Progress*. Oxford: Oxford University Press.

_____ . 1996. "Botany, Chemistry, and Tropical Development." *Journal of World History* 7(1):1-20.

Heinberg, Richard. 2007. *Peak Everything*. Gabriola Island: New Society Press.

Hobsbawm, Eric J. 1975. *The Age of Capital 1848-1875*. New York: Meridian.

Heynen, Nick, James McCarthy, Scott Prudham, and Paul Robbins, eds. 2007. *Neoliberal Environments*. New York: Routledge.

Hopkins, Terence K. 1982. "World-systems analysis: Methodological issues." Pp. 145-158 in *World-Systems Analysis*, edited by Terence K. Hopkins and Immanuel Wallerstein. Beverly Hills: Sage.

Hornborg, Alf, J.R. McNeill, and Joan Martinez-Alier, eds. 2007. *Rethinking Environmental History*. Walnut Creek: AltaMira Press.

Huff, Gregg. 2007. "Globalization, Natural Resources, and Foreign Investment." *Oxford Economic Papers* 59:i127–i155

Hughes, J. Donald. 1994. *Pan's Travail: Environmental Problems of the Ancient Greeks and Romans*. Baltimore: The Johns Hopkins University Press.

_____ . 2001. *An Environmental History of the World*. New York: Routledge.

Innis, Harold. 1956. *Essays in Canadian Economic History*. Toronto: University of Toronto Press.

Jorgenson, Andrew. 2003. "Consumption and Environmental Degradation." *Social Problems* 50(3):374-394.

Jorgenson, Andrew, and Brett Clark, eds. 2009a. *Ecologically Unequal Exchange in Comparative Perspective*. Theme Issue, *International Journal of Comparative Sociology* 50(3-4).

_____ . 2009b. "The Economy, Military, and Ecologically Unequal Exchange Relationships in Comparative Perspective." *Social Problems* 56(4):621–646.

Klein, Naomi 2007. *The Shock Doctrine*. New York: Metropolitan Books.

Landes, David. 1969. *The Unbound Prometheus*. Cambridge: Cambridge University Press.

Levins, Richard, and Richard C. Lewontin. 1985. *The Dialectical Biologist*. Cambridge: Harvard University Press.

Lewontin, Richard and Richard Levins. 1997. "Organism and environment." *Capitalism Nature Socialism* 8(2):95-98.

Lloyd-Jones, Roger. 1990. "The Long Wave and the British Industrial Revolution." *Journal of Interdisciplinary History* 20(4):581-605.

Lloyd-Jones, Roger, and M.J. Lewis. 1998. *British Industrial Capitalism since the Industrial Revolution*. London: UCL Press.

Magdoff, Harry. 1969. *The Age of Imperialism*. New York: Monthly Review Press.

Mandel, Ernest. 1975. *Late Capitalism*. London: New Left Books.

Martin, Randy. 2002. *The Financialization of Daily Life*. Philadelphia: Temple University Press.

Martinez-Alier, Joan. 1987. *Ecological Economics*. Oxford: Basil Blackwell.

Marx, Karl. 1926. *Selected Essays*. New York: International Publishers.

_____ . 1967. *Capital*. 3 vols. New York: International Publishers.

_____ . 1971. *Wage-Labor and Capital*. New York: International Publishers.

_____ . 1973. *Grundrisse*. New York: Vintage.

_____ . 1976. *Capital*. Vol. I. New York: Vintage.

_____ . 1981. *Capital*. Vol. III. New York: Penguin.

Mason, Paul. 2009. *Meltdown*. London: Verso.

McMichael, Philip. 1990. "Incorporating Comparison Within a World-Historical Perspective." *American Sociological Review* 55(2):385-397.

_____ . 1999. "The Global Crisis of Wage-Labour," *Studies in Political Economy* 58:11-40.

_____ . 2005. "Global Development and the Corporate Food Regime." *Research in Rural Sociology and Development* 11:269-303.

_____ . 2009. "The World Food Crisis in Historical Perspective." *Monthly Review* 61(3), https://www.monthlyreview.org/090713mcmichael.php, accessed 12 December 2009.

McNally, David. 2009. "From World Crisis to World-Slump." *Historical Materialism* 17:35-83.

McNeill, J.R. 2000. *Something New Under the Sun*. New York: W.W. Norton.

Merchant, Carolyn. 1980. *The Death of Nature*. New York: Harper & Row.

_____ . 1989. *Ecological Revolutions*. Chapel Hill: University of North Carolina Press.

Monbiot, George. 2006. *Heat*. London: Allen Lane.
Moore, Jason W. 1997. "Capitalism over the *Longue Durée*." *Critical Sociology* 23(3):103-116.
_____ . 2000a. "Environmental Crises and the Metabolic Rift in World-Historical Perspective." *Organization & Environment* 13(2):123-158.
_____ . 2000b. "Sugar and the Expansion of the Early Modern World-Economy: Commodity Frontiers, Ecological Transformation, and Industrialization." *Review: A Journal of the Fernand Braudel Center* 23(3):409-433.
_____ . 2002a. "The Crisis of Feudalism: An Environmental History." *Organization & Environment* 15(3):296-317.
_____ . 2002b."Remaking Work, Remaking Space: Spaces of Production and Accumulation in the Reconstruction of American Capitalism, 1865-1920." *Antipode* 34(2):176-204.
_____ . 2003a. "*The Modern World-System* as Environmental History? Ecology and the Rise of Capitalism." *Theory & Society* 32(3):307-377.
_____ . 2003b. "Nature and the Transition from Feudalism to Capitalism." *Review: A Journal of the Fernand Braudel Center* 23(2):97-172.
_____ . 2003c. "Capitalism as World-Ecology: Braudel and Marx on Environmental History." *Organization & Environment* 16(4):431-458.
_____ . 2007a. *Ecology and the Rise of Capitalism*. Ph.D. dissertation. Department of Geography, University of California, Berkeley. http://jasonwmoore.com, accessed 1 May, 2010.
_____ . 2007b. "Silver, Ecology, and the Origins of the Modern World, 1450-1640." Pp. 123-142 in *Rethinking Environmental History*, edited by Alf Hornborg, J.R. McNeill, Joan Martinez-Alier. Walnut Creek: AltaMira Press.
_____ . 2008. "Ecological Crises and the Agrarian Question in World-Historical Perspective." *Monthly Review* 60(6):54-63. http://www.monthlyreview.org/081117moore.php, accessed 1 January 2011.
_____ . 2009, in press. "Madeira, Sugar, & the Conquest of Nature in the 'First' Sixteenth Century, Part I: From 'Island of Timber' to Sugar Revolution, 1420-1506." *Review: A Journal of the Fernand Braudel Center* 32(4).
_____ . 2010a. "'Amsterdam is Standing on Norway', Part I: The Alchemy of Capital, Empire, and Nature in the Diaspora of Silver, 1545-1648." *Journal of Agrarian Change* 10(1):35-71.
_____ . 2010b. 'Amsterdam is Standing on Norway', Part II: The Global North Atlantic in the Ecological Revolution of the Seventeenth Century." *Journal of Agrarian Change* 10(2):188-227.
_____ . 2010c. "The End of the Road? Agricultural Revolutions in the Capitalist World-Ecology, 1450-2010." *Journal of Agrarian Change* 10(3):389-413.
_____ . 2010d, in press. "Madeira, Sugar, & the Conquest of Nature in the 'First' Sixteenth Century, Part II: From Regional Crisis to Commodity Frontier, 1506-1530." *Review: A Journal of the Fernand Braudel Center* 33(1).
_____ . 2010e. "'This Lofty Mountain of Silver Could Conquer the Whole World': Potosí and the Political Ecology of Underdevelopment, 1545-1800." *Journal of Philosophical Economics* 4(1):58-103.
_____ . 2011a. "Transcending the Metabolic Rift: A Theory of Crises in the Capitalist World-Ecology." *Journal of Peasant Studies* (38)1:1-46.

_____ . 2011b. "The Financialization of Nature: Food, Fuel, and Finance in the Signal Crisis of Neoliberalism," manuscript, Umeå Studies in Science, Technology, and Environment, Umeå University, http://jasonwmoore.com, accessed 3 January, 2011.

Mumford, Lewis. 1934. *Technics and Civilization*. New York: Harcourt, Brace.

Northrup, David. 1995. *Indentured Labor in the Age of Imperialism, 1834-1922*. Cambridge: Cambridge University Press.

O'Brien, Patrick K. 1985. "Agriculture and the Home Market for English Industry, 1660–1820." *English Historical Review* 100:773–800.

O'Connor, James. 1998. *Natural Causes*. New York: Guilford Press.

O'Hearn, Denis. 2005. "Cycles of Accumulation: Crises, Materials, and Space." Pp. 113-137 in *Nature, Raw Materials, and Political Economy*, edited by Paul S. Ciccantell, David A. Smith, and Gay Seidman. Amsterdam: Elsevier.

O'Rourke, Kevin H. 1997. "The European Grain Invasion, 1870-1913." *Journal of Economic History* 57(4):775-801.

Page, Brian, and Richard A. Walker. 1991. "From Settlement to Fordism: The Agro-Industrial Revolution in the American Midwest." *Economic Geography* 67(4):281-315.

Panitch, Leo, and Colin Leys, eds. 2006. *Socialist Register 2007: Coming to Terms with Nature*. London: Merlin Press.

Peet, Richard, and Michael Watts, eds. 1996. *Liberation Ecologies*. New York: Routledge.

Peluso, Nancy. 1992. *Rich Forests, Poor People*. Berkeley: University of California Press.

Peluso, Nancy, and Michael Watts, eds. 2001. *Violent Environments*. Ithaca: Cornell University Press.

Perkins, J.H. 1997. *Geopolitics and the Green Revolution*. Oxford: Oxford University Press.

Pimentel, David, L.E. Hurd, A.C. Bellotti, M.J. Forster, I.N. Oka, O.D. Sholes, and R.J. Whitman. 1973. "Food Production and the Energy Crisis." *Science* 182:443-449.

Pimentel, David, S. Williamson, C.E. Alexander, O. Gonzalez-Pagan, C. Kontak, and S.E. Mulkey. 2008. "Reducing Energy Inputs in the US Food System." *Human Ecology* 36:459–471.

Podobnik, Bruce. 2006. *Global Energy Shifts*. Philadelphia: Temple University Press.

Polanyi, Karl. 1957. *The Great Transformation*. Boston: Beacon Press.

Pomeranz, Kenneth. 2000. *The Great Divergence*. Princeton: Princeton University Press.

Ponting, Clive. 1991. *A Green History of the World*. New York: St. Martin's Press.

Post, Charles. 1995. "The Agrarian Origins of U.S. Capitalism: The Transformation of the Northern Countryside before the Civil War." *Journal of Peasant Studies* 22(3):389-445

Pred, Allan. 1995. "Out of Bounds and Undisciplined." *Social Research* 62(4):1065-1091.

Quark, Amy A. 2008. "Toward a New Theory of Change: Socio-Natural Regimes and the Historical Development of the Textiles Commodity Chain." *Review* 30(1):1-37.

Richards, J.F. 2003. *The Unending Frontier*. Berkeley: University of California Press.

Rostow, Walt W. 1938. "Investment and the Great Depression." *Economic History Review*, first series, 8(2):136-158.

Ruttan, Vernon W. 2002. "Productivity Growth in World Agriculture." *Journal of Economic Perspectives* 16(4):161–184.

Salleh, Ariel. 2010. "From Metabolic Rift to 'Metabolic Value'." *Organization & Environment* 23:205-219.

Sayre, Nathan F. 2008. "The Genesis, History, and Limits of Carrying Capacity." *Annals of the Association of American Geographers* 98(1):120-134.

Schnaiberg, Allan. 1980. *The Environment: From Surplus to Scarcity*. New York: Oxford University Press

Schneider, Mindi and Philip McMichael. "Deepening, and Repairing, the Metabolic Rift." *Journal of Peasant Studies* 37(3):461–484.

Skocpol, Theda, ed. 1984. *Vision and Method in Historical Sociology*. Cambridge: Cambridge University Press.

Smith, Neil. 1984. *Uneven Development*. Oxford: Basil Blackwell.

_____ . 2006. "Nature as Accumulation Strategy." Pp. 16-36 in *Socialist Register 2007: Coming to Terms with Nature*, edited by Leo Panitch and Colin Leys. London: Merlin Press.

Soederberg, Susanne. 2010. "Cannibalistic Capitalism: Securitized Pension Funds and the Social Reproduction of Neoliberalization." Paper presented at the 2010 Meeting of the Standing Group on International Relations, Stockholm, Sweden, 9-11 September.

Tilly, Charles. 1984. *Big Structures, Large Processes, Huge Comparisons*. New York: Russell Sage.

Tomich, Dale W. 1990. *Slavery in the Circuit of Sugar*. Baltimore: Johns Hopkins University Press.

Wackernagel, Mathis, and William Rees. 1996. *Our Ecological Footprint*. Gabriola Island: New Society Press.

Walker, Richard A. 1998. "The Global Agitator, or Capitalism's Recurrent Self-Criticism," Working Paper, Department of Geography, University of California, Berkeley. http://geography.berkeley.edu/ProjectsResources/Publications/Global_Economic_Crisis.html, accessed 18 June, 2009.

_____ . 2000. "Capitalism's Recurrent Self-Criticism." *Historical Materialism* 5:179-210.

_____ . 2004. *The Conquest of Bread*. New York: New Press.

Wallerstein, Immanuel. 1974. *The Modern World-System I*. New York: Academic Press.

_____ . 1980. "Maps, Maps, Maps." *Radical History Review* 24:155-159.

_____ . 1983. *Historical Capitalism*. London: Verso.

_____ . 1991. "Beyond *Annales*?" *Radical History Review* 49:7-15.

_____ . 1995. "What Are We Bounding, and Whom, When We Bound Social Research?" *Social Research* 62(4):839-856.

_____ . 2004a. "World-Systems Analysis." In *World System History: Encyclopedia of Life Support Systems*, edited by George Modelski. Oxford: UNESCO/EOLSS Publishers, http://www.eolss.net, accessed 25 August, 2010.

_____ . 2004b. *The Uncertainties of Knowledge*. Philadelphia: Temple University Press.

_____ . 2004c. "After Development and Globalization, What?" *Social Forces* 83(3):321-336.

Watts, Michael. 1983. *Silent Violence*. Berkeley: University of California Press.

_____ . 2006. "Empire of Oil." *Monthly Review* 58(4):1-17.

Weis, Tony. 2010. "The Accelerating Biophysical Contradictions of Industrial Capitalist Agriculture." *Journal of Agrarian Change* 10(3):315-41.

White, Richard. 1995. *The Organic Machine*. New York: Hill and Wang.

Williams, Michael. 2003. *Deforesting the Earth*. Chicago: University of Chicago Press.

Williams, Raymond. 1980. *Problems in Materialism and Culture*. London: Verso.

_____ . 1985. *Keywords*. 2d ed. Oxford: Oxford University Press.

Wolf, Eric R. 1982. *Europe and the People without History*. Berkeley: University of California Press.

Worster, Donald, ed. 1988. *The Ends of the Earth: Perspectives on Modern Environmental History*. Cambridge: Cambridge University Press.

Worster, Donald. 1990. "Transformations of the Earth." *Journal of American History* 76(4):1087-1106.

_____ . 1992. *Under Western Skies: Nature and History in the American West*. Oxford: Oxford University Press.

Wrigley, E.A. 1988. *Continuity, Chance and Change: The Character of the Industrial Revolution in England*. New York: Cambridge University Press.

York, Richard, Eugene A. Rosa, and Thomas Dietz. 2003. "Footprints on the Earth." *American Sociological Review* 68(2):279-300.

Young, Robert M. 1985. "Is Nature a Labour Process?" Pp. 206-232 in *Science, Technology, and the Labour Process*, Volume 2, edited by Les Levidow and Robert M. Young. London: Free Association Books.

WOMEN'S STATUS AND WORLD-SYSTEM POSITION: AN EXPLORATORY ANALYSIS

Richard York
Department of Sociology
University of Oregon
rfyork@uoregon.edu

Christina Ergas
Department of Sociology
University of Oregon
cergas@uoregon.edu

ABSTRACT

Our aim here is to strengthen the links between the world-systems perspective and research on gender inequality. Grounding our analysis in theories assessing the connections between gender relationships and world-system processes, we empirically explore (1) the extent to which women's status in nations overlaps with the world-system position of those nations and (2) the influence of women's status within nations on a variety of national characteristics. We find that women's status has a moderately strong association with world-system position, which suggests that macro-comparative research may confound the respective effects on a variety of social characteristics of women's status and world-system position if indicators of both factors are not included in analyses. We also find that, controlling for world-system position, GDP per capita, and urbanization, in nations where women have higher status (variously measured), total fertility rates, infant mortality rates, military expenditures, and inflows of foreign direct investment are lower, and public health care expenditures and per capita meat consumption are higher. These results suggest that women's status likely has social effects that can be seen on the macro-level, and that world-systems analysts should pay more attention to theories of gender in their research.

INTRODUCTION

A decade ago, Wilma Dunaway (2001: 2) observed that "women are only a faint ghost in the world-system perspective." She noted that very few articles in the two leading journals in the field, *Review* and the *Journal of World-Systems Research*, addressed gendered exploitation, women, or households. A quick perusal of the tables of content of issues of these journals published since Dunaway presented her assessment demonstrates that not much has changed over the first decade of this century (although, for a noteworthy exception, see the special issue of *Review* [Feldman 2007a] dedicated to an appreciation of the work of Joan Smith). Gender and women remain largely outside of the theoretical and research foci of the world-systems perspective.

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 147-164**
ISSN 1076-156X

In some ways, this is not entirely surprising. The world-systems perspective is characterized by a macro-level focus, whereas gender and gendered processes are typically theorized at a micro-level. After all, nations do not have genders. However, gender influences macro-level processes in important ways, including the machinations of the world-system, and world-system processes influence the lives of women and men and gender relationships. Therefore, our theoretical understanding of world-systems can be enhanced by taking gender seriously. Micro-level gendered processes are clearly important to explore within the world-system, however, to advance our current argument, we focus on the macro-level.

Our aim here is to help strengthen the link between the world-systems perspective and research on gender inequalities and to demonstrate how both literatures can inform each other[1]. To do this, we give a brief overview of some of the theories of gender inequalities that address how world-system processes and other macro-level phenomena are gendered in various ways and how gendered work is affected by world-system processes. We then present several exploratory empirical analyses to show that (1) women's status is connected to the structure of the world-system and, therefore, macro-level analyses that ignore women's status may confound gendered effects with world-system position effects, and (2) women's status within nations adds explanative power above and beyond those of world-system position and indicators of "modernization" and "development" in quantitative models of a variety of factors that are of interest to world-systems theorists. Finally, we offer some suggestions for future avenues of research examining gendered processes in world-systems.

THE GENDERED WORLD-SYSTEM

Analyses in the world-systems tradition typically focus on macro-structural factors such as trade networks, foreign direct investment, national debt, and GDP (Hall 2000; Misra 2000). These analyses have shed considerable light on the processes that produce and reproduce global inequalities. However, although the macro-structural factors that are typically included in these analyses are important indicators of dependency and the relative global influence of nations, they can obscure the gendered character of organizations, hidden work in commodity chains, and unequal relations within nations (Buchmann 1996; Dunaway 2001). The actors implicit in the activities that underlie these macro-structural factors are typically men and male-dominated organizations, while the activities of women are neglected (Waring 1999; Acker 2006). Overlooking gender, therefore, can limit the scope and explanatory power of the world-systems approach, since doing so can cause analysts to miss a large part of the social world – i.e., the world as experienced by women, who make up more than half of the world's population. Incorporating gender into the world-systems perspective presents a challenge, since the perspective focuses on large-scale processes and the configuration of relationships among nations. By focusing on relations among nations, and critiquing more powerful, core nations, world-systems analyses frequently fail to acknowledge the contributions of women to the world

[1] Our goal is not to debate the utility of micro-gender versus macro-world-systems analyses, nor do we seek to promote one level of analysis over the other. However, for a detailed discussion of these issues see Fernandez-Kelly (1994) and Misra (2000).

economy[2] (Buchmann 1996; Mies 1998). Here, we outline the contributions of gender scholars by reviewing some theoretical positions that help us understand the underlying gendered construction of the world-economy and the ways in which women are often made invisible in macro-structural analyses. We do this so as to expand the scope of the world-systems tradition and demonstrate the potential for macro-comparative empirical research to address questions about women's status and gender relationships.

Gender scholars have raised important concerns regarding the use of macro-levels of analysis. Coming from a critique of so-called "value neutral," male dominated epistemologies that objectify the subjects under study, gender research has a longstanding theoretical commitment to methodologies that take the individual as the unit of analysis (Merchant 1990; Naples 2003). Gender researchers have preferred methods that maintain women's status as subjects and explore problems that appear in their everyday worlds, such as household work distribution between women and men (Smith 1987; Harding 1991; Naples 2003). Gender scholars assert that research questions should be situated in the lived experiences of individuals in order to highlight oppressive relations and the contributions of invisible groups (Smith 1987; Misra 2000). Because of this, gender scholarship tends to focus on micro-processes, including gender relations and interactions.

Although the world-systems perspective takes the world-system as the unit of analysis and researchers tend to focus on macro-processes, gender and world-systems scholars do not necessarily have competing agendas (Fernandez-Kelly 1994; Hall 2000; Misra 2000). Both attempt to shed light on the relationship between general patterns and particular events with a critical eye towards power relations. The world-systems perspective lends itself to dialectical analysis of the relationship between local conditions or particular events and the global and historical contexts within which these events occur. Bunker's (1984) work on how the Brazilian Amazon became an extractive economy is an example of research that focuses on a local condition within the global economy. Hall (2000) addresses the "dual research agenda" of world-systems analysis – how the processes of the system affect the social structures of its constituent parts, and how changes in the internal social structure affect the system. From this he notes "the dialectic between local and global implicit in the dual research agenda is the heart of world-systems analysis" (p. 6). However, in practice world-systems analyses tend to look at the effect of global forces on local events, while gender analyses tend to look at how women and men contribute to and attempt to change structural processes.

Despite these general tendencies, some gender theorists do have a broader structural view of how the history of capitalist development is a gendered and racialized phenomenon. They argue that as practices around wages and labor markets bureaucratize, gender and racial inequalities are institutionalized (Nash 1988; Waring 1999; Acker 2006; Pellow 2007; Salleh 2009). Acker (2006: 9) asserts "a relatively small group of white men drove the development of capitalist production, reworking forms of male domination as intrinsic to emerging class relations, and organizing the new factories, and, later, the new offices based on the assumptions about the masculine individual as the normal human being." One example of how the workplace is

[2] We also recognize that the contributions of indigenous people are frequently neglected, and serious consideration of race/ethnicity and culture is often absent from most macro-level research. We do not address these issues here since to do so adequately would require extensive treatment, and our focus is on gender.

organized around the "normalized" masculine worker embedded in a gendered distribution of labor is the expectation that an employee can work long or odd hours without obligations in the home. This structure is based on the assumption that women provide domestic labor, enabling male workers to be available to meet the demands of employers. As these intrinsically gendered and racialized organizational processes are spread throughout the world-system, male hegemony is reinforced in preexisting patriarchal cultures around the globe. One such example is the Iranian Muslim household where women were employed by carpet manufacturers producing goods for trade with the West after the Second World War. In the home, men controlled their wives' money and spent it in ways that perpetuated male control, including investing in boys' but not girls' education (Nash 1988). Moreover, male hegemony is imposed on peoples with limited or no previous gender hierarchy, as in the case of the Cherokee frontier, where, before colonial influence, the Cherokee recognized matrilineal rights and celebrated women's subsistence labor (Dunaway 2000).

Gender scholars have demonstrated that women's work in the world economy is undervalued and, frequently, invisible (Mies 1998; Horton and Lee 1999; Waring 1999; Dunaway 2001; Acker 2006; Dunaway and Macabuac 2007; Federici 2009; Salleh 2009; Waring 2009). Women who do paid work, in accordance with standard economic definitions, tend to earn the lowest wages and do the least valued, although not unimportant, jobs. This is especially true for women of color (Acker 2006). Remuneration for women's devalued work can be understood as a type of unequal exchange, where women provide labor that is essential to society, but for which they receive little compensation. In addition, household and care-giving work, usually done by women, is typically non-waged, and thus is not calculated in productive economic terms, rendering it invisible in national accounts (Waring 1999). Moreover, household labor serves as the base of and subsidizes production in the capitalist world-system. Unpaid labor allows production costs to remain low, which, in turn, keeps commodities cheap and corporate profits high (Mies 1998; Acker 2006; Dunaway and Macabuac 2007).

Many world-systems theorists and other macro-comparative researchers have perpetuated the invisibility of women's work by over-focusing on indicators that Buchmann (1996), Waring (1999), and others have critiqued for their neglect of household and subsistence labor, such as GDP. Additionally, when world-systems theorists have written about household labor, they tend to do so without referring to the individuals doing the labor, who are typically women (Dunaway 2001). Neglecting to discuss women's labor is a huge oversight when considering that women worldwide are estimated to perform two-thirds of the world's work (UNICEF 2004). In fact, the global trend toward the "feminization of labor,"[3] both unwaged and waged in both informal and formal economic sectors, is a well documented phenomenon (Mies 1998; Moghadam 1999; Waring 1999; Parreñas 2001; Benería 2003).

To incorporate gender into the world-systems perspective, Dunaway (2001) suggests that world-systems theorists look at three constructs for gender analysis, specifically, the household, semiproletarianization, and commodity chains. Dunaway (2001: 6-7) further theorizes that three

[3] Due to competition, the "feminization of labor" is theorized to occur because multinational corporations increasingly need cheaper and more docile labor, and, given that women have historically been disenfranchised, women are seen as the most easily manipulated workers. However, there are many examples of women workers organizing around the world to combat deteriorating work conditions (Moghadam 1999).

structural forces affect the household: trends in the world economy, state machinery, and ethnicity/culture/subculture. While these forces affect households, households are also sites where people reproduce and resist these structures.

Semiproletarianization of the household occurs when corporations externalize costs of production by paying waged workers less than the amount needed to reproduce their household. This systemic and institutionalized form of sexism forces households to absorb these costs through women's reproductive and subsistence labor (Dunaway 2001; Dunaway and Macabuac 2007). Individuals in households adapt to corporate externalization of production costs by pooling resources in order to live, including wages, reproduction, subsistence food production, and informal work, such as craft production. In Dunaway and Macabuac's (2007) research on Philippine export aquaculture, they observed resource pooling in a small, previously subsistence fishing community. In particular, they note that when this community's economy transitioned from subsistence fishing to commercial export aquaculture, malnutrition and hunger increased in the community. As a result of the loss of food and social services, women adapted by working three to four more hours a day without pay to help their husbands do their jobs, and produced and sold crafts, livestock, and dried oysters or fish in informal markets.

Dunaway (2001) contends that nodes of commodity chains are the most promising sites for analyzing gendered work. Bunker (1984) makes a similar argument for focusing on nodes when he explores the extraction economy in the Brazilian Amazon. He observes that "however global exchange systems have become, commodities can emerge only from locally based extractive and productive systems," (or, in this case, reproductive) (Bunker 1984: 1019). Further, Bunker goes on to suggest that "models of global and regional systems must therefore be complementary and cannot be treated as opposing paradigms" (p. 1019). Dunaway and Bunker are not alone in their assessment of the limitations of focusing on global processes to the neglect of processes occurring within nations. Others have argued that the world-systems perspective would benefit from analyzing smaller scale processes in the context of the world-system (Misra 2000; Engel-Di Mauro 2008).

Another way to incorporate gender into the world-systems perspective, and what we aim to do here, is to utilize quantitative macro-comparative analysis. We do not seek to promote macro-level analyses above micro-level, but, rather, we do seek to convey how applying different methodologies can allow us to learn different things about the social world. McCall (2005) argues that gender research would benefit from including more structural analyses in research on inequality. Additionally, development researchers have made important contributions while using quantitative, cross-national analyses by considering different aspects of women's status within nations and their relationship with various development indicators. In particular, Buchmann (1996) examines the relationship between women's education and structural adjustment policy and finds that macroeconomic policies, such as structural adjustment in the Third World, can have negative effects on women's educational and occupational achievement. Hadden and London (1996) conclude that educating girls is the best investment that less-developed countries can make. Further, Shen and Williamson (1997, 2001) show that higher women's status, measured by education relative to men and reproductive autonomy, within a nation is correlated with lower incidence of maternal and infant mortality, while indicators of economic growth, like multinational corporate investment, have detrimental effects on mortality.

In light of the above considerations, it appears clear that the status of women within nations is both affected by and can affect various world-system processes. The exact ways in

which gender matters will of course be context specific, but it appears that there are some general patterns that we can expect to emerge. Below, we examine how women's status fits in the modern world-system and begin to explore what macro-structural factors it may affect.

POTENTIAL CONFOUNDING OF WOMEN'S STATUS AND WORLD-SYSTEM POSITION

There is a rich and growing body of quantitative empirical work showing the connections between position in the world-system and a wide variety of social and environmental conditions (e.g., Jorgenson 2003; McKinney, Kick, and Fulkerson 2010). There is also a small body of literature that establishes a connection between women's status and environmental politics using cross-national quantitative analyses (Norgaard and York 2005; Nugent and Shandra 2009; Shandra, Shandra, and London 2008). Cross-national studies demonstrate how women's status within nations is closely linked to important development indicators, including infant mortality, fertility rates, and maternal mortality (Shen and Williamson 1997, 2001; Buchmann 1996; Hadden and London 1996). However, these literatures have not extensively addressed the degree to which world-system position and women's status are confounded. As a first step in demonstrating that it is important to incorporate gender into the world-systems perspective, here we assess the extent to which women's status and world-system position are empirically associated.

We compare world-system position with five indicators of women's status using cross-national data to establish the degree to which these overlap. For measures of women's status, we use the indices developed by Nugent and Shandra (2009), which are derived from principal component analytic methods, covering four areas of women's status: education[4], economic/labor[5], politics[6], and health[7]. These variables were standardized for the sample of nations used to develop them (which varied from 80 to 133 based on data availability), each with a mean of 0 and a standard deviation of 1. We used these to develop a fifth measure, overall women's status, by averaging these four indicators in nations where all four are measured, averaging three where only three are measured, and averaged two where only two are measured.[8] This approach makes it so that the overall measure of women's status has better coverage than any one of the original indicators alone (N=139). The values and ranks on these five variables for a selection of nations are presented in Table 1.

---

[4] Based on the female to male ratio of average years in school, gender parity index for gross enrollment ratio (all levels except pre-primary), and the ratio of female to male adult (aged 15+) literacy rate.

[5] Based on the ratio of estimated female to male earned income, female professional and technical workers (% of total), and female labor force (% of total labor force).

[6] Based on seats in parliament held by women (% of total), number of years women have had the right to vote as of 2004, and women in ministerial government (% of total).

[7] Based on maternal mortality rate (per 100,000 live births), females living with HIV/AIDS (% of total living with HIV/AIDS), and female infant mortality (deaths per 1,000 live births).

[8] Although the justification for combining these four variables into a single index is principally on substantive grounds, it is also justifiable on statistical grounds. The scale reliability coefficient (Cronbach's alpha) for these four variables is .793 and the average Pearson's r value for inter-item correlations is .523.

Table 1. Women's Status in a Selection of Nations.

Nation (world-system position block)	Education (rank, N=94)	Econ./Labor (rank, N=80)	Politics (rank, N=129)	Health (rank, N=133)	Overall (rank, N=139)
U.S.A. (1)	.753 (16)	.785 (21)	.343 (42)	1.209 (17)	.772 (27)
Germany (1)		.179 (35)	2.033 (7)	1.472 (10)	1.228 (7)
Brazil (2)		.165 (36)	-.803 (108)	-.126 (74)	-.255 (82)
Spain (2)	.433 (37)	-.441 (56)	1.067 (16)	1.695 (7)	.688 (29)
Sweden (2)	1.365 (2)	1.361 (8)	2.859 (1)	1.833 (3)	1.854 (1)
China (3)	-.164 (67)		-.046 (67)	.378 (47)	.056 (61)
India (3)	-1.380 (84)		-.148 (69)	-.314 (80)	-.614 (103)
Japan (3)	.068 (62)	-.371 (51)	-.569 (90)	1.037 (25)	.041 (63)
Russia (4)	.811 (11)	1.562 (4)		.777 (34)	1.050 (12)
Romania (4)	.295 (43)	.687 (25)	.386 (40)		.456 (40)
Vietnam (5)	-.579 (73)			.112 (68)	-.234 (80)
Saudi Arabia (5)	-.456 (72)	-2.369 (80)			-1.413 (135)
Ukraine (6)	.292 (44)	1.264 (9)		.598 (39)	.718 (28)
Kazakhstan (6)	.325 (40)		-1.067 (116)	-.431 (85)	-.391 (92)
Bangladesh (7)		-.789 (63)	-.783 (106)	-.048 (72)	-.540 (99)
Iran (7)	-.680 (75)	-1.575 (74)	-1.133 (119)	.375 (48)	-.753 (108)
Nigeria (8)			-.617 (95)	-1.254 (116)	-.936 (116)
Mexico (8)	.392 (39)	-1.080 (69)	.025 (58)	.504 (44)	-.040 (71)
Ethiopia (9)			-.203 (71)	-1.276 (119)	-.739 (107)
Sudan (9)			-.965 (113)	-1.014 (100)	-.990 (121)
Laos (10)	-1.493 (86)		.084 (56)	-.637 (90)	-.682 (106)
Papua N.G. (10)			-2.185 (128)	-.802 (94)	-1.493 (136)
Mongolia (10)	1.621 (1)	.949 (15)	.143 (54)		.904 (15)

Note: The values for education, econ./labor, politics, and health are from Nugent and Shandra (2009) and are standardized scores, with a mean of 0 and a standard deviation of 1. The overall measure is the mean of these scores (see text). The rank, with 1 indicating the nation with the highest women's status, is presented in parentheses. The block represents the world-system position block of each nation from Kick et al. (in press) – see Table 2.

We assessed the association between these five indicators of women's status and Kick, McKinney, McDonald, and Jorgenson's (in press) measure of world-system position. Their measure is for the period 1995-1999 and is essentially an updated version of the well-known measure developed by Snyder and Kick (1979). The measure was developed using multiple-network analysis of transnational economic, political, cultural, and military linkages among 160 nations. They assessed ties between nations across four relational dimensions—trading partners, co-membership in international non-governmental organizations, inter-nation embassy sponsorship, and arms transfers between nations. The multiple network analysis produced ten

blocks of nations that are structurally situated in similar positions in the world-system. The ten blocks are summarized in Table 2.

Table 2. Summary of Kick et al.'s (in press) World-System Position (WSP) Measure and Women's Status.

WSP block (N)	Nations with largest populations	Overall women's status block mean (rank)
1. Center Core (6)	United States, Germany, France, United Kingdom	.819 (1)
2. Western European (16)	Brazil, Turkey, Spain, Poland, Greece, Portugal	.701 (2)
3. Asian (12)	China, India, Indonesia, Pakistan, Japan	-.029 (5)
4. Eastern European (11)	Russia, Romania, Czech Republic, Hungary	.555 (4)
5. Southeast Asian/Middle East (6)	Vietnam, Nepal, Saudi Arabia, Cameroon	-.629 (9)
6. Former Soviet (14)	Ukraine, Uzbekistan, Kazakhstan, Belarus	.597 (3)
7. Middle East (9)	Bangladesh, Egypt, Iran, Morocco, Sri Lanka	-.541 (8)
8. South American (27)	Nigeria, Mexico, Colombia, Argentina, Kenya, Algeria	-.098 (6)
9. African (31)	Ethiopia, Sudan, Uganda, Ghana, Madagascar	-.813 (10)
10. South Pacific/Middle East (5)	Laos, Papua New Guinea, Eritrea, Mongolia, Fiji	-.393 (7)

Note: The number of nations in each block is presented in parentheses in the first column. Here we are considering only the nations for which there are data for the overall women's status variable, not all of the 160 nations included in Kick et al.'s (in press) analysis.

We regressed the five women's status indicators on the world-system position indicator, dummy-coded into the ten blocks. In Table 3, we present R^2 values from these analyses. Note that we do not present the full set of regression coefficients since we are focusing on the strength of association, which is the relevant issue with regards to assessing the extent to which these factors are confounded. However, a sense of the differences across blocks can be gained from the different mean values of the overall status of women by block presented in Table 2. It is clear that there is a fairly strong association between world-system position and women's status, as indicated by the reasonably high R^2 values. For example, world-system position explains more than half of the variance in overall women's status. We also regressed the five women's status variables on GDP per capita (purchasing power parity) for the year 2000 (World Bank 2007), and report the R^2 values from these models in Table 3. These associations are reasonably strong,

although it is noteworthy that women's status is even more closely connected to world-system position than it is to GDP per capita, particularly for economic/labor status and educational status.

Table 3. Strength of Association (R^2) Between Indicators of Women's Status and Kick et al.'s (in press) World-System Position (WSP) Measure (ten blocks) and GDP per capita.

	WSP R^2	GDP p. c. R^2
Overall status	.525	.404
Educational status	.444	.168
Economic/labor status	.432	.060
Political status	.383	.293
Health status	.709	.600

Note: All associations are significant at the .05 level. Results are derived from OLS regression. In the case of the WSP measure, the ten blocks were dummy-coded. Sample size varies across models.

Due to the reasonably strong associations between women's status and both world-system position and GDP per capita, statistical models using world-system position variables or GDP per capita as independent variables may suffer from confounding if they do not include indicators of women's status. Stated differently, some effects that may in truth stem from women's status may be erroneously attributed to economic factors or world-system position. These strong associations suggest that there are good reasons to consider including indicators of women's status in a substantial variety of quantitative macro-comparative analyses, since many dependent variables of interest to world-systems researchers may well be affected by gender relationships. Of course, women's status is affected by world-system position, and, therefore, to some degree the effects of women's status on other factors may indirectly reflect world-system effects.

However, clearly the status of women within a nation is not reducible to world-system position, and stems from multiple forces including local cultural traditions. In fact, even though the association between women's status and world-system position is fairly strong, clearly there is a substantial amount of variation in women's status across nations that is not explained by world-system position or modernization. As can be gleaned from Table 1, there is substantial variation in women's status within world-system blocks. For example, within block 2, Sweden has the highest level of overall women's status out of the 139 nations for which there are sufficient data, whereas Brazil is ranked 82nd. Similarly, within block 10, Mongolia is the 10th ranked on the overall status measure while Papua New Guinea is 136th. This indicates that world-system position and indicators of modernization cannot be used as proxies for measures of women's status. Therefore, it is clearly important to separate the effects of gender relationships from those

of the factors that are typically directly included in world-system position indicators, such as the structure of trade networks and economic development.

THE EXPLANATIVE POWER OF WOMEN'S STATUS IN MACRO-COMPARATIVE ANALYSES

In addition to establishing that women's status and world-system position empirically overlap, for our basic underlying argument – that gender relationships have important macro-level effects that should not be ignored by world-systems researchers – to have force, it is necessary to demonstrate that women's status shows signs of having effects on a variety of features of societies above and beyond those of world-system position or modernization. To assess this issue, we examine six different features of nations that have been of interest to quantitative macro-comparative researchers: the total fertility rate, the infant mortality rate per 1000 births, government health expenditures as percentage of GDP, military expenditures as a percentage of GDP, net inflows of foreign direct investment as a percentage of GDP, and meat consumption per capita (kg/year). With the exception of the meat variable, all of these variables are from the World Bank (2007) for the year 2004. The meat variable is from the World Resources Institute (2010) and is for the year 2002.[9]

These variables represent a diversity of social conditions. Total fertility rate and the infant mortality rate are indicators of reproductive health, spending on health care and the military get at social and political priorities, foreign direct investment deals with economic links to the global economy, and meat consumption is related to agricultural production processes and cultural characteristics (Buchman 1996; Benería 2003; Waring 1999; York and Gossard 2004). Thus, these variables were selected for analysis because they show some of the breadth of social features that gender relationships (along with world-system processes) may affect.

Using OLS regression, we assess the effects of women's status, controlling for important indicators of world-system position (WSP) and modernization, on the above mentioned variables. We use Kick et al.'s (in press) WSP measure, dummy-coded (using the "center core" block as the reference category). Using dummy codes is a more conservative approach than using the WSP measure as a continuous variable, since it does not require parametric assumptions about the measure (e.g., that it is measured at the interval level). Furthermore, although the order of the blocks represents a rough hierarchy, Kick et al. (in press) do not present their measure as a continuous variable. We also include GDP per capita (purchasing power parity) and urbanization (percentage of the population living in urban areas), both measured in the year 2000 (World Bank 2007), as indicators of development. For each model, we select the indicator of women's status

[9] This is the most recent year for which data are available. We are aware that since one of the variables used to produce the women's status indices is from 2003, there is a conceptual problem with using this index to predict the values of a variable from an earlier point in time (note: the fact that the number of years women have had the right to vote was measured as of 2004 is not an issue, since the relevant issue is when women gained the right to vote; therefore, the number of years since women gained the right to vote as of 2004 is perfectly correlated with the number of years since they gained the right to vote as of 2002). However, since (1) both meat consumption and women's status are almost surely highly stable over short periods of time and (2) we are conducting here an exploratory analysis, rather than trying to develop a definitive model, we do not consider this to be a substantial problem.

that seems most theoretically appropriate for the dependent variable. For total fertility rate and infant mortality rate, we use women's educational status, since this is frequently identified as an important factor.[10] For health and military expenditures, we use women's political status, since both these measures are of government funding and, therefore, stem from political decisions. We use women's overall status for the analyses of foreign direct investment and meat consumption, since these are likely affected by a broader range of social factors.

It is important to note that we do *not* present any of these models as definitive. Clearly, each one of the dependent variables we analyze is influenced by a variety of factors and more developed models would be required to fully examine them. We present our analyses as initial and exploratory with the aim of demonstrating the potential for women's status to add explanative power to a variety of models above and beyond what is given by measures of development and world-system position.

The results of our analyses are presented in Table 4.[11] For all of the dependent variables, the women's status has an effect that is significant at least at the .05 level using a two-tailed test, with the exception of the model of health expenditures, where the women's status variable only has a significant effect at the .05 level using a one-tailed test (or at the .10 level using a two-tailed test).[12] This is quite remarkable in light of the fact that the models control for major macro-structural features that are often largely seen as determining characteristics of nations.

---

[10] We do not use the women's health status variable to explain infant mortality because of its partially tautological nature. First, the health status variable includes female infant mortality, which is part of total infant mortality. Second, maternal mortality is part of the women's health status indicator, and maternal mortality is a common cause of infant mortality.

[11] Note that we have tested the robustness of these models. We re-estimated the models with White-corrected standard errors, which addresses potential heteroskedasticity. For all of these models the women's status variable had a significant effect at the .05 level with a two-tailed test, except for the infant mortality model, where the women's status variable only had a significant effect with a one-tailed test, and the FDI model, where women's status did not have a significant effect. We also estimated the models using the more traditional three-tier conceptualization of WSP, where, as per Kick et al.'s (in press) suggestion, blocks 1-3 were considered the core, blocks 4-8 the semiperiphery, and blocks 9-10 the periphery. In all of these models the women's status variable had an effect that was significant at the .05 level with a two-tailed test, except for in the FDI model. We also estimated the models using the 10-block WSP variable as a continuous variable, although dummy-coding each block, as we do in the models we present, is the more conservative approach that requires fewer assumptions about the nature of WSP and how it is measured. Kick et al. (in press) note that the order of blocks is approximately the order of network centrality in the global system. In these models, the women's status variable is significant at the .05 level with two-tailed tests for every dependent variable except FDI. We also checked for multicollinearity by calculating the variance inflation factor (VIF). The highest mean VIF for any model was only 3.84 and the highest VIF for any single coefficient was 8.24; values well within accepted standards. Taken together, these assessments suggest that the results we report here are reasonably robust.

[12] Note that in an alternative model of health expenditures using the educational status variable instead of the political status variable, women's status has a significant effect at the .05 level using a two-tailed test. However, we present the model using women's political status so as to be consistent with the logic we use to justify including political status in the military expenditures model, i.e., government expenditures are based on political decisions.

Table 4. Total Fertility Rate (TFR), Infant Mortality Rate, Government Expenditures on Health Care, Military Expenditures, Net Inflows of Foreign Direct Investment (FDI), and Meat Consumption per capita Regressed on Women's Status (educational, political, or overall), GDP per capita, Urbanization, and World-System Position (ten blocks).

	TFR Coef. (S.E.)	Infant mortality Coef. (S.E.)	Health exp. Coef. (S.E.)	Military exp. Coef. (S.E.)	FDI, net inflows Coef. (S.E.)	Meat per capita Coef. (S.E.)
Educational status	-.576 (.138)***	-9.299 (4.116)*				
Political status			.310 (.166)†	-.426 (.183)*		
Overall status					-7.499 (3.698)*	8.101 (3.221)*
GDP per capita	.008 (.014)	-.434 (.232)†	.098 (.025)***	-.031 (.028)	1.684 (.360)***	1.889 (.333)***
Urbanization	-.009 (.007)	-.166 (.146)	.014 (.008)†	.021 (.010)*	-.095 (.110)	.374 (.100)***
WSP 2	-.142 (.313)	-1.150 (3.984)	-.354 (.645)	-.373 (.681)	19.864 (9.386)*	3.555 (8.732)
WSP 3	-.318 (.400)	2.248 (6.187)	-1.508 (.768)†	-1.171 (.813)	19.705 (10.830)†	-4.994 (10.381)
WSP 4	-.371 (.381)	-6.438 (5.273)	.162 (.787)	-1.189 (.833)	29.477 (11.427)*	18.442 (10.424)†
WSP 5	1.879 (.563)**		-3.088 (.959)**	.290 (1.020)	25.693 (13.904)†	-2.333 (11.812)
WSP 6	-.068 (.413)	-1.923 (7.392)	-.868 (.816)	-1.511 (.877)	39.551 (11.759)**	-4.720 (10.897)
WSP 7	-.320 (.481)		-1.184 (.921)	.453 (.958)	26.703 (12.171)*	2.287 (11.379)
WSP 8	.542 (.478)		-1.233 (.773)	-1.839 (.846)*	30.781 (11.098)**	6.894 (10.278)
WSP 9	1.805 (.518)**	-11.328 (8.946)	-.770 (.795)	-.593 (.856)	28.863 (11.521)*	.034 (10.812)
WSP 10			-1.021 (.965)	-1.940 (1.145)†	30.168 (13.884)*	37.826 (13.503)**
y-intercept	2.549 (.509)***	35.198 (9.706)**	3.017 (.827)***	2.014 (.893)*	-31.973 (12.113)**	6.658 (11.083)
N	62	29	117	101	130	131
R^2	.818	.687	.653	.328	.202	.765

Notes: Block 1, the "center core," is the omitted category for the WSP dummy-coded variables;
**** p<.001, ** p<.01, * p<.05, † p<.10 (two-tailed tests)*

Based on these results, we can say that there is clear evidence that where women have higher educational status, fertility rates and infant mortality rates are lower. These findings point to the major demographic and health consequences of women's status. Our results also suggest that women's status has a distinct effect on social priorities. Where women's status is higher, military expenditures are lower and government health care expenditures are higher. Our results also show that women's status is associated with national links to the global economy. There is less foreign direct investment in nations where women have higher status, which suggests that gender equality leads nations to be less dependent on the global economy. Finally, diet and agriculture also appear to be affected by women's status. Where women's status is higher, meat consumption is higher. Clearly, women's status is connected to a wide variety of processes and social outcomes.

These findings can be understood by reflecting back on some of theoretical issues we introduced above. Waring (1999) describes how social priorities are articulated in the global economic system through valuation. Specifically, she uncovers the "patriarchal nature of economics" and argues that "those who are making the decisions are men, and those values which are excluded from this determination are those of our environment, and of women and children" (p. 3). One example she explores is how military work is imputed into national economic figures and is considered active work and is paid labor, while reproductive work, of the household and human life, is considered inactive and goes unremunerated and unacknowledged. While Waring does not seek women's actual remuneration, she argues that without an imputation to account for unpaid labor, women's needs and contributions go unrecognized by policy-makers. Perhaps as a product of differentiated historical, material and social conditions, in particular, women's roles as primary caregivers and nurturers of households, and men's responsibilities to work outside the household to obtain money, women in positions of power tend to value different things than do men. For example, according to attitudinal research, women tend to express more concern for the environment than do men (Bord and O'Connor 1997; Davidson and Freudenburg 1996). These differences in valuation may explain many of our results, particularly the differences in military and health care spending across nations with respect to the status of women.

Reflecting on the effects of women's status on diet as well as infant mortality, it is worth noting that women and girls in Third World nations disproportionately experience malnutrition as compared to men and boys (Adams 1993; Dunaway 2001; Dunaway and Macabuac 2007). When food is scarce, mothers eat less food in order to feed their children and husbands. Additionally, male children are routinely fed better than girls (Adams 1993; Dunaway 2001; Dunaway and Macabuac 2007). In many societies, meat consumption is a cultural sign of status, and meat is often difficult to come by. For this reason, it is often reserved for men who are of higher status in the sex-hierarchy (Adams 1993).

DIRECTIONS FOR ANALYSES OF GENDER IN THE WORLD-SYSTEM

Our aim here has been to develop a link between theories of gender and the world-systems perspective, in particular to show that many aspects of the world-system are gendered, although these aspects have typically been neglected by world-systems researchers. We pointed to some of the existing theoretical work that examines both how gender relationships and women's status and actions affect many large-scale global processes and how global processes affect gender

relationships, women, and the household within nations. We then demonstrated the potential importance of women's status in world-systems research by empirically assessing two issues. First, we demonstrated that there is a fairly strong association between world-system position and women's status within nations. This finding points to the potential for confounding in any empirical models that use world-system position indicators but that do not take into consideration women's status – i.e., results showing that world-system position affects any particular dependent variable may be spurious, or partially so, if the effects of women's status are neglected. Second, we presented exploratory models of six different dependent variables of interest in world-systems research: total fertility rate, infant mortality rate, public spending on health care, military expenditures, foreign direct investment, and meat consumption. For all six of these variables, we found that women's status had an effect above and beyond those of world-system position and indicators of "modernization." These results suggest that the neglect of gender relationships in empirical research is a major oversight, and that the inclusion of indicators of women's status has substantial potential to add explanative power to analyses of a wide variety of social conditions. Based on what we have presented here, we believe it is reasonable to conclude that, rather than asking whether or not to consider gender in world-systems research, important questions for scholars in the world-systems tradition include in what ways gender relationships affect the global economy, political structure, and cultural relations, and in what ways are gender relationships affected by the machinations of world-system processes.

We suggest that world-systems research should engage in efforts to both develop the theoretical connections between gender and the world-system and to develop empirical measures of gendered aspects of societies so that these factors can be included in macro-comparative models. Further engagement with theories of gender may provide new or more nuanced answers to old questions addressed in the world-systems literature and raise new questions and, therefore, novel avenues for research. One of the powers of engaging a diversity of theories is the potential to see the world in a variety of ways and, thereby, make discoveries that have been overlooked. The utilization of theories of gender may be one avenue for adding further vitality to the world-systems tradition.

However, theoretical development alone will not be sufficient to bring considerations of gender into the world-systems tradition. One of the strengths of the world-systems tradition is its substantial body of empirical research, including a rich and growing quantitative macro-comparative literature. Incorporating gender into this literature will require the utilization of overlooked data sources and the gathering of data on a variety of social features that have not typically been central to analyses of world-system processes. An important source of data that is emerging is that developed by the WomenStats project (Caprioli et al. 2009), which provides the most comprehensive compilation of data, both qualitative and quantitative, on women's status currently available (http://www.womanstats.org/). The United Nations Development Program (UNDP) (2009) also tracks data on gender equality. The Gender-related Development Index, which is related to the widely used Human Development Index, is based on differences between men and women in life expectancy, literacy, education, and income. The UNDP (2009) has also developed the "gender empowerment measure," which is based on women's representation in government and professional occupations. In addition to measures of women's status, measures that assess the activities of women that are typically overlooked by traditional economic measures (e.g., GDP) would be highly useful. The Genuine Progress Indicator (GPI), an alternative to GDP, developed by Redefining Progress, represents an important move in this direction, in that it

includes measures of the value of household labor and parenting as well as volunteer work (Talberth, Cobb, and Slattery 2007). However, the GPI has, to date, only been developed for the United States. If relevant data for measures like this were collected for all nations in the world, women's labor could be better represented in analyses.

Recognizing how gender relationships and women's status fit into the world-system is clearly a worthy, if challenging, task for scholars. Nonetheless, addressing gender can add theoretical depth to the world-systems tradition as well as enrich empirical research. Although gender has remained, at best, on the fringes of the world-systems perspective in the decade since Dunaway (2001) noted how women have been left out of this research tradition, perhaps the coming decade will see the development of enduring links between theories of gender and the world-systems perspective, thereby improving our understanding of our world.

REFERENCES

Acker, Joan. 2006. *Class Questions: Feminist Answers.* Lanham, MD: Rowman and Littlefield Publishers Inc.

Acosta-Belen, Edna and Christine E. Bose. 1990. "From Structural Subordination to Empowerment: Women and Development in Third World Contexts." *Gender and Society.* 4(3): 299-320.

Adams, Carol J. 1993. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory.* New York: The Continuum Publishing Company.

Benería, Lourdes. 2003. *Gender, Development, and Globalization: Economics as if All People Mattered.* New York: Routledge.

Bord, Richard J. and Robert E. O'Connor. 1997. "The Gender Gap in Environmental Attitudes: The Case of Perceived Vulnerability to Risk." *Social Science Quarterly* 78: 803-40.

Buchmann, Claudia. 1996. "The Debt Crisis, Structural Adjustment and Women's Education: Implications for Status and Social Development." *International Journal of Comparative Sociology.* 37: 5-30.

Bunker, Stephen G. 1984. "Modes of Extraction, Unequal Exchange, and the Progressive Underdevelopment of an Extreme Periphery: The Brazilian Amazon, 1600-1980." *American Journal of Sociology* 89(5): 1017-1064.

Caprioli, Mary, Valerie M. Hudson, Rose McDermott, Bonnie Ballif-Spanvill, Chad F. Emmett, and S. Matthew Stearmer. 2009. "The WomanStats Project Database: Advancing and Empirical Research Agenda." *Journal of Peace Research* 46(6): 839-851.

Collins, Jane L. 2007. "The Paradox of Poverty in the Transition from Welfare to Work." *Review* XXX(4): 283-311.

Davidson, Debra and William Freudenburg. 1996. "Gender and Environmental Risk Concern: A Review and Analysis of Available Research." *Environment and Behavior* 28:302-39.

Dickinson, Torry D. 2007. "(Hetero)Sexism as a Weapon of the World-System: Feminist Reflections on Household Research by Joan Smith and the Fernand Braudel Center." *Review* XXX(4): 261-281.

Dunaway, Wilma A. 2000. "Women at Risk: Capitalist Incorporation and Community Transformation on the Cherokee Frontier." Pp. 195-210 in *A World-Systems Reader: New*

Perspectives on Gender, Urbanism, Cultures, Indigenous Peoples, and Ecology. Edited by Thomas D. Hall. Lanham, MD: Rowman and Littlefield Publishers.

_____ . 2001. "The Double Register of History: Situating the Forgotten Woman and Her Household in Capitalist Commodity Chains." *Journal of World-Systems Research* VII(1): 2-29.

Dunaway, Wilma A. and M. Cecilia Macabuac. 2007. "'The Shrimp Eat Better Than We Do': Philippine Subsistence Fishing Households Sacrificed for the Global Food Chain." *Review* XXX(4): 313-337.

Engel-Di Mauro, Salvatore. 2008. "Seeing the Local in the Global: Political Ecologies, World-Systems, and the Question of Scale." *Geoforum* 40:116-125.

Federici, Silvia. 2009. "The Devaluation of Women's Labour." Pp. 43-65 in *Eco-Sufficiency and Global Justice: Women Write Political Ecology,* edited by Ariel Salleh. New York: Pluto Press.

Feldman, Shelley. 2007a. "Introduction." *Review* XXX(4): 237-242.

_____ . 2007b. "Households, Labor, and Global Capitalism: A Close Encounter with Joan Smith." *Review* XXX(4): 243-260.

Fernandez-Kelly, Patricia M. 1994. "Broadening the Scope: Gender and the Study of International Development." Pp. 143-168 in *Comparative National Development.* Edited by Douglas Kincaid and Alejandro Portes. Chapel Hill: University of North Carolina Press.

Hadden, Kenneth and Bruce London. 1996. "Educating Girls in the Third World: The Demographic, Basic Needs, and Economic Benefit." *International Journal of Comparative Sociology.* 37: 31-46.

Hall, Thomas D. 2000. "World-Systems Analysis: A Small Sample from a Large Universe." Pp. 3-27 in *A World-Systems Reader: New Perspectives on Gender, Urbanism, Cultures, Indigenous Peoples, and Ecology*. Edited by Thomas D. Hall. Lanham, MD: Rowman and Littlefield Publishers.

Harding, Sandra. 1991. *Whose Science? Whose Knowledge?: Thinking from Women's Lives.* Ithaca, NY: Cornell University Press.

Horton, John and Eun-Jin Lee. 1988. "Degraded Work and Devalued Labor: The Proletarianization of Women in the Semiconductor Industry." Pp. 137-152 in *Racism Sexism, and the World-System,* edited by Joan Smith, Jane Collins, Terence Hopkins, and Akbar Muhammad. New York: Greenwood Press.

Jorgenson, Andrew K. 2003. "Consumption and Environmental Degradation: A Cross-National Analysis of the Ecological Footprint." *Social Problems* 50: 374-394.

Kentor, Jeffrey. 2000. *Capital and Coercion: The Economic and Military Processes that Have Shaped the World Economy 1800-1990.* New York: Garland Publishing.

Kick, Edward L., Laura A. McKinney, Steve McDonald, and Andrew Jorgenson. (In press). "World-System Position: A Network Analysis of Nations." In *Sage Handbook of Social Network Analysis,* edited by John Scott and Peter Carrington. Thousand Oaks, CA: Sage Publications.

McCall, Leslie. 2005. "The Complexity of Intersectionality." *Signs: Journal of Women in Culture and Society.* 30(3): 1771-1800.

McKinney, Laura A., Edward L. Kick, and Gregory M. Fulkerson. 2010. "World System, Anthropogenic, and Ecological Threats to Bird and Mammal Species: A Structural Equation Analysis of Biodiversity Loss." *Organization & Environment* 23(1): 3-31.

Merchant, Carolyn. 1990. *The Death of Nature: Women, Ecology and the Scientific Revolution.* New York: Harper One.

Mies, Maria. 1998. *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labor."* New York: Zed Books Ltd.

Misra, Joya. 2000. "Gender and the World-System: Engaging the Feminist Literature on Development." Pp. 105-127 in *A World-Systems Reader: New Perspectives on Gender, Urbanism, Cultures, Indigenous Peoples, and Ecology.* Edited by Thomas D. Hall. Lanham, MD: Rowman and Littlefield Publishers.

Moghadam, Valentine. 1999. "Gender and Globalization: Female Labor and Women's Mobilization." *Journal of World-Systems Research.* 5(2): 367-388.

Naples, Nancy. 2003. *Feminism and Method: Ethnography, Discourse Analysis, and Activist Research.* New York: Routledge.

Nash, June. 1988. "Cultural Parameters of Sexism and Racism in the International Division of Labor." Pp. 11-38 in *Racism Sexism, and the World-System,* edited by Joan Smith, Jane Collins, Terence Hopkins, and Akbar Muhammad. New York: Greenwood Press.

Norgaard, Kari and Richard York. 2005. "Gender Equality and State Environmentalism." *Gender & Society* 19(4): 506-522.

Nugent, Colleen and John M. Shandra. 2009. "State Environmental Protection Efforts, Women's Status, and World Polity." *Organization & Environment* 22(2): 208-229.

Parreñas, Rhacel Salazar. 2001. *Servants of Globalization: Women, Migration and Domestic Work.* Stanford, CA: Stanford University Press.

Rocheleau, Dianne, Barbara Thomas-Slayter, and Esther Wangari. 1996. "Gender and Environment: A Feminist Political Ecology Perspective." Pp. 3-26 in *Feminist Political Ecology: Global Issues and Local Experiences,* edited by Dianne Rocheleau, Barbara Thomas-Slayter, and Esther Wangari. New York: Routledge.

Roberts, J. Timmons, Bradley C. Parks, and Alexis A. Vásquez. 2004. "Who Ratifies Environmental Treaties and Why? Institutionalism, Structuralism and Participation by 192 Nations in 22 Treaties." *Global Environmental Politics* 4(3): 22-64.

Salleh, Ariel. 2009. "Ecological Debt: Embodied Debt." Pp. 1-41 in *Eco-Sufficiency and Global Justice: Women Write Political Ecology,* edited by Ariel Salleh. New York: Pluto Press.

Shandra, John M., Carrie L. Shandra, and Bruce London. 2008. "Women, Non-Governmental Organizations, and Deforestation: A Cross-National Study." *Population & Environment* 30: 48-72.

Shen Ce and John B. Williamson. 1997. "Child Mortality, Women's Status, Economic Dependency, and State Strength: A Cross-National Study of Less Developed Countries." *Social Forces.* 76(2): 667-700.

_____. 2001. "Accounting for Cross-National Differences in Infant Mortality Decline (1965-1991) Among Less Developed Countries: Effects of Women's Status, Economic Dependency, and State Strength." *Social Indicators Research.* 53: 257-288.

Smith, Dorothy E. 1987. *The Everyday World is Problematic.* Boston, MA: Northeastern University Press.

Smith, Joan. 1993. "We Irish Women: Gender, History, and the World-Economy." *Review* XVI(1): 1-15.

Snyder, David, and Edward L. Kick. 1979. "Structural Position in the World System and Economic Growth, 1955-1970: A Multiple-Network analysis of Transnational Interactions." *American Journal of Sociology* 84(5): 1096-1126.

Talberth, John, Clifford Cobb, and Noah Slattery. 2007. *The Genuine Progress Indicator 2006: A Tool for Sustainable Development.* Oakland, CA: Redefining Progress.

United Nations Children's Fund (UNICEF). 2004. "Gender Equality: The Big Picture." http://www.unicef.org/gender/index_bigpicture.html. Accessed July 6, 2010.

United Nations Development Program. 2009. *Human Development Report 2009*. New York: UNDP.

Waring, Marilyn. 1999. *Counting for Nothing: What Men Value and What Women Are Worth* (2nd edition). Toronto: University of Toronto Press.

_____ . 2009. "Policy and the Measure of Woman." Pp. 165-179 in *Eco-Sufficiency and Global Justice: Women Write Political Ecology*, edited by Ariel Salleh. New York: Pluto Press.

World Bank. 2007. *World Development Indicators 2007*. CD-ROM. Washington, D.C.: World Bank.

World Resources Institute. 2010. *EarthTrends Searchable Database.* (http://earthtrends.wri.org). Accessed January 5, 2010.

York, Richard and Marcia Hill Gossard. 2004. "Cross-National Meat and Fish Consumption: Exploring the Effects of Modernization and Ecological Context." *Ecological Economics* 48(3): 293-302.

EXTERNALITY AND INCORPORATION IN THE WORLD-SYSTEM: ABYSSINIA – ANOMALY OR PALIMPSEST?

Jon D. Carlson
School of Social Sciences, Humanities & Arts
University of California
Jcarlson3@ucmerced.edu

ABSTRACT

This article examines the concept of the 'external arena' and the role of the 'information network' in the expansion of the world-system and incorporation of new regions. To address systemic incorporation, I reference research on nested networks of interaction, and echo criticisms that the impact of myth and misinformation has been underappreciated as an element of incorporation. Significant alteration occurs well-prior to the point at which most world-systems literature considers a region incorporated. I offer the concept of "protoglobalization" as a means of conceptualizing this early, overlooked social, economic, and political change. Abyssinia is of interest because it offers a rare case of cross-systemic incorporation. The region was historically part of the Red Sea trade complex, had linkages throughout the interior of Africa, and existed on the periphery of the Indian Ocean world-system. So while initially outside the realm of European contact, this case offers an example of successful resistance to incorporation and how that process can be understood. Additionally, it offers a case study of cross-systemic incorporation, which has been lacking in the literature. As such, it also contributes to the concept of a 'contested periphery'. The case reaffirms the significant impact external regions can have on the functioning of "internal" system actors; the mere myth of Prester John spurred significant effort by European powers to locate his legendary Christian Kingdom. Finally, the article uses the methodological innovation of historical maps to trace the border of the 'information network', which allows for a refinement of our understanding of the complex process of incorporation and an improved model of the relationship between networks of interaction, frontiers, contestation, and incorporation.

INTRODUCTION

To expand upon existing research on 'incorporation' into the world-system, I undertake a specific case study of a region external to the expanding European world-system. Accordingly, this is meant to flesh-out the middle ground between Wallerstein's (1974, 1980, 1989) analysis of incorporation (European-focused, state-centric, 'inside-out') and Hall's (1986, 1987, 1989) research on frontiers and incorporation (external, indigenous-oriented, 'outside-in'). This case also supports the 'pulsation' thesis of world-systems (Hall 1987, 1989, 2005; Chase-Dunn and Hall 1997; Beaujard and Fee 2005), offering insight for future cross-systemic study: are zones along system borders repeatedly incorporated as they fall in and out of neighboring systems, or are they mere geographic socio-cultural bridges between systems? Accordingly, the case of

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 165-198**
ISSN 1076-156X

Abyssinia is also applicable to research on 'contested peripheries' (Allen 1992, 1997, 2005; Cline 2000; Hall 2005). Such areas have "geographical, political and economic implications, since the affected region lies between two larger empires, kingdoms or polities established to either side of it" (Cline 2000: 7). Furthermore, the Abyssinian case offers insight into the ability of regions to maintain externality, or 'negotiate peripherality' (Kardulias 1999, 2007). Ethiopia (née Abyssinia) maintained independence from colonial subjugation well into the twentieth century, despite being linked to the African, Eurasian and Indian Ocean systems (Beaujard and Fee 2005; Beaujard 2007). Finally, because of the long historical overview of this case, it also lends support to the application of world-system analysis to pre-capitalist settings, as has been argued by Abu-Lughod (1989, 1993), Chase Dunn and Hall (1991), Frank (1990, 1998), Frank and Gills (2005), Gills and Frank (1991), and it echoes concerns with globalization as having a considerable historical legacy (*cf*., Gills and Thompson 2006). The interaction between systems is also a useful homologue for contemporary discussions about cultural globalization and civilizational 'clashes' (Huntington 1993). Thus, I use a 'palimpsest'[1] as a fitting image for the examination of Abyssinia, sitting at the nexus of the African, Indian Ocean/Red Sea and European world-systems.

I use Chase-Dunn and Hall's (1991, 1997) and Hall's (1986, 1989, 1999a, 1999b, 2009) notion of nested networks of interaction combined with Carlson's (2001, 2002) 'zone of ignorance'. By treating networks as various 'states of being' through which a region passes and is briefly temporally fixed, one can operationalize incorporation more specifically. So a region can be in 1) a 'zone of ignorance' (ZOI) – where next to nothing is known and myth carries as much weight as fact and beyond which an area exists which is 'external'; 2) the 'information network' (IN) – of regularized information exchange and cultural interaction; 3) the 'prestige goods network' (PGN) – of regularized luxury and high value-to-weight goods exchange; 4) the political-military network (PMN) – of regularized military and/or political interactions; 5) a bulk goods network (BGN) – a system of regularized exchange of low value to weight goods. Accordingly, this case study adds to the "variance-maximizing" strategy that Hall (2009:29) calls for regarding the study of frontiers, and which applies to studying cases of incorporation.

The case study focuses on the transition from the zone of ignorance, to information network, to prestige goods network, ending with the political-military network. As historical maps are reflections of a given information network, a 'freeze-frame snapshot' of accumulated knowledge, these are used to parse the status of a given region at a particular historic moment. Maps in conjunction with other written sources are used to give a clearer picture of a given region during the period of incorporation (*cf*., Carlson 2001:253-254), especially the transition from zone of ignorance to information network, as maps often capture the myths, rumors, and biases (geographic and otherwise) of a given historical period or worldview.

The academic discussion of Abyssinia, or what is largely modern Ethiopia, is often cast in terms of the country's unique status within the African continent. It was the only African polity to survive intact into the twentieth century and is remarkable in its very antiquity. Ethiopia is studied *precisely because* of this dual aberration. But this perception of Abyssinia as unique has created a certain amount of intellectual blindness to its role in the social systems of North

[1] A 'palimpsest' is a page from a scroll or book, often of parchment, that has been scraped clean and reused. Over time the faint remains of the former writing could reappear enough so that scholars could discern the text (*scriptio inferior*, the "underwriting") enough to be able to decipher it.

Africa, the Arab peninsula, the Red Sea and the Indian Ocean. This blindness manifests in the treatment of Ethiopia as isolated or insurmountable and has resulted in an ability to explain anything Ethiopian by geography. This "geographical determinism" produced an "isolation paradigm" that predominates in Ethiopian studies (Tibebu 1996), resulting in a dominant view of Ethiopia as an anomaly or paradox within the field of African studies (Jesman 1963). The "anomaly and paradox" thesis has resulted in Ethiopianist studies being treated as an outgrowth of Orientalism: "Ethiopians are Semitic, not Negroid; civilized, not barbaric; beautiful, not ugly; … all are images of Orientalist Semiticism in the Western paradigm of knowledge" (Tibebu 1996:427; *cf*., Marcus 1971). Even noted Africanist Ali Mazrui places emphasis on the triple heritage of Ethiopia – Indigenous, Semitic, and Greco-Roman – as distinct from the larger heritage of Africa as embodied in the triple modern personality of Nigeria (Mazrui 1984:13).

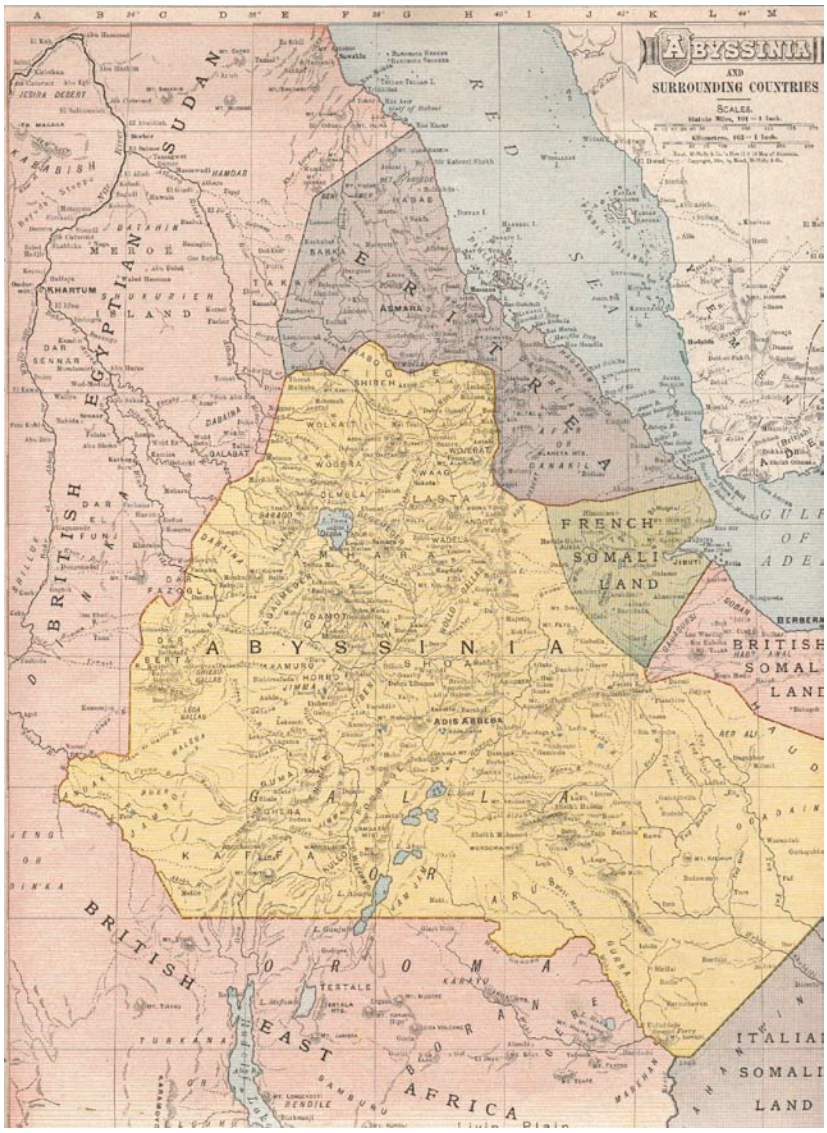
The "isolation paradigm" ascribed to Ethiopia overlooks the overt linkages the region had to the outside world. More relevantly, it allows a false construction of Ethiopian history, such that "Ethiopia has been perceived as outlandish to the general African scene. *Ethiopia is supposedly located in the wrong place*. Ethiopia is in Africa but not of Africa" (Tibebu 1996:428, emphasis in original). Why is this crucial? On one hand, it reifies the Eurocentric approach to much of African pre-colonial, colonial, and post-colonial history and development – which is itself inherently Eurocentric in that African history is defined in a context of European colonialism. Yet more insidiously, it allows the removal of the one example of "African success" from any discussion of African political development. No longer do we have the example of an African polity surviving into the twentieth century as a functioning part of 'international society'.[2] Instead, Ethiopia is an 'anomalous paradox'. This allows scholars to ignore what was required to subjugate the rest of Africa, to neglect the question of *why* the rest of Africa became colonized and exploited by European interests. Rather, if Abyssinia/Ethiopia *is* considered "African" the question becomes, 'If possible in Ethiopia, why was success *not* possible elsewhere in Africa?' Or asking the historical counterfactual, 'Does Ethiopia provide an example of what was possible in Africa if the colonial interlude had happened differently?'

By the turn of the twentieth century, Abyssinia was an independent African island surrounded by a sea of European colonial aspiration. To make this point – as well as to provide a frame of reference for the historical discussion of Abyssinia – that one can appreciate Figure 1, the map of "Abyssinia and Surrounding Countries". From 1904, the map reaffirms Abyssinia as a recognized independent polity amidst the colonies of Britain, France, and Italy. British Egyptian Sudan and British East Africa dominate the region to Abyssinia's west and south, and these holdings are balanced by British Somali Land to the east. Italy abuts Abyssinia to the north and southeast with Eritrea (an Italian colony) and Italian Somali Land respectively. French Somali Land completes the European colonial encirclement. Notably, Eritrea occupies much of what had been historically subject to the empires of Abyssinia, based significantly on the Red Sea trade network. For example, Axum is on the far northern frontier of Abyssinia in the 1904 map, yet much Axumite trade came via Adulis on the Zula inlet of the Red Sea. Other historically

[2] This is most obviously indicated in that Ethiopia was a member of the League of Nations, joining in September of 1923. But Ethiopia was diplomatically active in the international community even earlier, being a signatory member for the creation of an International Institute of Agriculture and later even entering into trade agreements with the United States, for example (see "Convention…", 1908; "Treaty…", 1914).

important features include Lake Tana – which appears on earlier maps as a possible source of the Nile, and Gondar just to the north of the lake. This encroachment on Abyssinia's borders eventually leads to conflict with the colonial powers.

Figure 1: Rand McNally (1904). "Abyssinia and Surrounding Countries", from Atlas of the World. New York: Rand McNally & Co., pp. 151, author's collection.



Even by 1904, there remained minor uncertainty regarding Abyssinia's geography. For instance, some of the rivers are only tenuously drawn as they transit between solid sections that had been already mapped (*e.g.*, the Blue Nile). More than fifty years later, even simple geographic relationships taken for granted elsewhere in the modern world were still a point of

debate with regard to Ethiopia: did snow exist in Ethiopia's mountains and did this contribute to Nile flooding? (*e.g.*, Simoons 1960). The conclusion reached was a qualified "yes" regarding the snow, and "no" regarding the flooding. Much of the European world's awareness about Ethiopia and its history was similarly late in coming and subject to qualification. Ethiopia's very existence as a functioning, independent state was subject to ongoing modification and negotiation. Indeed, Ethiopia's status as an independent state appeared as tenuous as the debate over the existence of the mountain snows. Much like the tradition of snow in the Ethiopian highlands, the history of the Ethiopian state in European context is a debate over something that has been there all along.

ABYSSINIA IN A WORLD-SYSTEMS CONTEXT

It is to get at a better understanding of Ethiopian history that Tibebu (1996:428) argues a "political-economy approach to Ethiopian history, within the larger cosmos of African history, can be an alternative paradigm for the study of Ethiopian history." While this reframes Ethiopian history in a larger perspective, it also contributes to the dialogue of African development. If the isolationist paradigm of Ethiopia lacks support, what does this have to say about other instances of African political development and colonial contestation? To what extent was the region linked to the political, economic and social developments of the surrounding region? How relevant is this for the understanding of the emergence of the world-system and the process of incorporation? In turn, this has implications for the understanding of state development in Africa and other non-European regions, the emergence of the state system as a whole, and the gradual expansion of 'international society' (*cf.*, Bull 1984).

Instead of approaching Abyssinia as an anomaly or paradox, a world-systems approach allows us to study the history and evolution of Abyssinia as a palimpsest. Quite literally, instead of a text of Ethiopian history as isolated and removed from the surrounding region, this emphasizes the interactive, constantly revisited nature of socio-political evolution; the text of history is always in the process of being partially erased and overwritten. This allows for the exploration of recurring themes in Ethiopian history: 1) the relationship to the Arab world and the Arabic slave-trade, 2) the institution of Christianity and rule by Coptic Egyptians, 3) the creation of a European 'myth' of Prester John, 4) the benign isolation afforded by the high plateau of Abyssinia, 5) the emergence of an agricultural society, 6) the relationship with the Red Sea trade, and 7) the evolution of Ethiopian interaction with Europe.

Abyssinia in Antiquity

Contrary to the paradigm of isolation, the history of Abyssinia is a long and interactive affair. As Diamond (1997) reminds us, humans as a species came 'out of Africa', and the Great Leap Forward for human societal development dates to around 50,000 years ago, when the first signs of standardized stone implements and preserved jewelry[3] are found in East African sites

[3] Diamond identifies the jewelry as ostrich-shell beads. Elsewhere, jewelry or ornamentation is also part of the story when discussing trade networks or patterns of exchange, especially among "primitive" cultures and prestige goods (*cf.*, Bennyhoff and Hughes 1987, Karklins 1980). This raises a potential avenue of specific research for examining the timing and extent of down-the-line trade and growth of prestige goods

(1997:39). The earliest hominids, *Australopithecus* -- including the well-known "Lucy"-- were found in the Rift Valley in eastern Africa and are dated between 5.8 and 3.0 million years ago (Phillipson 2005:32-3). And the earliest stone tools (2.6 mya) have been found at the site of Gona in Ethiopia. So there is a certain amount of irony involved in any discussion of the cradle of human evolution being "effectively linked" to the expanding European world-system.

While it is not required to trace the development of Abyssinia through 50,000 years of history, it is relevant that the region was one of the first to develop organized agriculture. Indigenous grasses such as teff and finger millet were later complemented with a package of crops from the Fertile Crescent: wheat, barley, peas, and lentils. Ehret (1979) observes that Ethiopian agriculture traces its roots to the intensive utililization of the indigenous wild grains as early as 13,000 BCE, with more formalized grain cultivation emerging at least 7,000 years ago. While there may be debate over whether agricultural cultivation originated in Ethiopia or was a spillover from the Fertile Crescent, it was well established by approximately 5,000 BCE. While most of the indigenous Ethiopian plant species are still largely confined to the region, at least one (the coffee bean) has become a sought-after bulk good in the modern world economy and contributed to Ethiopia's position in the Red Sea and Mediterranean trade (*cf.*, Aregay 1988).

Why emphasize agricultural production? Because agriculture is the foundation on which state development stands. Organized agriculture provides for the extraction of surplus to allow specialization, and is a crucial determinant of bulk-goods linkages throughout a given system. In Ethiopia, as elsewhere, central administration based on agricultural production surplus also produced writing, an organized ruling class, and the creation of a formal military structure. The Ethiopian alphabet is based on a modified Arabian alphabet, in turn evolved from the earliest Semitic alphabets (Diamond 1997:227,400). Elsewhere in sub-Saharan Africa, the alphabet was much later in coming and was introduced by Arab or European traders. Further, iron use is present early in Abyssinia, where lacking elsewhere in Africa (Wainwright 1942). With agriculture as the basis for the emergence a modern state, inclusive of a literate society, Ethiopia developed into a functioning state well prior to European expansion.

In fact, the region underwent a succession of empires and states, largely because it *was* part of the Red Sea and Middle Eastern trading system. Pankhurst (1997) points out that the historical kingdom of Punt is associated with Ethiopia, with the first known Egyptian records of contact with Punt dating to around 3,000 BCE. Later, the kingdom of Da'amat (also D'mt) was located in the highlands of western Tigre and held a peripheral role in the region: "It exchanged ivory, tortoiseshell, rhinoceros horn, gold, silver and slaves for such finished goods as cloth, tools, metals, and jewelry" (Marcus 1994:3-4). While most modern historians consider Da'amat indigenous (*cf.*, Munro-Hay 1991:57), some argue that it was an admixture of indigenous peoples and a "culturally superior" Sabaean expansion from the Arabian peninsula (*cf.*, Tamrat 1972). Regardless of the debate surrounding the origins of Da'amat and the degree of Sabaean influence, the kingdom collapsed by about 100 BCE when rivals managed to divert trade to cities with easier access to the Red Sea, though the region continued to be heavily influenced by patterns of regional trade.

---

networks: jewelry and ornamentation. By definition not a necessity, is jewelry a 'canary in the coalmine' of cultural exchange, since local or traditional types of ornamentation are most easily replaced with exotic 'foreign' material? The opposite flow of ornamental material is also interesting, as exotic items of limited local value were occasionally in high demand within "civilized" society (*e.g.*, pearls).

Another early major trading state explicitly associated with Ethiopia was Axum, which rose to prominence around 100 CE, linked to the stimulus provided by Ptolemaic Egypt and later by the Roman world-economy (Marcus 1994). Centered on the city of Axum, it encompassed the important costal port of Adulis (also Adulé), and several ports further east on the Aden coast. Exports included ivory, rhinoceros horn, tortoise shell and obsidian,[4] with "hippopotamus hides, apes and slaves" as noted by Pliny. Imported goods – originating predominantly from Egypt, India and Arabia – were more varied, and included cloth from all three regions, varieties of glass, sheets of copper for making utensils, iron for weapons and tools, finished axes, adzes and swords, wine, limited amounts of olive oil, and some money (*cf.*, Marcus 1994:5-7, Pankhurst 1997:18-20).

The importation of money indicates a level of commerce requiring an easier method of exchange, though it was, at first, only "for foreigners in the area" (Pankhurst 1997:19). By late in the third century, however, Axum was minting its own coins. This is relevant for two reasons. First, "the mere existence of Axumite money signaled Ethiopia's major role in the Middle East, where only Persia, Kushanas in India, and Rome circulated specie" (Marcus 1994:7). The second reason the Axumite specie is important is reflected in its use, illustrating Axum's position in the regional economy. As a "proto-global" currency, the first Axumite mintings were in Greek with denominations based on fractions of the Roman *solidus*, indicating that the coinage was used primarily for international trade. In contrast, the majority of the Axumite population – and domestic commercial relations with the interior – continued to use bars of iron and salt as primitive currency. The bars of rock salt provided an important link to the gold trade to the west and southwest of Axum (Marcus 1994:6-7, Pankhurst 1997:25).

The coins of Axum capture another important aspect of the kingdom – the adoption of Christianity during the third and fourth centuries CE. This is arguably the most important incorporative event for the region. It provides the basis for the myth of Prester John, which fires European imaginations. The Axumite decision to adopt Christianity reflects trade-related issues of the time:

> At court, the ideology was discussed philosophically but also, as befitted a place of power, in economic and political terms. Context was paramount: by the early fourth century, Christianity had become the established religion of the eastern Roman Empire. Since Roman trade dominated the Red Sea, it was inevitable that Christianity would penetrate Axum (Marcus 1994:7).

Conversion to Christianity occurred slowly and was initially limited to trade routes and towns. It eventually gained broad acceptance, as embodied in the conversion of the Axumite King, Ezana. The coins issued during Ezana's reign (*ca.* 321-360) initially carried his picture with a representation of the sun and moon, but after his conversion to Christianity Axumite coins were embossed with the Cross of Christ – "the first such emblem to appear on a coin anywhere in the world" (Pankhurst 1997:23). The currency of Axumite trade and empire became a reflection of the ideology carried to Axum as part of the Roman Red Sea trade package.

---

[4] The obsidian was used to manufacture jewelry and offerings, and likely came from a coastal area east of Adulis.

Axum's power waned from the late 500s through 1000 CE, as Persia emerged as a regional power in the late sixth century. With the growth of Muslim power and influence in the eighth century, Axumite shipping in the Red Sea-Indian Ocean trade soon fell into decline. No longer the center of the Red Sea trade, the coastal region lost its economic vitality and trading centers withered. The kingdom was overthrown by the twelfth century, and the center of power shifted southward to the new capital at Roha, now Lalibela (after Emperor Lalibela who ruled *ca.* 1185-1225) (Marcus 1994:10-12, Horvath 1969:206).

The reign of Lalibela is most commonly associated with the Prester John myth. Rumor of a Christian kingdom beyond the realm of Islam had circulated for centuries, and it is fairly certain that these rumors were based on the factual existence of Axum. By 1165, these rumors gained credence in the form of a letter allegedly sent by the ruler of a distant Christian kingdom that circulated throughout Europe. This letter and numerous subsequent variations of it, while a "wondrous concoction", is the basis for the legend's spread in Europe and describes the Prester as, "ruling in 'India,' a geographical expression that to Europeans in 1165 and much later meant nothing more specific than a land lying to the east" (Nowell 1953:435). Nevertheless, it also served as impetus for the eastward journey of Marco Polo from 1271-1295.[5] Upon Polo's return and distribution of his writings, the myth of Prester John became a geographical problem.

Why does Marco Polo's journey present a problem for the Prester John myth? Because the journey became the primary source of popular information about the East for more than two centuries. Polo's writings were widely distributed after being first printed in 1477, and they made no mention of the Christian kingdom believed to lie to the east. This resulted in the mythic kingdom in some cases being pushed down into what is modern India, but more commonly Prester John became associated with Africa. Thus, as Marco Polo created motivation for the Age of Discovery, Prester John assumed the status of a mythic *leitmotif* that ran concurrent with the Age. In a very real sense, Prester John personifies the edge of the zone of ignorance for the Europeans, much the same way the Northwest Passage framed exploration of North America (*cf.*, Carlson 2002). Prester John would haunt the European consciousness for nearly four centuries, a blend of myth and fact, desire and reality, hope and rumor. Whitfield (1998:31) echoes this, noting that "the figure known as Prester John, ruler of a mysterious Christian kingdom in the east, would be discussed and sought by generations of European explorers" and who "appeared again and again on maps from the thirteenth to the sixteenth century, shaping the European vision of the world."

Indeed, any map of Africa produced during the three hundred years after Marco Polo was hardly deemed complete *without* a reference or pictograph of Prester John in the vicinity of Abyssinia. Homem (1558) provides a striking visualization of the dominance Prester John had in the consciousness of Europe. Even though the map is of the Indian Ocean, the viewer's eye is drawn to the Horn of Africa where one is presented with a regal figure enthroned in the mountain fastness of the continental interior. Holding a staff topped by a cross, Prester John gazes almost longingly across the tents of the lowland African people toward the Portuguese ship on the Indian Ocean. Enticingly, the headwaters of the Nile River reach like grasping fingers into the Ethiopian interior, offering another possible route by which Europe could reach the fabled land.

---

[5] Another motivation for this trip, in addition to that of trade with Cathay, was that the Mongols were not clearly religious and carried out a ruthless campaign against the Muslim World during 1256-1260, thus offering the possibility of another ally in Europe's ongoing conflict with Islam.

Figure 2: "Chart of the Indian Ocean". Homem, Diogo (1558). "Chart of the Indian Ocean" [Map] in Queen Mary's Atlas, The British Library, shelfmark MS 5415A, reproduced in Leo Bagrow (1966) History of Cartography, revised and enlarged by R. A. Skelton. Cambridge, MA: Harvard University Press, pp. 144-145 (inset).

The discussion of Prester John seems a convenient place to leave the discussion of Abyssinia in antiquity, at least for the time being. Plainly, Abyssinia long-existed on the edge of Europe's information network (IN), shrouded in myth and rumor which was then embodied in Prester John, beginning in the twelfth century. Seventeenth century representations of the region remove the ephemeral figure of Prester John, but continue to refer Abyssinia as the "Empire" or "Kingdom" of the Prester; he is the framework within which the area is conceptualized. At what point does Prester John become supplanted by economic or other political-military concerns? Or, more accurately – as Axum had an established trade relationship with the Mediterranean system – when did Europe expand *into* the existing trading systems that involved Abyssinia?

Wallerstein, the World-System and Abyssinia

Wallerstein is concerned with later aspects of Abyssinian/Ethiopian development. Because his vision of the world-system is that of European expansion outward, earlier interactions with Ethiopia are neglected or downplayed. This is further complicated by the relative positioning of Abyssinia in context of larger systems of interaction: the region is adjacent to successive trading systems and its political success derived from an ability to exploit inter-regional -- or cross-systemic -- trade. To illustrate:

> In the twelfth century, the Eastern Hemisphere contained a series of empires and small worlds, many of which were interlinked at their edges with each other. At that time, the Mediterranean was one focus of trade where Byzantium, Italian city-states, and to some extent parts of northern Africa met. The Indian Ocean-Red Sea complex formed another such focus (Wallerstein 1974:17).

As discussed, Abyssinia née Axum was a peripheral part of the early Mediterranean world economy through linkages with Egypt. But this relationship to the Mediterranean was also predicated on the position of Abyssinia vis-à-vis the Red Sea trade, and the neighboring Indian Ocean complex. Further, Abyssinia was situated to extract benefit from the trans-Sudan Sahel trade networks of the African interior as goods traveled to and from the coastal ports. It is precisely because these early world-economies *were* interlinked at their edges that Abyssinia developed, producing the "Golden Age of the Solomonic Dynasty", *ca.* 1270-1500 (Marcus 1994:17-30). Abyssinia was the nexus by which these world-economies were hinged.

The import of these linkages becomes clearer when one examines Portuguese expansion and its impact on the Levant's "decline", as it mirrors several structural features of the trade exploited by Abyssinia. With Portugal's entrance into the Indian Ocean, the eastern Mediterranean spice trade went into decline due to "the structural diversion of trade and hence its noninclusion in the expanding European world-economy" (Wallerstein 1974:325). This is well and good, and indicates that regions favorably impacted by the "structural diversion of trade" <u>should</u> be included in the European world-economy - yet this neglects the same consideration be given to regions negatively impacted. Indeed, after 1500 the Indian Ocean was essentially a Portuguese lake:

> In any case from about 1509 when the Portuguese defeated the Egyptian fleet at Diú, the Portuguese navy held 'uncontested hegemony' in the Indian Ocean. In addition, during the sixteenth century …Portuguese traders were to be found not only there but in the China Sea, on the coasts of Africa east and west, in the south Atlantic, in Newfoundland, and of course in Europe. 'Thus, present everywhere, a Portuguese economy' (Wallerstein 1974:327).

If the region is under uncontested Portuguese hegemony and reflects the presence of a Portuguese (thus European) economy, why would it *not* be part of the European world-economy?

There are two reasons, one theoretical and one practical, that the Indian Ocean world-economy – hence Abyssinia peripherally – is not part of the European world-economy. Practically, Portuguese control in the Indian Ocean complex was maintained quite simply, by monitoring *access*, not production. Two squadrons were used in conjunction with a network of fortresses. One fleet patrolled the western coast of India and the other blocked the Red Sea. Thus, the empire-building trade astride which the Solomonic Dynasty grew was diverted from the traditional Red Sea - Egypt and trans-Sudan networks and began to flow around Africa under

Portuguese control.[6] Just as the Levant trade was forced into decline, Abyssinia experienced similar deleterious effects; it is not coincidental that the period from 1500 to 1769 is associated with the decline of the Solomonic Dynasty (Marcus 1994:30-47).

The theoretical reason for non-inclusion comes down to dominance. This reflects the overly Eurocentric nature of the Wallersteinian world-system. Reminiscent of the "favorable order" required for incorporation, the Indian Ocean is external because:

> To appreciate why we do not consider the Indian Ocean trading area to be part of the European world-economy despite the fact that it was so completely dominated by a European power, we must look successively at the meaning of this dominance for the Asian countries affected, its meaning for Europe, and how it compares with those parts of the Americas under Iberian rule (Wallerstein 1974:328).

Because the Portuguese took over a pre-existing trade network, they did not establish political dominance. Therefore trade was carried on in a framework established by the Asian nations, and the "social organization of the economy as well as the political superstructures remained largely untouched" (Wallerstein 1974:331). Essentially, if nations or external actors can possibly set the terms of trade, Wallerstein defines them as outside the system. *Successful resistance implies externality.*

This illustrates some conceptual problems that emerge in the discussion of inter-systemic trade. What happens when two previously independent systems come into contact with one another? If the polity being contacted can negotiate its own terms, should it be external to the system as no reorganization of the economy is enacted? If so, this mandates that, by definition, the "world-system" being discussed is one of European dominance. Thus, there is no notion of "equal exchange" or mutual benefit; the process of incorporation becomes synonymous with the process of European subjugation. This is evident in the discussion of the difference between the Iberian experience in Asia to that in the Americas: "Iberia establishes *colonies* in the Americas, but *trading-posts* in Asia" (Wallerstein 1974:335, emphasis in original), meaning "that the Americas became the *periphery* of the European world-economy in the sixteenth century while Asia remained an *external arena*" (1974:336, emphasis in original). This seems counterintuitive – as there was a developed economy in place in Asia, should that not *more* easily become linked to the expanding European world-economy since an economy does not have to be created from scratch? The benefits have to accrue to Europe, not Asia, thus shifting to a political definition of the system.

By minimizing external agency (*i.e.,* political power in the external arena), Wallerstein unnecessarily hamstrings the notion of the expanding world-system with a shift from defining characteristics based on economic factors (*i.e.,* bulk goods) and their production to political control and social dominance. This runs directly counter to the conception of the world-system as a process "based on the fact that the economic factors operate within an arena larger than that which any political entity can totally control" (Wallerstein 1974:348). By ignoring the non-

---

[6] Enticingly, a subsidiary stop for Portuguese goods was located at Aden. But these goods were bound for the intermediate markets of Malacca, Calicut, and Ormuz, not ports on the Red Sea coast (Wallerstein 1974:327).

European political entities involved in the larger arena of economic exchange, and by defining the system as that within which European nations exert political dominance, the complex process of incorporation is oversimplified. This still leaves us with a historical shell-game: whither the 'pea' that is Abyssinia?

Since the Indian Ocean – Red Sea network is external to the system despite Portuguese expansion, when does Abyssinia/Ethiopia become part of the world-economy? The answer is compounded by the diversion of trade under the Portuguese. As an adjacent arena that was partially dependant on trade from the larger Red Sea network, Ethiopia experienced a period of decline to around 1769. This is related to the close relationship between the Ottoman Empire as an economic system and the Red Sea trade. As the Ottoman Empire came under increased pressure from European competition and dominance of the Indian Ocean, this was felt throughout the region:

> Red Sea commerce had eroded, owing to the onset of the political illness that was to make Turkey the sick man of Europe. The Ottoman Empire, as an economic system, was deteriorating along its periphery, especially in the Red Sea-Indian Ocean. As the region's trading networks were disrupted, demand for Ethiopia's products slackened. Intra-Ethiopian trade continued, with regional products, such as wool blankets from Menz, salt from Eritrea, and coffee from Kefa, being marketed everywhere. (Marcus 1994:49)

Everywhere, in this case, means within the intra-Ethiopian trading network. Ethiopia declined and entered a period of political erosion, drifting out of the system toward the zone of ignorance.

It is during the period between 1769 and 1855 that the region underwent a political and economic transformation (*cf.* Marcus 1994:48-62) followed by an "imperial resurrection". It is also the period of 1750-1850 that Wallerstein (1989:127-190) identifies with the incorporation of new zones into the world-economy. It is hardly coincidental that a period of drastic world-systemic expansion corresponds to a period of transformation in the Ethiopian system. As the Ottoman Empire was being drawn into the world-economy, ripples of change were similarly felt along its periphery. Yet Wallerstein only argues that central portions of the Ottoman Empire are being incorporated, so the period from 1800-1850 is the Wallersteinian period of incorporation. As we see, the process started much earlier.

ETHIOPIA AND EUROPE

What happens during the period of transition from existing as myth to the period of being inside the system? Here, the notion of nested boundaries of world-systems networks comes in handy. The 'grooming' process of systemic enlargement occurs as new regions or systems are contacted, and should be viewed as the information and prestige goods networks becoming partially coincident. Truth begins to be sorted from fiction and the relative "worth" of new regions is explored. Accordingly, rumors and myths of wealth also exert an inordinate influence on decision making. The process of 'incorporation' begins as prestige goods, luxuries, and high-value commodities are systematically exchanged or extracted. Relations are more formalized via official government activity and become regularized, thus bringing the regions into a political-

military network of interaction. The peripheralization process, then, refers to the greater exchange of bulk goods and an increase in interaction resulting in the regions existing in a mutual bulk goods network. It is only this most narrow, "bulk goods network" that is solidly considered to be "within the system". Examining local history makes systemic linkages more evident. Marcus (1994) provides a useful rubric for the consideration of modern, post-Axumite Ethiopia: dynastic rise (to 1500), decline (to 1769), transformation (to 1855), and eventual imperial resurrection (to 1877).

Golden Age of the Solomonic Dynasty (1270-1500)

A principle element in the history of Ethiopia is its identity as a Christian kingdom. In turn, this identity creates a dual-natured 'myth'. On one hand, it became necessary to maintain an internal political lineage of monarchical origin. On the other, this formed the basis for the Prester John myth of external, European re-creation and consumption. That Ethiopia was a Christian state is not in question. The origin of this state, however, is more a product of revisionist history used for political consolidation and legitimation. Not unique to Ethiopia, similar myths are central to the growth of most nationalist movements. Yet this particular myth of origin plays a more central role in the relationship Ethiopia develops with the outside world, and proves integral to the rise of the Solomonic dynasty in the thirteenth century.

While rumors of the existence of Prester John's fabulously wealthy and strategically placed Christian kingdom circulated in Europe in the twelfth century, the political reality in Ethiopia was more fractious. National unity and dynastic authority was under constant challenge. By the late thirteenth century a small Christian kingdom in northern Shewa, having grown rich by diverting trade, rebelled. The king, Yekuno Amlak, gained support by promising to make the church a semi-independent institution and defeated the Zagwe monarch in 1270 – killing the Zagwe king in front of the altar of a parish church. To overcome resistance to his usurpation, Amlak and his supporters began to circulate a story about his descent from King Solomon and Makeda, Queen of Saba ("Sheba"). Thus, the Solomonic line was "restored", legitimacy and continuity of rule reinforced, and the basis of the Prester John myth solidified (Stevens 1981, Marcus 1994).[7]

Faced with Muslim encirclement, the new Solomonic regime carried out continuous military activity against encroachment by the seaboard-based Muslim states. This military activity was balanced by internal religious development and literary renaissance, resulting in the merger between church and state. Under the rule of Amda Siyon (r. 1314-1344), Ethiopia expanded southward and the empire consolidated. Siyon reorganized provinces into smaller administrative units controlled by strategically placed garrisons, who in turn spread the gospel as well as the *Pax Ethiopica*. The garrisons kept an eye on the local *gult*, or fief, administrators who

[7] This myth of origin has even become officially sanctioned. First codified in the *Kebre Negast* ("The Glory of Kings") in the early fourteenth century, the story of origin was cobbled together by six scribes, who "blended local and regional oral traditions and style and substance derived from the Old and New Testaments, various apocryphal texts, Jewish and Islamic commentaries, and Patristic writings. The *Kebre Negast*'s primary goal was to legitimize the ascendancy of Emperor Yekuno Amlak and the 'restored' Solomonic line." The Ethiopian constitution of 1955 reinforces this, stating in Article 2 that the ruling line descended from Menelik I, son of the Ethiopian queen Makeda and King Solomon (Marcus 1994:17). Myth has transcended and become government-sanctioned "fact".

were responsible for collecting taxes, supplying soldiers in wartime, demanding service from subjects, and maintaining authority in the name of the monarch. As long as taxes were paid and order maintained, these local *gult*-lords enjoyed considerable autonomy (Marcus 1994:17-19).

By the late 1320s, Muslims tired of Christian domination and heavy taxes managed to unite and exploit a decade of royal neglect. Eventually put down, this rebellion reflects the constant threat Islam posed to Ethiopia. As a response, Christianity became an internal *and* external source of defense. The rule of Emperor Zara Yakob[8] (r. 1434-1468) exemplifies this dualistic nature of Christianity. Internally, he reformed the church with the goal of greater theological uniformity. The king endowed monasteries and churches that supported the reformed ideology of a unified state, often with property confiscated from defeated rulers. This solidified the monarch-church relationship and increased the integration of the clergy into the larger political structure of the kingdom (Marcus 1994:23-5).

Externally, the nature of Christianity under Zara Yakob is relevant for systemic development. Interested in restoring the country's international relations, he sought to renew Ethiopia's contact with external Christian powers. Earlier kings (*e.g.*, Widim Arad, 1297-1312; Yeshaq, 1414-1429) had previously tried to send missions, which further fed the Prester John myth in Europe. Limited contact with Western and Byzantine regions was tenuous, via the Coptic Church in Egypt, which was responsible for the assignment of Ethiopian archbishops. Ethiopian monks from Jerusalem even attended the Council of Florence in 1441, where the Pope was seeking to reunite the Eastern and Western Church (Munro-Hay 1991, Stevens 1981). Embassies sent to Cairo in 1443 and 1447 were reported in Europe, and throughout the 1440s Zara Yakob tried to break the Muslim control over European access into Ethiopia. Access was blocked by Egypt, determined "not to let the Europeans travel to Ethiopia, lest they sell modern firearms to the emperors" (Marcus 1994:26). To get around this blockade, in 1448-1449 Zara Yakob successfully settled military colonies in what is now Eritrea and diverted trade from the highlands to the new ports on the coast (Marcus 1994, Munro-Hay 1991). In world-system parlance, this is clear evidence of the region existing as a contested periphery, caught between the Christian and Muslim trading systems.

Word of Zara Yakob's success spread to Europe, fanning the flames of the Prester John myth and raising hopes that a Christian ally would be able to break Muslim power in Egypt and Arabia. Rumors about the mythic kingdom had long circulated, and supplemented Henry the Navigator's maritime push around Africa in the early 1400s. For example:

> The deliberateness of what the Portuguese were doing during these years is attested by a remarkable document, the Papal bull *Pontifex Romanus* of 1455. It is effectively the charter of Portuguese imperialism, granting them a monopoly of navigation and trade between Cape Bojador and the Indies. The church decreed that those who died in the course of these voyages would be regarded as having died in the course of a crusade and therefore receive a plenary indulgence for their sins. The aims of winning land and trade from the Moslems and linking with Prester John were kept constantly in view (Whitfield 1998:36).

[8] Alternately spelled Zara Ya'qob (see Munro-Hay 1991).

Portuguese sailors, soldiers, even artisans[9] and priests began to penetrate into Ethiopia in the latter half of the fifteenth century, reintroducing Ethiopia to Europe and bringing the networks of the two systems into greater contact (Marcus 1994, Munro-Hay 1991).

By the start of the sixteenth century, Ethiopia was a developed state at the heart of a significant regional sub-system. It was a feudalistic conglomerate state centered on the northern highlands with a population sharing linguistic, religious and economic similarities. Beyond this core region was a ring of more recently conquered provinces with a similar administration and whose people were nominally Christian. At the outer periphery were tributary states with traditional rulers governing peoples that were culturally distinct, but often economically tied to the heartland. As long as the core was profitable and stable, the system could be held together. With the weakening of the central state toward the end of the fifteenth century, revenues decreased, garrisons withered, and increased friction between church and crown resulted in a reversion to Christian heterodoxy (Marcus 1994).

Pankhurst (1997) clarifies the mutually-beneficial economic relationship between the borderlands and the core of the Ethiopian state, as political stability promoted trade. Taxation and tribute was important for the central state, but also for the political entities nearer the periphery as they were able to levy duties on goods carried from the interior or the coast. Nevertheless, the trade of the interior was heavily dependent on the borderlands since "all such commerce passed either through the Red Sea or Gulf of Aden ports, on the northern or eastern periphery, or by way of Sudan, on the western borderland" (Pankhurst 1997:432). The type of goods carried reflected the importance of the periphery: "Gold, ivory and civet came largely from the rich lands on the south-western periphery, while myrrh and other resins originated in the arid lowlands in that of the east". The borderlands were also a major source of slaves, which were "one of the region's most valuable exports" (Pankhurst 1997:432; *cf.* Lewis 1990). The currency of the interior – the bars of rock salt known as *amolés* – originated in the salt plains of the northeastern borderlands, and the gold for international trade was primarily obtained from the western and southwestern periphery. Control of the trade routes, and especially access to the sea, was therefore crucial to the maintenance of empire. This was reinforced with the arrival of Europeans and the coincident introduction of firearms that became crucial to determining the balance of political power throughout the region (Pankhurst 1997; Marcus 1994).

Dynastic Decline (1500-1769)

Is it mere happenstance that the beginning of Solomonic decline coincides with the emergence of European power in the Indian Ocean? No, though it does possess a certain amount of historical irony. The arrival of the Portuguese in the Indian Ocean exacerbated internal political problems for Ethiopia. Because one Portuguese squadron blocked the Red Sea trade and no longer allowed Muslim traders free access to the Indian Ocean network, disruptions were felt in the Red Sea economy. Pressures in the Muslim territories of the Ethiopian hinterlands, which had been building for years, were made worse by the disruption of trade revenues. As an empire dependent

[9] While most travelers were turned away by Egypt, some managed to get through and even impacted local artistic styles. The painter Niccolo Brancaleone, "whose fluid renaissance style influenced traditional Ethiopian artists to graft a more natural modeling of faces and bodies onto their previously stylized religious scenes" (Marcus 1994:28).

on exploiting trade routes, which were in turn largely dependent of the Red Sea trade network, Ethiopia was facing an existential crisis by the beginning of the sixteenth century. This crisis was a direct result of the Portuguese incursion into the Indian Ocean.

Europe still identified the Ethiopian region with the image of Prester John and knew relatively little about the interior of the country. This changed with the arrival of priests and official Portuguese envoys after the turn of the 16th century, though books and published accounts of the region still framed Ethiopia in the context of Prester John. For example, Martin Waldseemüller's "*Carta Marina*" exhibits the confluence of the expanding European information network with that of the Ethiopian system. Prester John resides in the Horn of Africa, signified as such by the text above the figure with the cross. The African coastline is reasonably accurate, but the interior of the continent is largely vacant. Place names are drawn inward to give the illusion of fullness; additional textual notation is included -- thus reaffirming the importance of treating maps as historical texts and as a methodological tool for measuring information networks. Mountains surround the highlands of Ethiopia, even stretching erroneously across the Somali lowland plains. The Red Sea is also a combination of fact and fancy, in turn reflecting Europe's lack of dominance in its confines. Many islands are positioned throughout the Red Sea, it is given an east-west orientation that drastically diverges from its more accurate north-south run, and the width of the sea is overstated in context of its length. These distortions are partially the product of the *type* of map employed – a plane-chart based on a simple square grid – which was already becoming outdated by the turn of the sixteenth century. Nevertheless, it still reflects the European "view" of Ethiopia.

The Ethiopian emperor faced with pending crisis at the turn of the 16th century was Lebna Dengel (r. 1508-1540). Partly inflamed by European Christian expansion into the Indian Ocean, Muslim tension in northwest Africa increased. Emperor Dengel had to deal with non-Christian nomads expanding their range along the south, particularly the southern Oromo. The Muslim states along the Red Sea also became agitated, partly because of a perceived decline in central Ethiopian administrative control and partly because of external support from the Ottomans, who began to introduce firearms and new tactics to the region in an effort to stave off competition from the Christians. The indirect result of European arrival in the Indian Ocean was decreased trade and disruption of patterns of exchange, which led to a lack of central administrative control and capacity, followed by demands in the periphery, which led to a jihad in 1527. The periphery quickly fell to the forces of Islam, and the Emperor and his army were forced to retreat into the highlands of the interior (Marcus 1994, Munro-Hay 1991).

Lebna Dengel died in 1540, but he may have ensured the survival of Ethiopia as a Christian state sending a plea for help to Europe. The call reached Portugal in 1535, by which time even the interior of Ethiopia was under Islamic control. It was not until 1541, after six more long years of war, that four hundred musketeers under the leadership of Cristovão da Gama arrived.[10] The Muslim leader, Ahmad ibn Ibrihim al-Ghazi,[11] turned to regional Ottoman authorities who "provided nine hundred Muslim, mostly mercenary, musketeers and ten cannon" (Marcus 1994:34). After much fighting, Ahmad ibn Ibrihim was killed in 1543 and the Muslim forces left Ethiopia to the Christians, led by Emperor Galawedos (r. 1540-1559) (Marcus 1994:32-35; Munro-Hay 1991). Notably, while this war served as the introduction of firearms

[10] The son of noted explorer Vasco da Gama, Cristovão was captured and beheaded in 1542.
[11] Referred to as Ahmad "Gran" – the "left-handed" – Imam Ahmad was known for his Islamic Puritanism.

into the region and they proved crucial to victory, firearms remained scarce until the early 1800s (Pankhurst 1965:26).

Figure 3: Carta Marina [detail]. Waldseemüller, Martin (1516). "Carta Marina" [map], in Peter Whitfield (1994) The Image of the World, London: The British Library, pp. 54-55.

The conflict between the Christians and Muslims in Ethiopia is important for more than just the aspects of religious conflict. It is indicative of the region's status as a 'contest periphery' and it marks a fundamental shift in the position of Ethiopia in the larger context of the world-system, as evidenced by the supply of musketeers. No longer does Ethiopia benefit from its position as a bridge between two interdependent networks of exchange, able to build political stability based on the extraction of economic surplus from trade. Instead, it has become a

'periphery of contention' between two counter-systemic superpowers (*cf*., Allen 1997, Cline 2000). With Istanbul competing with Lisbon for hegemony of the Indian Ocean, Ethiopia became a contested ground between Europe and the Ottoman Empire. Religion was perhaps the most obvious symptom of this divide, but it was a systemic conflict more than a strictly religious one. This becomes evident if we look at the resulting socio-political situation within Ethiopia.

Even though a consolidated facsimile of the Solomonic empire was fashioned after the victory, it lacked the deep strength of the earlier polity. The Christian core of the Ethiopian state was further divided as Portuguese priests sought to undermine the local Orthodox Church and promote conversion to Catholicism. By the mid-1600s, the Ethiopian church-state relations were characterized by fragmentation and sectarianism, resulting in a series of rebellions and uprisings and the eventual rejection of Roman Catholicism. In turn, this meant that the Solomonic state became limited to the highlands of Abyssinia. The Jesuits, and later all Roman Catholic missionaries, were expelled. Effectively, by refusing to embrace the Roman Catholic Church of the Portuguese, Ethiopia managed to withdraw from existing in the periphery of contention between Portugal and the Ottomans. This 'negotiated peripherality' (*cf*., Kardulias 1999, 2007) also contributed to a period of isolation that followed for the next 200 years (Marcus 1994; Stevens 1981). Incorporation into the European system necessarily meant dissension in Ethiopia; religious division is merely one aspect of this process. While incorporation is oft thought as consolidation, it is only consolidation if it benefits the expanding system. Necessarily, it is a force of 'creative *destruction'* that eliminates or reduces contending sources of authority or power. This, then, creates significant fissures in societies on the periphery that are in the process of being absorbed, groomed, altered, or otherwise incorporated.

Political isolation does not mean that Ethiopia was not connected to the larger systemic networks, as the regional sub-system of Ethiopia continued to be active. While the political reach of Ethiopia consolidated around the new capital of Gonder[12] in the Christian north, the economic reach of Ethiopia continued to be extensive, and influenced by European demands.

The highlands exploited the hinterland's primary products, connecting Ethiopia's economy to the commerce of the Red Sea and Nile valley. A complex caravan network linked Mitsiwa and the interior, and Gonder became a regional center, doing business with Sennar and Fazughli for slaves and gold bought and paid for with coffee obtained from Enerea. The market for Ethiopian beans grew considerably during the last quarter of the seventeenth century as Yemen, a major trading partner, sought increasing amounts of coffee for transshipment to Europe to satisfy burgeoning Western demand (Marcus 1994:40).

Coffee became an important linkage to the outside world. A common export, there were unsuccessful attempts by Europeans to obtain coffee directly from Ethiopia (Aregay 1988). With the growth of coffee plantations in European colonies this became superfluous, though Ethiopia continued to contribute to the Red Sea coffee trade during the eighteenth century.

Overall, the Gonderine period is one of political decline. The religious divisions within the Ethiopian state continued, which led to the eventual aristocratization of encroaching Oromo from the south as an attempt to stabilize increasingly tenuous authority in the region. This only fueled interior division as regional feudal leaders continued to challenge the monarch, who increasingly became dependent on their generals. Abyssinia slipped into disarray, and provincial lords increasingly went their own way as the emperor's power at Gonder became limited to the

[12] Or Gondar, Ethiopia has a tradition of transient capitals (See Horvath 1969).

immediate vicinity of the royal compound. Predictably, civil war broke out in 1766 between provincially divided interpretations of Ethiopian Christianity, leading to a period of feudal anarchy, which would last until 1855 (Crummey 1975, 1990; Crummey and Shisagne 1991).

So where is Europe during this period? How is the expanding European system conceptualizing Ethiopia and where does it sit in terms of European networks of interaction? After coming into initial contact, and even entering into the realm of political-military interaction with the Portuguese supply of musketeers and in 1541, Ethiopia rejected the subsequent phase of cultural incorporation as embodied by the dispute with the Jesuits and Roman Catholics. The expulsion of the Europeans meant that little first-hand knowledge of Europe was directly available in Ethiopia, though the region was still part of the Red Sea trading network and the prestige-goods network of the European system. As the political situation became unstable and Ethiopia declined, it stagnated on the active fringe of the European system, sliding back toward the realm of myth and fantasy.

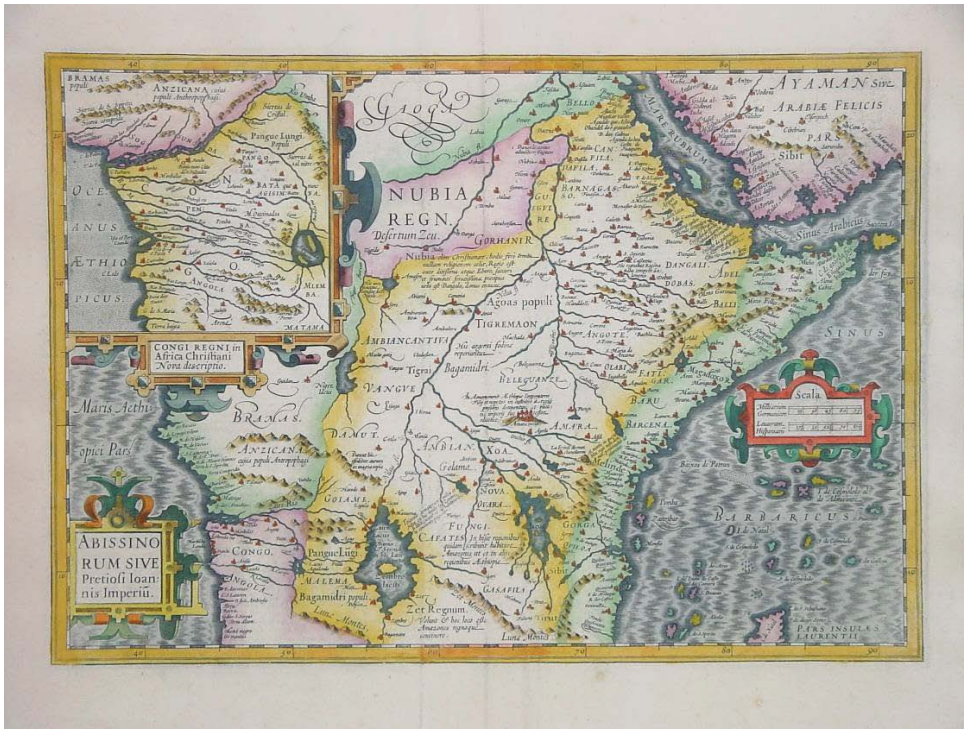
Figure 4: "Presbiteri Iohannis". Ortelius, Abraham (1573). "Presbiteri Iohannis…" [map], in Theatrum Orbis Terrarum, Antwerp. Image from Peter Whitfield (1998) New Found Lands. London: The British Library, pp. 165. Shelfmark Maps C.23.e.12.

This is evidenced by the way the region is represented throughout the sixteenth and seventeenth centuries. Gerard Mercator's world map of 1569 is insightful, as "Mercator conceived his map as an intellectual document to be read and studied" with many lengthy texts, including a "demythologizing account of the Prester John legend" (Whitfield 1994:66). Reflecting Mercator's extensive research into travel narratives, geographical literature, and navigational reports, the map was published thirty years after his previous world map, and may be viewed as a comprehensive encapsulation of European knowledge. While relatively free of the space-filling figures and fanciful animals populating the continental interiors of earlier works, Ethiopia is still conspicuous precisely because of the Prester John figure in the African interior. This reflects European knowledge concerning Ethiopia: reference to Prester John, mountainous, with some realization that it may be related to the source of the Nile.

The static nature of Ethiopia in European awareness is clear with only a cursory examination of period maps. Abraham Ortelius produced a widely distributed and copied version of the Kingdom of Prester John in 1573.

Ortelius' *Theatrum Orbis Terrarum* is described as the first modern atlas, and went through 32 editions after its initial publication in 1570. Based partially on reports of the Portuguese embassies, some modern names are recognizable (*viz.*, Goiame and Tigrai). The overall extent of Abyssinia is greatly exaggerated and river drainages are drawn for effect. Nevertheless, because of its wide publication, this became the dominant image of the region for the next two centuries.

Figure 5: "Abissinorum". Hondius, Jodocus (1613). "Abissinorum sive Pretiofi Ioannis Imperiu" [Map], Amsterdam. First edition published in 1606.



Forty years later, Hondius (1613) is essentially the same representation. The only major differences are in presentation, not content. Coloration and use of cartouche or text box differs, but the gross exaggeration of Abyssinia is the same. An interesting additional "detail" lies in the heart of the largest lake envisioned as the origin of the Nile – Hondius innovates and tosses in an island. One is left to ponder, is it better to have some information depicted, however inaccurate, or rather no information? Stylized images of Prester John have disappeared from cartographic depictions of Abyssinia, yet the region and its Coptic Christian rulers – who were now said to be descendants of the original Prester John – continued to be conceived in the same intellectual framework: Christian, mountainous, and largely inaccessible. Though by the mid to late 1700s, efforts to reach the head of the Nile had pushed its headwaters to the south, with Lake Tana remaining the primary source of the Blue Nile.[13]

Transformation & the Zamana Masafent (1769-1855)

The next period in Ethiopian history essentially kick-started the grooming process once more, though not without a painful transition period of political consolidation. Systemically, Ethiopia began to move from the zone of ignorance, through the external arena, into a state of becoming nominally incorporated. Domestically, this period was known as the Zamana Masafent, or "age of princes", and proved to be a time of political and economic reorganization. The assassination of the emperor by the imperial *ras*[14] Mikail Sehul in 1769, ushered in this period of transition (Marcus 1994:45-47). The decline in central authority led to decreased commerce, and times were so bad that nobles even "resorted to such traditionally unsavory occupations as smithing, weaving, and trading" (Marcus 1994:53).

Social innovations also helped the royal lineages survive (*cf.*, Crummey 1975, 1990). The *alakenat* is one such innovation, by which a single individual was endowed with the majority of a family's property and power to be held in trust for the next generation. Other families tied church endowments to the trans-generational support of specific lineages, which helped some to survive and prosper. This had the subsidiary impact of effectively institutionalizing sectarian differences in the church over what would otherwise be secular disagreements over succession. Thus, the theological controversy that had split the country in civil war became transferred to questions of royal lineage and succession (Marcus 1994; Stevens 1981). The royal line was riven, with legitimate contenders and usurping pretenders, so that during the most confused period (*ca*. 1800) there were as many as six rival emperors. Peasants either left the land or were driven from it, to become brigands or soldiers-for-hire. Power was dispersed and only became more centralized by the second quarter of the nineteenth century as external forces began to make an impact on the highlands and throughout the Ethiopian periphery (Stevens 1981:17-19).

In 1811, Muhammad Ali of Egypt (r. 1801-1848) began a slow expansion into Arabia and down the Red Sea coast, making incursions along the eastern edge of the Gonderine state. Trade

[13] For example James Bruce, author of the five volume *Travels to Discover the Source of the Nile*, arrived in Ethiopia in 1760 and subsequently commented on the political intrigue and bloody dissention.

[14] *Ras* literally means "head" and is a title of nobility, roughly equivalent to duke. The imperial *ras* served as the primary head of the emperor's military forces, or commanding general. The assassination was not a unique occurrence, as soldiers helped assassinate Emperor Tekle Haimanot (r. 1706-1708), and imperial guards saw to the poisoning of Emperors Yostos (r. 1711-1716) and Dawit III (r. 1716-1721).

among the Red Sea states revived as Cairo's influence reappeared, and "[d]emand grew for southern Ethiopia's slaves, coffee, hides, skin, musk, and ivory, immediately affecting the north, since trading centers in Shewa, Begemdir, and Tigray were involved in moving the commodities to the sea" (Marcus 1994:54). European powers – notably the British and French – began to show interest in the Horn of Africa and beyond, stimulated in part by the increase of trade goods flowing from the Ethiopian interior. The slave trade proved to be of particular interest, and Ethiopia was once again a periphery of contention between European and Muslim interests.

The slave trade provides a significant basis for understanding the trade linkages of Ethiopia, and it also prompted Muslim and European interest in the region:

> Middle Easterners long had bought Ethiopian slaves for their armies, their fields, their homes, and their beds. The *habasha* slaves,[15] as they were generally classified, were not usually from Abyssinia but from southern and western Ethiopia, whose societies could not protect themselves against the raiders' firearms. Religious law did not permit Christians to participate in the trade, but they could buy, own, and use slaves; and rulers such as Sahle Sellassie could tax transactions as the slaves were marketed or as the traffic passed through Shewa and its dependencies (Marcus 1994:55).

While the claim that Christians could not "participate" in the slave trade – yet still buy, own, use slaves and tax slave transactions – seems tenuous, the distinction refers to the active collecting and marketing of the slaves. This distinction was taken seriously, as Muslims dominated the slave trade and the slaves came from regions in the south or southwest, allegedly beyond the pale of Christian authority. The slaves were transported across Ethiopia to the coast, where the slave markets often operated in close proximity to markets for "legitimate" goods. A major slave market at Abdul Resul saw 3000-4000 slaves sold annually for "export to Arabia, where a growing economy created increasing demand for slaves" (Marcus 1994:55). Another reason demand increased in the Red Sea region was because the contemporary expansion of Russia into the Caucuses effectively cut off the flow of white slaves out of Central and Western Europe via Istanbul and other Ottoman cities, thus the Muslim states looked elsewhere (Lewis 1990:72-73).

Britain unilaterally outlawed the trade in slaves in 1807, which provided a convenient front on which Islamic economic power could be assailed. By 1828, the elimination of the slave trade was being used as a criterion for relations with Ethiopia. Ras Sibargardis, the chief of Tigre province in northern Ethiopia, sent his English servant to Bombay, Egypt and England in search of firearms and military support. The chairman of the British Commission for Indian Affairs considered the request favorably, feeling that "Ethiopia could become the emporium of East African trade, and that the Ras if assisted could be expected to annihilate the slave trade" (Pankhurst 1965:26). Thus, after lengthy negotiations a number – estimated around 3,000 – of outdated matchlocks from the stores of the East India Company were forwarded to the Ras in 1831. This was the start of what would be the flow of hundreds of thousands of weapons over the next hundred years, from a variety of sources in addition to Britain (Pankhurst 1965).

So, by the start of the nineteenth century Ethiopia was rapidly being drawn back into the workings of the Red Sea network, which served as a proxy for the European world-system by the

[15] "Habasha" translates as "Ethiopian".

early 1800s. So how much was known about Ethiopia? How did it appear on European maps? Because of its location on the Nile, previous Portuguese contacts, and in conjunction with new British and French efforts to establish commercial and political relations, Ethiopia was one of the few areas in Africa that *was* reasonably well-known by 1800.

This is strikingly clear in Aaron Arrowsmith's rendition of the turn of the century world, and of Africa in particular. Arrowsmith captures a tremendous moment in the development of the world, as Europe sought new spheres of trade and colonization. Yet he embraced the relatively new relationship between cartography and geographical knowledge; Arrowsmith was firmly working in the scientific tradition and his map was inspired by Captain James Cook's voyages of the eighteenth century. It marks a conscious shift to the reflection of the "known" and "reveals the progressive demythologizing of the world map" (Whitfield 1994:114). Accordingly, Arrowsmith's representation of Africa encompasses only what is known to the European world – the empty spaces are then striking in their vastness. Gone from Africa are the whimsical creatures and large lakes placed in the interior. Actual knowledge is almost entirely confined to coastal regions or some river drainages, with the notable exception of Ethiopia.

Figure 6: Arrowsmith Abyssinia [detail]. Arrowsmith, Aaron (1808). "Map of the World on a Globular Projection", first published 1794. London: A. Arrowsmith. Electronic image courtesy David Rumsey Historical Map Collection, copyright Cartography Associates: http://www.davidrumsey.com/maps924.html.

The representation of Abyssinia is remarkable, even more so when considered in light of the rest of Africa. Abyssinia is portrayed as a complete political entity with the bordering and green shading (perhaps a bit of a fiction, considering the state of civil unrest) and regions are clearly recognizable. Tigre province, with the city of Axum, appears in the north, Gonder is in the proximity of Lake Tana, Shoa province is to the south in the highlands, and numerous other provinces are accurately depicted. The extent of Abyssinia is proportionately limited and the Red Sea is correct, with islands and Arab coastal cities designated. In contrast to Abyssinia, the hinterlands of the Ethiopian sub-system appear quite bleak and foreign; virtually nothing appears in what is the Ogaden to the southwest, until "Mogadasho" on the coast of the Indian Ocean.

By the end of the Zamana Masafent in 1855, Ethiopia was firmly involved in the incorporation process of the European world-system. It had long been linked to the Red Sea region through the transshipment of the caravan trade and as the location of port exchanges. Further, by mid-century diplomatic relations were becoming regularized and the tremendous influx of firearms would prove to be a mechanism both for further political consolidation and fragmentation (Caulk 1972). However divisive the import of firearms proved to be, they were central to the eventual rejection of European colonial aspirations. By the late nineteenth century the possession of firearms became a precondition for national leadership, and thousands of the most modern rifles were being shipped into Ethiopia. Ethiopian rulers easily played the British against the French – and vice versa – to supply weapons, and even "commissioned Greeks to buy muskets . . . and to smuggle then in through Turkish occupied territory" (Pankhurst 1965:27). Political favoritism and smuggling proved a successful strategy for weapons accumulation, and it was only when this dual strategy broke down that Italy successfully invaded in 1935.

Thomas (1937:120) describes the region's transition: "The country was brought within the horizon of European politics by Bonaparte's persistent Oriental policy; and the sending of the first British diplomatic mission in 1805 to counteract this opened the way for a stream of European traders, missionaries, and travelers that has continued fairly steadily from that time on." This transition was solidified in the latter half of the century, as "with the reign of Menelik there began a network of surveys and exploration in every direction" (Thomas 1937:120). The next stage was one of finalizing internal political consolidation, which resulted in Ethiopia effectively entering the European world-system as an independent African polity. Thus, the first three-quarters of the nineteenth century are the final transition of Ethiopia into the world-system.

Incorporation and Resurrection of Empire (1855-1895)

The transition and consolidation from the Zamana Masafent was by no means immediate. By 1855 one man again dominated Ethiopia: Lij Kassa Haylu, who was crowned the head of the church and took the throne name Tewedros (r. 1855-1868). Tewedros aspired to reestablish a cohesive Ethiopian state, and sought to reform the church and administration. He established a standing army, salaried governors and judges, confiscated some church lands and attempted to tax what he viewed as a corrupt and divisive church. He turned to the West, particularly Britain, for technical assistance, craftsmen and teachers, and sought an Anglo-Ethiopian alliance against encroaching Muslim power. When relations broke down in 1868, Tewedros took British hostages, which prompted invasion and eventually defeat by a British expeditionary force, after which he committed suicide (Marcus 1994:63-72; Stevens 1981:19-21).

That Ethiopia did not fall back into Gonderine chaos speaks favorably to the seeds of national unity that Tewedros planted. Only three main contenders for national control emerged. The first, Dejazmatch[16] Kassa Mercha of Tigray was governor of the northern province and had been in rebellion against the crown since 1865-66, outraged by Tewdros's efforts to tax the church and appropriate church holdings. Having assisted the British expeditionary force with wheat and barley and by securing supply lines to the coast, Dej. Kassa was rewarded with "military aid worth approximately £500,000, including artillery, muskets, rifles and munitions" (Marcus 1994:72). The second imperial contender, Wagshum Gobeze, was Kassa's brother-in-law. Holding control over the central highlands, Gobeze was crowned Emperor Tekle Georgis II in 1868, but held a tenuous position in the interior. Cut off from a ready supply of arms, Tekle Georgis was defeated by the smaller, better-equipped Tigray army when he attempted to bring Kassa Mercha under his control. Kassa Mercha was crowned "king of kings" in Aksum in 1872, and took the throne name Yohannes IV (r. 1872-1889) (Marcus 1994:72; Stevens 1981:20-21).

The third contender for the throne was Menelik II of Shewa. King of Shewa, Menelik traced his lineage back to the Solomonic line and held power in the southern part of the empire. As Yohannes was distracted with issues of consolidation in the north, Menelik spread his rule to the south and west, eventually strengthening his position with the acquisition of European firearms. Italy was the primary source of these weapons, as Italy hoped to use Menelik against Yohannes, who had closer relations with the British and had gained considerable war materiel after defeating well-equipped Egyptian forces in 1875 and 1876. Pankhurst (1965:29) documents that "the Emperor captured something like 20,000 Remingtons, the most modern rifles of the day, a considerable amount of artillery, including 25 to 30 cannon, as well as many horses, mules, camels and food supplies. Understandably enough the Emperor refused all Egyptian demands for the return of his booty." After the striking victory, in the south many Shewans were reluctant to confront an emperor who had defeated the despised Muslims, especially one that was now well-equipped with the most modern arms. After hard negotiations Menelik II formally submitted to Yohannes, in return for the Emperor's promise to respect Shewa's sovereignty as long as the province remained faithful (Marcus 1994:73-76, Stevens 1981:20). By this act of submission, Yohannes then became the first emperor in centuries to consolidate and wield authority from Tigray in the north, south to Gurage.

European powers continued to try and exploit the political division between Menelik and Yohannes, and thereby reinforce the relative freedom that made Shewa the source of Ethiopian expansionism. Why was Shewa expansionist? In order to meet the biannual tribute given to Yohannes, Menelik looked to the south for conquest, where people had only traditional weapons. Menelik needed firearms to consolidate power and promote expansion. Italy hoped to gain his favor by providing them: "total supplies from Italy in 1888 were reported to have comprised 4,000 Remington rifles with 200,000 cartridges, 5,000 other rifles and 400,000 Weterley cartridges. Shortly afterwards, on January 28, 1889, Antonelli brought Menelik a further welcome gift of 5,000 rifles, and 1,000,000 Weterley cartridges" (Pankhurst 1965:30).

Menelik assumed the imperial throne after Yohannes was killed in 1889 fighting the Sudanese, well-supplied to defend the Empire against Italian aggression. In fact, though territory continued to be ceded, Ethiopia survived intact under Menelik into the 1930s. He established a

---

[16] "Dejazmatch" (abbr. "Dej.") translates literally as 'commander of the gate' and denotes a title of nobility equivalent to a count.

permanent capital at Addis Ababa in 1893 which developed into a true urban center (Pankhurst 1961). Menelik more than doubled the size of Ethiopia through conquest to the south, though European colonial powers continued to show interest in northern territory along the Red Sea coast. Complete recognition of Ethiopia as a power sovereign from Europe came in 1895, when Menelik's army defeated Italian forces that had invaded the northern province of Tigray (Stevens 1981:23-24; Marcus 1994:91-103).

INCORPORATION, CONTEST PERIPHERIES AND 'PROTOGLOBALIZATION': SUGGESTIONS AND CONCLUSIONS

At the beginning of the Scramble for Africa in 1885,[17] Ethiopia was already part of the international community and a functioning element in the world-system. But this did not mean that it was immune to the territorial predations of European nations. Rather, it merely meant that it had a better position from which to withstand them. Much in the same manner that the Ottoman Empire would be carved up, Ethiopia found itself being eaten away along the edges of its territory. This is likely to be evidence of being a contest periphery: gradual and incremental territory loss. Historically stretching to the Red Sea coast, Ethiopia was effectively landlocked by the turn of the twentieth century. For an empire whose socio-political history was based on its ability to exploit trade to and from the Red Sea ports, this was especially troubling. It was precisely because Ethiopia was effectively cut off from outside arms supplies in 1935, when Britain and France were cowed into refusing Ethiopia transport of arms across their colonial frontiers, that Mussolini was finally able to invade Ethiopia and realize the long-held Italian colonial aspirations. Improved firearms available to Italy but not Ethiopia, as well as the advent of new weapons of warfare such as the tank, the airplane, and poison gas made the outcome rather predictable (Pankhurst 1965:20).

So what type of preliminary conclusions can we come to regarding the sequencing of Abyssinian incorporation? To begin to answer this, let us turn to a modified typography of incorporation for Abyssinia.

In many ways the case of Abyssinia becoming incorporated is much more complex than other cases of basic incorporation (*cf.*, Hollis 2005, Carlson 2002). Abyssinia is less isolated, not as "pristine", and more closely tied to historic trading systems and 'global' forces. As such, this is an added challenge when dealing with contest peripheries – the layers of interaction are longer and more overwritten. Thus, the image of a palimpsest is fitting: the region was continuously being renegotiated, pulsating in and out of contending systems, and gaining and losing territory. Abyssinia's relationship with the Red Sea trade – and by extension the larger network of the Indian Ocean – is a defining characteristic. The health of the governing polity, from the time of Axum to Menelik II, was directly tied to an ability to exploit these systemic interactions. In this sense, Ethiopian incorporation is best conceived as contextually dependent on the Red Sea trade: the Red Sea trading network is the grooming process for incorporation. This is evident in the rise of the Golden Age of the Solomonic Dynasty up to 1500, not to mention the preceding rise and

[17] As Pankhurst (1965:30) reminds us, the Scramble – as far as this part of the continent was concerned – "may be said to have begun on February 5, 1885, when the Italians occupied the port of Massawa. Five years later the Italian colony of Eritrea was proclaimed in what had hitherto been Northern Ethiopia."

fall of Axum. Only when the Indian Ocean-Red Sea complex is disrupted with the arrival of the Portuguese and their subsequent blocking of the Red Sea does the region go into decline. This is not coincidental. Once trade begins to be stimulated again with the encroachment of European powers and Muslim activity out of Egypt, political transformation begins to occur. By the turn of the nineteenth century, the region is well known to Europe, though consolidation and expansion continues through mid-century, with the Zamana Masafent coming to an end by 1855. With unification in 1877, Ethiopia was effectively incorporated and beginning to be peripheralized. Thus, much of the conflict that ultimately results in Italy's defeat in 1895 is actually peripheral competition and jockeying for favorable position within the European system.

Figure 7: Abyssinian Incorporation. Typography of Abyssinian Incorporation, adapted from Carlson (1999:30, 2001:249, 2002:431).

****

I. Process: Grooming Incorporation Peripheralization
(Overlays I-----------------------I I---------------------------------I I-------------------------------I
transitions
in temporal ← Red Sea Trade → ← European Colonial Expansion →
condition)

II. State of Being: {Zone of Ignorance} → {External Arena} → {Nominal Incorp.} → {Effective Incorp.} → {Periphery} →

III. Signaling Events 1. Solomonic Dynasty (to 1500) →
2. Decline (to 1769)
← {Unification 1877}
3. Tranformation/Zamana Masafent {Italy defeat
→ (to 1855) 1895}

It is also difficult to precisely determine when Abyssinia passes through a particular state of being or transitions into a given network of interaction. However, this is to be expected. Why? Because we are examining an established trading system and a developed polity. The very antiquity of the region and the interaction of the primary actors mean that we are concerned with the integration of *systems*, not just an individual polity. Accordingly, the transition between states of being – and the transition from various networks of interaction (ZI, IN, PGN, PMN, BGN) are all likely to be temporally compressed. Because these networks are already nested in an "exterior" system, once a trade-based relationship begins the other 'membranes' of that system are quickly breached. The 'natural' evolution of trade and information exchanges is effectively jump-started. This is one area – the interaction of systems on one another – that is seriously under-theorized in most world-systems literature.

Breaking apart the information network is a good way to get at the inter-systemic dynamics that occur, especially with the zone of ignorance. If one limits a world-systems analysis to the temporal bounds as described by Wallerstein, Abyssinia has always existed on the fringes of the information network of the world system. The first reports of the mythic kingdom of Prester John in the twelfth century predate the emergence of even a germinal capitalist world-system, and it still exerted a tremendous pull on the European imagination. Finding the Christian King was an added incentive pushing Portugal around Africa. By the time Europe expanded into the Indian Ocean, Abyssinia was shifting solidly into the information network. Moreover, the supply of Portuguese musketeers, and the subsequent influx of priests and other interested parties, should be considered part of the incorporative process.

Regardless, by the 1500s the regions were becoming increasingly intertwined. Yet because we are looking at an established polity, Abyssinia was able to expel the Jesuits and Roman Catholics because of perceived negative impacts associated with "incorporation". A less developed polity would not have been able to resist – or negotiate externality - in such a manner. On one hand this reflects the political development of the modern Ethiopian state. The period of political transformation known as the Zamana Masafent begins *precisely because* the region is linked to the outside system, and parallels the political reorganization – or the 'creative destruction' – envisioned by Wallerstein as a necessary precursor to incorporation.

In this case, however, the external region is able to manage its own political structures instead of having them inserted by European powers. While the incorporation process begins with the political transformations of the age of princes, it is not complete until the ascendance of Yohannes. In turn, this is reflected in the cartographic treatment of Ethiopia. By 1806, it is one of the few regions in Africa that are known enough to be part of the 'outside world', precisely because it was also politically developed. This level of political development allowed Ethiopia to administratively 'out compete' the European colonial powers in a local context throughout the 1800s. While firearms were crucial to maintaining physical independence, the means by which they were acquired speaks to the capacity of the Ethiopian state. As long as Menelik could play one colonial interest against another, the benefit accrued to Ethiopia and the 'Lion of Judah' prevailed. When the flow of arms was finally cut off by an assertive Mussolini, then Ethiopia was isolated from the international community - and the world stood by and let it fall to Italian aggression. Yet this only reaffirms the longstanding, and symbiotic, role Abyssinia had with 'external' actors.

How far back can the impacts of protoglobalization be traced? In the case of Abyssinia the linkages arguably go all the way back to the dawn of humankind and the migration of humans out of the African continent. In many ways, migration is a constant aspect of human reaction to adversity, so can be viewed as such and not just a contemporary challenge of globalization (Kardulias and Hall 2007). Dealing with slightly more recent history, there is ready analogue for cross-cultural religious conflict and cooperation. In particular, a key motivation behind European fascination with Ethiopia was because of the Prester John myth: the belief that there was an ally, but more importantly a Christian ally, on the other side of the Muslim wall that encircled Europe. Early concern with cross-border environmental issues is also present, as the snows of Ethiopia were believed (or not believed) to impact flooding on the Nile, thus prompting further exploration of the Nile basin. So quite easily, three of the most contentious problems of twenty-first century globalization (immigration/migration, religious conflict, and environmental concerns) can be

traced hundreds of years – if not thousands of years – into the past. The roots of globalization run deep.

Similarly, ancient trade networks within the Indian Ocean-Red Sea-Mediterranean Sea complex echo modern financial and economic issues. Axum was minting a truly "international currency", in a Roman denomination, using Greek markings, for use throughout the Middle East and Mediterranean basin! It is also noteworthy that upon the arrival of the Portuguese in the Indian Ocean, Abyssinia immediately felt the negative impact of the closure of the Red Sea. This indicates that when we consider incorporation, trade diversion is also a reliable indicator of 'impact' and may mark the onset of the 'grooming' process of an encroaching system. This is the dynamic nature of a 'contested periphery'.

Other aspects of protoglobalization are evident in the dispersal of agriculture, notably coffee, and agriculture is also a motivation for modern Ethiopian activity in the international community; Ethiopia was a signatory member of the International Institute of Agriculture in 1908, one of the first major international organizations. And it is with recognized irony that the one of the keys to Ethiopia being recognized as a full member of the international community lay in its ability to get modern arms from the outside world. This independent sovereign status allowed Ethiopia the opportunity to become an active and accepted member of international society, as indicated by decades of official treaties, diplomatic recognition, and membership in multinational bodies, but especially the League of Nations by 1923. Only when access to the most modern weapons was cut off did Ethiopia fall, sacrificed on the altar of the 'international community' that it helped create.

What we can take from the preceding case study is fourfold. First, it serves as an additional case of incorporation that scholars can use to refine or rebut elements of the world-systemic understanding of incorporation. In particular, the existence of an information network is readily present and visible by using historic maps. But beyond this, and captured within the maps themselves is an underappreciated aspect of systemic expansion: the important role of myth and fantasy. *Not* knowing and merely believing is often more important for the expansion into new regions than having accurate information. Accordingly, the "zone of ignorance" at the edge and beyond the information network helps capture the fuzziness that characterizes early stages of incorporation. Arguably, this concept could also be expanded to contemporary notions of "emerging markets", resource exploration, seabed mapping, expenditures on technological innovation, or other areas of modern systemic expansion that are other than purely cartographic or historic, as the zone of ignorance is not purely a cartographic nor outdated phenomenon. Wishful thinking leads to the most remarkable undertakings.

Second, the concept of "contest peripheries" needs further development and additional research on cross-systemic incorporation should be done. As much research on incorporation focuses on 'clean' cases that can be easily studied in and of themselves (*cf.*, Carlson 2001:251-252), the bulk of systemic expansion is likely to be of polities other than those of a small or isolated nature. Simply, now that a model of incorporation along the lines of Chase-Dunn and Hall's (1991, 1997) and Hall's (1986, 1989, 1999a, 1999b, 2009) notion of nested networks of interaction has been developed, tougher cases of incorporation that include contest peripheries needs to be undertaken (*cf.*, Allen 1992, 1997, 2005; Cline 2000; Hall 2005). Since this case study lends support to the "pulsation thesis" of world-systems (Hall 1987, 1989, 2005; Chase-Dunn and Hall 1997; Beaujard and Fee 2005), this is likely to be a considerable and complex task. Put simply, repeated experiences of "incorporation" are likely to have occurred for many

regions of the world, particularly those on the borders of rival civilizations or cultures. Multiple palimpsests exist, and reading the *scriptio inferior* is time-consuming and prone to differing interpretations.

The notion of repeated incorporation transitions to a third, and related fourth, point worth reiterating. Third, this case further solidifies the application of world-system analysis to pre-capitalist settings, as has been argued by Abu-Lughod (1989, 1993), Chase Dunn and Hall (1991), Frank (1990, 1998), Frank and Gills (2005), Gills and Frank (1991). Of particular interest, was the systemic linkage and purposeful development of a "proto-global" currency by Axum. As such, a careful reading of Abyssinian history echoes "modern" concerns with globalization and argues that instead of being truly new or novel, the many problems subsumed under the rubric of globalization have a considerable historical legacy (*cf*., Gills and Thompson 2006). In reference to this lengthy historical legacy, I offer the notion of "protoglobalization" as a means of differentiating the roots or precursor homologues of the "modern" phenomena. The rapidity of change is new – yet the challenges themselves are not. Accordingly, the interaction between systems is also useful for contemporary discussions about cultural globalization and civilizational 'clashes'. The process – or interrelated processes – of globalization have been taking place for thousands of years. Studying earlier cases of systemic incorporation, contest peripheries, and changes along the various networks of systemic interaction can provide us with a better understanding of how to negotiate these "modern" challenges.

ACKNOWLEDGEMENTS

This paper benefited from access and resources made available through the Helen Wallis Fellowship of The Map Library at The British Library, and through graduate and travel support provided by the Political Science Department at Arizona State University. The author also thanks the anonymous reviewers at JWSR for their helpful comments. With regard to errors or omissions, the usual statement applies.

REFERENCES

Abu-Lughod, Janet L. 1989. *Before European Hegemony: The World System A.D. 1250 - 1350*. New York: Oxford University Press.

_____ . 1993. "Discontinuities and Persistence: One World System or a Succession of World Systems?" in Andre Gunder Frank and Barry K. Gills, eds. *The World System: Five Hundred Years or Five Thousand?* London, UK: Routledge, pp. 278-290.

Allen, Mitchell. 1992. "The Mechanisms of Underdevelopment: An Ancient Mesopotamian Example." *Review* 15: 3 (Summer) pp. 453-476.

_____ . 1997. "Contested Peripheries: Philistia in the Neo-Assyrian World-System." Unpublished Ph.D. dissertation, Interdepartmental archaeology program, UCLA.

_____ . 2005. "Power is in the Details: Administrative Technology and the Growth of Ancient Near Eastern Cores." Pp. 75-91 in *The Historical Evolution of World-Systems*, edited by Christopher Chase-Dunn and E. N. Anderson. New York: Palgrave.

Aregay, Merid W. 1988. "The Early History of Ethiopia's Coffee Trade and the Rise of Shawa", *The Journal of African History*, vol. 29:1, pp. 19-25.

Arrowsmith, Aaron. 1808. "Map of the World on a Globular Projection", first published 1794. London, UK: A. Arrowsmith. Electronic image courtesy David Rumsey Historical Map Collection, copyright Cartography Associates: http://www.davidrumsey.com/maps924.html

Bagrow, Leo. 1966. *History of Cartography*, revised and enlarged by R. A. Skelton. Cambridge, MA: Harvard University Press.

Beaujard, Philippe. 2007. "L'Afrique de l'Est, les Comores et Madagascar dans le Système-Monde Eurasiatique et Africain avant le 16e Siècle" *L'Afrique et Madagascar*, pp. 29-102, D. Nativel and F. Rajaonah (eds), Paris: Karthala.

Beaujard, Philippe and S. Fee. 2005. "The Indian Ocean in Eurasian and African World-Systems before the Sixteenth Century" *Journal of World History* (December) 16: 4, pp. 411- 465. http://www.historycooperative.org/journals/jwh/16.4/beaujard.html.

Bennyhoff, James A. and Richard E. Hughes. 1987. *Shell Bead Ornament Exchange Networks between California and the Western Great Basin*. New York: American Museum of Natural History.

Bull, Hedley. 1984. "The Emergence of a Universal International Society," in Hedley Bull and Adam Watson, eds. *The Expansion of International Society*. Oxford, UK: Clarendon Press, pp. 117-126.

Carlson, Jon D. 1999. "World-Systems Incorporation and the Zone of Ignorance: The Northwest Fur Trade," Paper presented at the annual meeting of the *Western Political Science Association*, March 25-27, Seattle, WA.

_____ . 2001. "Broadening and Deepening: Systemic Expansion, Incorporation and the Zone of Ignorance", *Journal of World-Systems Research*, 7: 2 (Fall), pp. 225-263, http://jwsr.ucr.edu/volumes/vol7/Carlson-v7n2.pdf .

_____ . 2002. "The 'Otter-Man' Empires: The Pacific Fur Trade, Incorporation and the Zone of Ignorance", *Journal of World-Systems Research*, 8: 3 (Fall), pp. 390-442, http://jwsr.ucr.edu/volumes/vol8/Carlson-v8n3.pdf .

Caulk, R. A. 1972. "Firearms and Princely Power in Ethiopia in the Nineteenth Century", *The Journal of African History*, vol. 13:4, pp. 609-630.

Chase-Dunn, Christopher and Thomas D. Hall. 1997. *Rise and Demise: Comparing World-Systems*. Boulder, CO: Westview Press.

Chase-Dunn, Christopher and Thomas D. Hall, eds. 1991. *Core/Periphery Relations in Precapitalist Worlds*. Boulder, CO: Westview Press.

Cline, Eric H. 2000. "'Contested Peripheries' in World Systems Theory: Megiddo and Jezreel Valley as a Test Case" *Journal of World-Systems Research* (6:1) pp. 7-16, http://jwsr.ucr.edu/archive/vol6/number1/v6n1_pdf/jwsr-v6n1-cline.pdf .

"Convention between the United States of America and Italy, Montenegro, Russia, Argentine Republic, Roumania, Servia, Belgium, Salvador, Portugal, The United Mexican States, Luxemburg, The Swiss Confederation, Persia, Japan, Ecuador, Bulgaria, Denmark, Spain, France, Sweden, The Netherlands, Greece, Uruguay, Germany, Cuba, Austria-Hungary, Norway, Egypt, Great Britain, Guatemala, Ethiopia, Nicaragua, Brazil, Costa Rica, Chile, Peru, China, Paraguay, and Turkey, Providing for the Creation of an

International Institute of Agriculture", *American Journal of International Law*, vol. 2:4 (October 1908), pp. 358-362.

Crummey, Donald. 1975. "Society and Ethnicity in the Politics of Christian Ethiopia during the Zamana Masafent", *The International Journal of African Historical Studies*, vol. 8:2, pp. 266-278.

_____ . 1990. "Society, State and Nationality in the Recent Historiography of Ethiopia", *The Journal of African History*, vol. 31:1, pp. 103-119.

Crummey, Donald and Shumet Sishagne. 1991. "Land Tenure and the Social Accumulation of Wealth in Eighteenth-Century Ethiopia: Evidence from the Qwesqwam Land Register", *The International Journal of African Historical Studies*, vol. 24: 2, pp. 241-258.

Diamond, Jared. 1997. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: W.W. Norton & Company.

Ehret, Christopher. 1979. "On the Antiquity of Agriculture in Ethiopia", *The Journal of African History*, 20:2, pp. 161-177.

Frank, Andre Gunder. 1990. "A Theoretical Introduction to Five Thousand Years of World System History," *Review* 13:2 (Spring), pp. 155-250.

_____ . 1998. *ReOrient: Global Economy in the Asian Age*. Berkeley, CA: University of California Press.

Gills, Barry K. and Andre Gunder Frank. 1991. "5000 Years of World System History: The Cumulation of Accumulation", in Chase-Dunn and Hall, eds., *Core/Periphery Relations in Precapitalist Worlds*. Boulder, CO: Westview Press.

Gills, Barry K. and William R. Thompson, eds. 2006. *Globalization and Global History*. New York: Routledge.

Hall, Thomas D. 1986. "Incorporation in the World-System: Toward a Critique," *American Sociological Review*, 51, 390-402.

_____ . 1987. "Native Americans and Incorporation: Patterns and Problems," *American Indian Culture and Research Journal*, 11:2:1-30.

_____ . 1989. *Social Change in the Southwest, 1350-1880*. Lawrence, KS: University Press of Kansas.

_____ . 1999a. "Precapitalist World-Systems", in *Encyclopedia of Political Economy, vol. 2*, Phillip Anthony O'Hara, ed. New York: Routledge Publishing, pp. 897-900.

_____ . 1999b. "World-System: Incorporation Into," in *Encyclopedia of Political Economy, vol. 2*, Phillip Anthony O'Hara, ed. New York: Routledge Publishing, pp. 1265-1267.

_____ . 2005. "Mongols in World-Systems History" *Social Evolution & History* (4:2) pp.89-118.

_____ . 2009. "Puzzles in the Comparative Study of Frontiers: Problems, Some Solutions, and Methodological Implications" *Journal of World-Systems Research*, (15:1) pp. 25-47, http://jwsr.ucr.edu/archive/vol15/Hall-vol15n1.pdf .

Hollis, Shirley. 2005. "Contact, Incorporation and the North American Southeast," *Journal of World Systems Research*, 11:1, pp. 95-130, http://jwsr.ucr.edu/archive/vol11/number1/pdf/jwsr-v11n1-hollis.pdf.

Homem, Diogo. 1558. "Chart of the Indian Ocean" [Map], in Queen Mary's Atlas, The British Library, shelfmark MS 5415A, reproduced in Leo Bagrow (1966) *History of Cartography*, revised and enlarged by R. A. Skelton. Cambridge, MA: Harvard University Press, pp. 144-145 (inset).

Hondius, Jodocus. 1613. "Abissinorum sive Pretiofi Ioannis Imperiu" [map], Amsterdam.

Horvath, Ronald J. 1969. "The Wandering Capitals of Ethiopia", *The Journal of African History*, vol. 10:2, pp. 205-219.

Huntington, Samuel P. 1993. "The Clash of Civilizations?" *Foreign Affairs*, 72:3 (Summer) pp. 22-49.

Jesman, Czeslaw. 1963. *The Ethiopian Paradox*. New York: Oxford University Press.

Kardulias, P. Nick. 1999. "Multiple Levels in the Aegean Bronze Age World-System," in P. Nick Kardulias, ed. (1999). *World-Systems Theory in Practice: Leadership, Production and Exchange*. Lanham, MD: Rowman & Littlefield Publishers, Inc., pp.179-201.

_____ . 2007. "Negotiation and Incorporation on the Margins of World-Systems: Examples from Cyprus and North America", *Journal of World-Systems Research*, 13: 1, pp. 55-82, http://jwsr.ucr.edu/archive/vol13/Kardulias-vol13n1.pdf .

Kardulias, P. Nick, and Thomas D. Hall. 2007. "A World-Systems View of Human Migration Past and Present: Providing a General Model for Understanding the Movement of People" *Forum on Public Policy*. http://www.forumonpublicpolicy.com/archivesum07/kardulias.pdf.

Karklins, Karlis. 1980. *A Bibliography of Glass Trade Beads in North America*. Moscow, ID: South Fork Press.

Lewis, Bernard. 1990. *Race and Slavery in the Middle East*. New York: Oxford University Press.

Marcus, Harold G. 1971. "The Black Men Who Turned White", *Archiv Orientali*, 39, pp. 155-166.

_____ . 1994. *A History of Ethiopia*. Berkeley, CA: University of California Press.

Mazrui, Ali. 1984. "The Semitic Impact on Black Africa: Arab and Jewish Cultural Influences", *Issue*, 13, pp. 3-8.

Mercator, Gerard. 1569. "Nova et Aucta Orbis Terrae Descriptio…" [map], Duisburg, in Peter Whitfield (1994) *The Image of the World*. London, UK: The British Library, pp. 66-67.

Munro-Hay, Stuart. 1991. *Aksum: An African Civilisation of Late Antiquity*. Edinburgh, UK: Edinburgh University Press.

Nowell, Charles E. 1953. "The Historical Prester John", *Speculum*, 3 (July), pp. 435-445.

Ortelius, Abraham. 1573. "Presbiteri Iohannis…" [map], in *Theatrum Orbis Terrarum*, Antwerp. Image from Peter Whitfield (1998) *New Found Lands*. London, UK: The British Library, pp. 165. Shelfmark Maps C.23.e.12

Pankhurst, Richard. 1961. "Menelik and the Foundation of Addis Ababa", *The Journal of African History*, vol. 2:1, pp. 103-117.

_____ . 1965. "Guns in Ethiopia", *Transition*, 20, pp. 26-33.

_____ . 1997. *The Ethiopian Borderlands: Essays in Regional History from Ancient Times to The End of the 18th Century*. Lawrenceville, NJ: The Red Sea Press.

Phillipson, David W. 2005. *African Archaeology, 3rd Ed*. New York: Cambridge University Press.

Rand McNally and Company. 1904. "Abyssinia and Surrounding Countries" [map], *Atlas of the World*. Chicago, IL: Rand McNally, pp. 151.

Simoons, Frederick J. 1960. "Snow in Ethiopia: A Review of the Evidence", *Geographical Review*, vol. 50:3 (July), pp. 402-411.

Stevens, Richard P. 1981. "Historical Setting", in Harold Nelson and Irving Kaplan, eds., *Ethiopia, a Country Study*. Washington, DC: Foreign Area Studies, pp. 1-56.

Tamrat, Taddesse. 1972. *Church and State in Ethiopia: 1270-1527*. New York: Oxford University Press.

Thomas, T. H. 1937. "Modern Abyssinia: A Selected Geographical Biography", *Geographical Review*, vol. 27:1 (January), pp.120-128.

Tibebu, Teshale. 1996. "Ethiopia: The 'Anomaly' and 'Paradox' of Africa", *Journal of Black Studies*, vol. 26:4 (March), pp. 414-430.

"Treaty of Commerce between the United States and Ethiopia." 1914. *American Journal of International Law*, vol. 16:1 (January 1922), pp. 9-10.

Wainwright, G. A. 1942. "Early Records of Iron in Abyssinia", *Man*, vol. 42 (July-August), pp. 84-88.

Wallerstein, Immanuel. 1974. *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. San Diego, CA: Academic Press.

_____ . 1980. *The Modern World System II: Mercantilism and the Consolidation of the European World Economy, 1600-1750.* San Diego, CA: Academic Press.

_____ . 1989. *The Modern World System III: The Second Era of Great Expansion of the Capitalist World-Economy, 1730-1840s*. San Diego, CA: Academic Press.

Whitfield, Peter. 1998. *New Found Lands: Maps in the History of Exploration*. London, UK: The British Library.

FIVE CENTURIES OF REGIONAL DEVELOPMENT IN NORTHWEST GERMANY AND THE NETHERLANDS

Kees Terlouw
Urban and Regional research centre Utrecht
Faculty of Geosciences
Utrecht University
terlouw@geo.uu.nl

ABSTRACT

Germany and the Netherlands have developed very differently over the centuries. A close examination of Dutch and German regions show the differentiated way in which regions profit from the changing developmental opportunities of the world-system. This article studies long-term regional development using regional urban population in the Netherlands and Northwest Germany. Initially the coastal regions profited from the emerging trade based agricultural world-system. Later on, state formation enabled some of the previously developed regions to regain their position. Industrialization concentrated the development. In recent times, development spreads, giving developmental opportunities to some previously disadvantaged regions that are well located and well-endowed to profit from the recent developments in the world-system.

INTRODUCTION

The world-system approach is mostly used to explain the differences in development between states. This paper applies the world-system approach to the development of regions in two countries which have from the start belonged to the world-system. The position of the Netherlands and Germany in the world-system has however changed considerably between the emergence of the world-system and the present.

The Netherlands and Northwest Germany belonged from the start to the world-system (Wallerstein 1974). Several types of important relations shaped this area from the early modern times. For instance grain exports from the German part facilitated the population growth of Dutch trade cities. Half the food for these urban populations was imported. Migration was also important. In the first half of the seventeenth century 39% of marriage partners in Amsterdam were born abroad. About half of the foreign born marriage partners in Amsterdam came from our study area. This migration declined in later centuries (Diederiks 1983: 330, 338). The significance of foreign migrants in Dutch cities was much greater compared to other European cities at the time. For instance Paris received a significant influx of foreign refugees in the end of the seventeenth century. However, even the by far largest group of Catholic Jacobite refugees from the British Isles amounted to only about 3% of the Parish population (Genet-Rouffiac 1995). Our study area has also important seasonal migration. Up till the nineteenth century, seasonal labor in the Netherlands was a significant source of income for many marginal German regions. Although seasonal migration occurred also in other areas in Europe, the size and the international character

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 199-217**
ISSN 1076-156X

of this phenomenon make our study area unique in Europe (Lucassen 1984, 1988). The trade relations between Germany and the Netherlands have also strongly influenced land use patterns. Nitz (1989, 1993) regards in the early modern period the Netherlands and North Germany as structured by a *von Thünen* like regional division of labor focused on the Amsterdam market, which especially transformed the agricultural land use in the areas which were most accessible for Dutch shipping. This was according to Nitz one aspect of the strong influence of the modern world-system on this area.

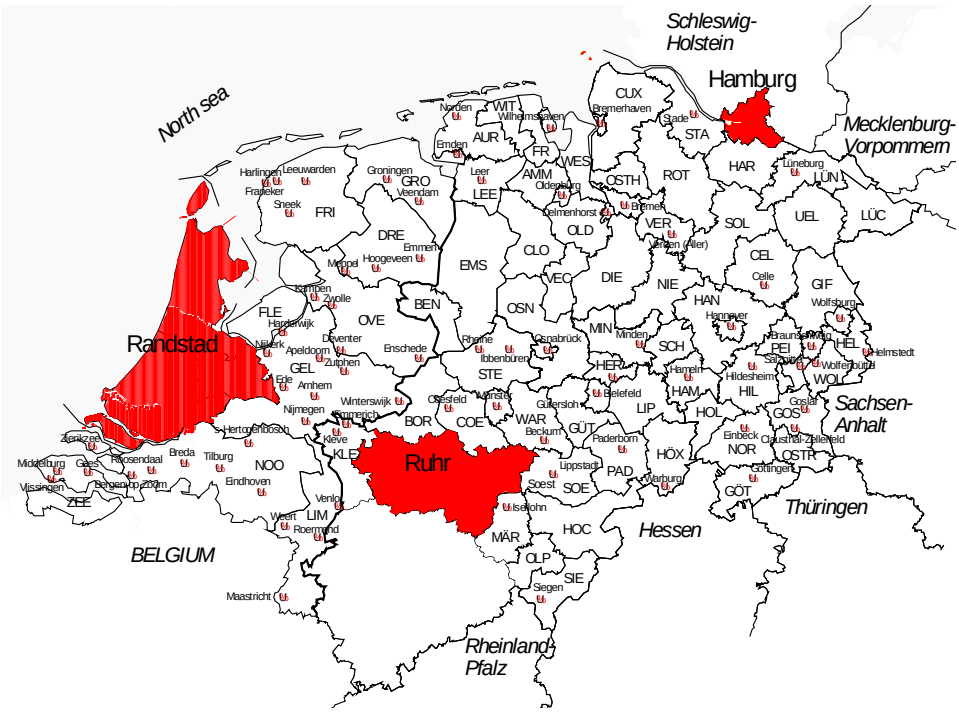
The area depicted in figure 1 is also interesting to study from a world-system perspective while the Netherlands and Germany have a very different but linked history. The trade based rise to hegemony by the Dutch in the seventeenth century contrasts with Germany's decline. Dutch traders dominated the trade in the world-system and the Dutch state achieved a prominent international position. Germany suffered in the same period from the Thirty Years War. This intensified a longer period of economic decline and caused the political fragmentation of Germany into numerous political entities. Urban population reflects these changes. In 1300, both had comparable levels of urban densities. In 1700, the density in Germany had hardly changed, while in the Netherlands it increased nine fold.[1] In the eighteenth century the influence of the Dutch state and economy declined as the French and especially the British improved their position in the world-system. In the nineteenth century the Dutch economy stagnated further. It tried to compensate for the decline in its economic competitiveness by intensifying the exploitation of its colonies in Asia (Indonesia). German unification and industrialization marked the rise from semiperiphery to a leading European core state, which started to dominate the European continent. This contrast between the Netherlands and Germany diminished after the defeat of Germany in two world wars and the industrialization of the Netherlands after the Second World War. Now the huge differences of the past have mostly disappeared.

The study area has a distinct regional structure. Three national cores dominate (See figure 1). The area between them is not a homogeneous peripheral space. In the South there is a zone with very fertile loess soil with old cities like Osnabruck, Hannover and Braunschweig. The coastal zone in the West and North profited from its sea trade possibilities and fertile clay soil. The more developed sea-based zone in the north and the land-based zone in the south are separated by a frugal zone. In this traditionally sparsely populated peripheral zone the infertile sandy soils dominate. Through this the Weser connects the sea-based zone with the land-based zone in the South. This regional differentiation from the coast in the West and North to the interior in the South and East makes it an interesting area to study the regional development over the different phases of the world-system. The stronger coastal and interior regions are not only separated by a frugal sandy zone, but are also divided by the border between the Netherlands and Germany with very different paths of development within the world-system.

---

[1] Data on urban population is quite scarce and quite fragmentary in the early modern era in this area (Diederiks 1983: 328). Data on urban population is based on *Bairoch et al.,* (1988), the most comprehensive data set on urban population in Europe. This database covers much more cities than for instance de Vries (1984). Calculations are based on contemporary borders. Urban density is the number of people living in urban settlements per square kilometer. Urban settlements are those with more than 3000 inhabitants, as reported in Bairoch et al. (1988).

Figure 1. The Study Area: National Cores, Regions and Urban Nodes (Full Names are Provided in the Appendix)



THE DEVELOPING WORLD-SYSTEM

Immanuel Wallerstein formulated the world-systems approach in the 1970s as an alternative to state centered approaches to development. Both the then dominant modernization theory and Marxism equated state with society and studied social change from a state centered evolutionary perspective. Dependency theorist like Raúl Prebisch and André Gunder Frank criticized this and explained the lack of development in peripheral states through their unequal relations with core states. The world-system approach builds on this, but shifts the unit of analysis to the total network of these relations. This world-system has its own dynamic; it is more than its parts. The present world-system operates through a spatial division of labor through which the core exploits the periphery. The competition between rivaling states makes it possible for entrepreneurs to locate their different activities in areas where they can maximize their profits. The weak peripheral states enable them to produce cheap products, while in strong core states they can profit from political support to protect their more monopolistic business activities like financial services. The semi-peripheral states depolarize the world-system and are sometimes able to improve their position in the world-system. This rearrangement of states over the different positions in the world-system takes place especially during periods of economic crisis. These crises also result in the spatial (extensive) and social (intensive) expansion of the world-system.

The modern world-system emerged in the sixteenth century in Europe and has expanded over the centuries to cover the whole globe (Wallerstein 1976, 1979).

In the sixteenth century, the core states in Northwest Europe profited from trade in agricultural products with Eastern Europe (grain and timber) and the Americas (gold, silver and sugar). This enabled their economies to concentrate on highly profitable industries. The development in peripheral state suffered from their specialization in agricultural commodities with low profit margins. The relations with Northwest Europe also hindered the emergence of an independent class of entrepreneurs and weakened the peripheral states (Wallerstein 1974).

After its emergence in the long sixteenth century (±1450-1650), our world-system stagnated. Production and trade diminished. Although regional self-sufficiency increased and the international division of labor contracted, the capitalist world-system did not disappear. The many wars in this period (±1600-1750) strengthened the core states and institutionalized the interstate system of competing sovereign states. This consolidated the modern world-system and created the conditions for a renewed expansion in the next period, for instance by integrating their territories into national markets (Wallerstein 1980).

The revival of trade from the mid eighteenth century onwards signaled a period of renewed expansion of the world-system. It expanded and finally incorporated the entire globe at the end of this period (±1900). The military power of the European core states opened up new peripheries for the world-system in Asia and Africa. This spatial expansion went hand in hand with the further intensification of the world-system. The economic specialization and social polarization increased to such a degree that many characterized it as an industrial revolution. Although agriculture no longer dominated the economy and the role of wage laborers increased, there was no fundamental break in the functioning of the world-system. The membership of the core, semiperiphery and periphery changed in this period, but the working of the market based capitalist world-economy remained the same (Wallerstein 1989).

After its glorious nineteenth century, the world-system entered into a more challenging period. Economic stagnations and world wars characterized the first half of the twentieth century. The changing spatial division of labor characterizes the second half of the twentieth century. The European core states lost their dominant position in the world-system to new core states. The center of the world-system shifted further westward. The USA and later Japan overtook the West European economies. The more recent globalization further intensified integration and spreads semiperipheral development towards some parts of the former periphery, especially in Asia (Wallerstein 1976, 1979).

THE WORLD-SYSTEM AND THE STUDY OF REGIONAL DEVELOPMENT

This world-systems approach can help analyzing the linkages between worldwide and regional developments (Taylor 1988). However, in practice it hardly focuses on regions or cities. Although starting as a critique of state centered developmentalist thinking of modernization theories, states still dominate in Wallerstein's (1974, 1980, 1989) voluminous analyses of our changing world-system. When occasionally the regional level comes into focus, it is mostly to explain the development of states. For instance, Wallerstein (1989a) compares French and British regional structure to explain why the British state triumphed in the nineteenth century. Some see this as a fundamental problem in the conceptualization of space in the world-systems approach.

"Wallerstein's conception of global space is thus most precisely described as an *inter-state* division of labor: national state territoriality serves as the basic geographical unit of the world economy" (Brenner 2004: 51). But it can also be seen as a more practical empirical deficiency. The state level still predominates in academic studies. The availability of statistics limits the analysis of worldwide quantitative data for the more recent past to the state level (Terlouw 1992).

However, the long-term development of individual regions is frequently studied form a world-systems perspective. For instance Hanna (1995) analyzed how the over the centuries improving position of the USA in the world-system influenced the regional development of a national peripheral region. Space then is almost reduced to a place. The relation with higher scales dominates the analysis. The spatial context of similar regions receives little attention.

It is very difficult to do justice to all the temporal and spatial complications of the world-system in empirical research. The complexity of time, scales, space must be reduced. Using urban population size as a rough indicator of regional development and reducing the study area, this article tries to overcome some of the problems in analyzing the relation between regional change and worldwide developments.

Urban development is a good indicator of regional development. Cities reflect, as the crossroads of both small- and large-scale interaction, the regions' internal and external capacity for development (Gottmann 1947, 1969; Hall and Hay 1980; Hoekveld 1994; Kuznets 1968; de Vries 1984). The differences in developments between cities reflect the wider patterns of changing regional development within the world-system. Cities are important nodes in the world-system. Some contend that the world-system is increasingly organized by world-cities. Globalization has in the last decades transformed the importance of nation-states in regulating the world-system, giving more room to cities to organize economic networks (Taylor 2000). Whereas city size and importance in wider networks do not necessarily coincide (Stoob 1985), population change is the best indicator of the development of the position and economic prosperity of a town (Van der Wee 1988: 308-309). Cities are also less transitory than regions, and are the most important building blocks from which regions are constructed.

Selecting the units to measure regional development within this zone is not so obvious. Regions are not lasting entities, but are constantly created and destroyed (Paasi 1991). Regional development is not only a characteristic of a region, but also creates regions. It is most practical to start from the present administrative division. It is not practical to study the many hundreds of municipalities in the study area. The first meaningful regional levels above municipalities are provinces for the Netherlands and districts (*Landkreise*) in Germany.[2] The exclusion of large German cities from this administrative framework creates problems for analyzing regional differentiation. Large cities and rural regions are not comparable units for studying regional

[2] At this level Dutch regional borders are quite constant (Mitchell 1980, CBS). In Germany these regional borders have greatly changed. For Niedersachsen the reconstructed data are available (NLS 1995). For Nord-Rhein-Westfalen these had to be recalculated. The population figures for the old *Kreise* in Westfalen (Reekers 1956) were transformed into the present *Kreise*. Old municipalities were usually in their entirety transferred to the new *Kreise*. The instances in which the municipal borders were redrawn never involved more than a few percentages of the area of the *Kreise*. As these are mostly sparsely inhabited areas outside villages, the error for population figures is much lower. The data on the national core regions is the sum of the provinces South Holland, North Holland and Utrecht for the Randstad (Mitchell 1980; CBS), Hamburg (SLH) as state, and the Ruhr area as the territory of the *Kommunalverband Ruhrgebiet* (Steinberg 1978, 1985).

development. The adding the population of these self-governing cities to its neighboring regions tries to alleviate this problem. Lines from the edges of the common border to the center of the city delimit the parts of the territory of the self-governing cities that are allocated to its neighboring regions. Proportionally to the size of the divided area, the urban population is divided over its neighboring regions. The population of the Randstad and the Ruhr area are aggregated.

THE SIXTEENTH CENTURY

Figure 2. Regional Development in the Sixteenth Century[3]

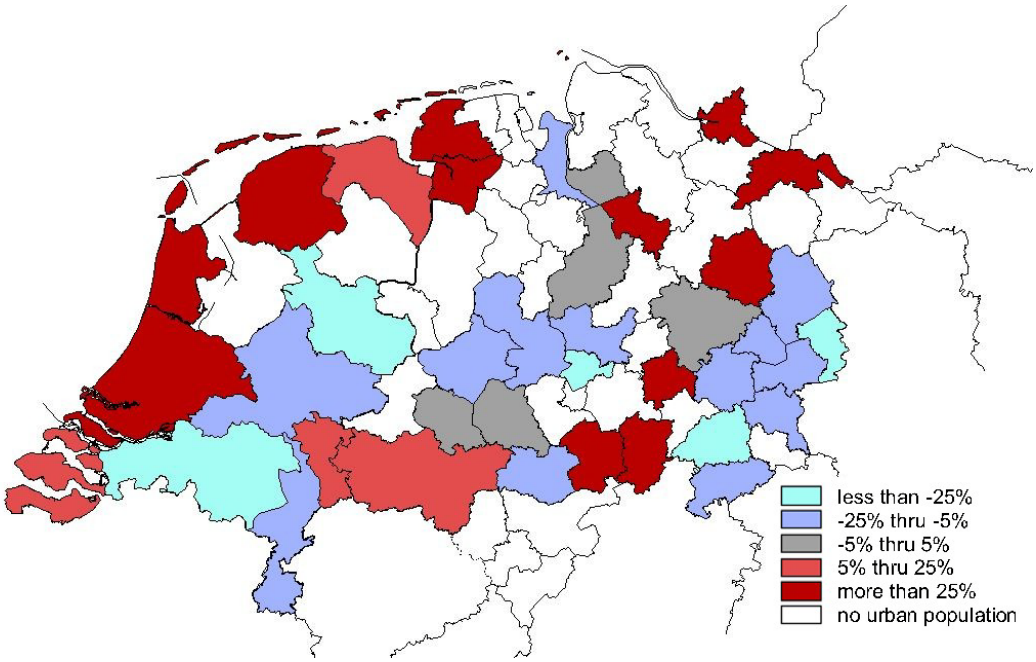


Figure 2 shows the changes in urban population for the regions in the Netherlands and Northwest Germany between 1500 and 1600. The growth of the coastal regions and the relative decline of most of the inland regions is the dominant pattern of regional development in the sixteenth century. This contrasts with the medieval pattern which was dominated by the cities in the zone with fertile loess soils in the Southeast of the study area. Regional diversity in Medieval Europe was based on the locally different ecological possibilities for subsistence farming. Political power

[3] The aim of these maps is to depict the development of individual regions. In order to make comparisons possible of the pattern of regional development between the different periods the same classification procedure of regional development is used. For each year the proportion of the urban or regional population in the total population of the study area was calculated. The maps depict the percentage change in that century. (The overall growth in urban population in the study area was 14% in the 16th, 19% in the 17th, 62% in the 18th, 333% in the 19th, 217% in the 20th, and 154% for the total population in the 20th century).

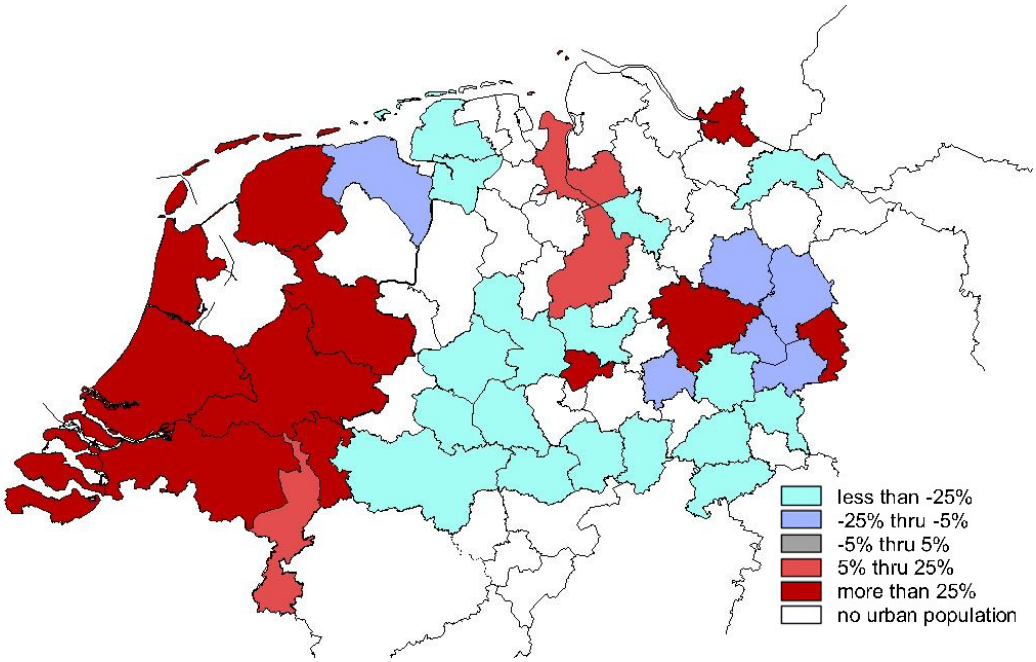
was mostly local, and based on forced surplus extraction. Urban associations regulated crafts and trade. The capitalist world-system which emerged in the long sixteenth century transformed these structural characteristics of ‘feudal’ Europe. It undermined the position of the cities in the interior.

The rise of the trade based coastal regions is very visible in the sixteenth century. The limited success of the uprising against the Hapsburg rulers further polarized this pattern of regional development. The inland regions of the Netherlands suffered from the initial defeats of the Dutch revolt against the Hapsburg rulers. After the defeat of the uprising in Flanders, many merchants and workers fled to other port cities along the shores of the North Sea. This migration affected not only the nearby Dutch provinces of Zeeland and Holland, but its influence extended all the way to Hamburg. After the fall of Antwerp in 1585, Flemish refugees formed a quarter of its population (Möller 1999: 25). Emden, a German port city facing the Dutch province of Groningen, profited even stronger from these refugees. These refugees fuelled a strong, but short period of prosperity. Between 1530 and 1570 its population increased from 4.000 to almost 20.000. Dutch refugees formed then a third of Emden's population (Brandt et al. 1994: 205). Emden based ships briefly dominated the Dutch grain trade with the Baltic at the end of the 1560s. Between 1565 and 1569 the number of Emden based ships passing through the Sound increased from 152 to 542, while the number of Amsterdam based ship declined from 504 to 139 (Brandt et al. 1994: 199). After the later successes of the Dutch revolt, the Dutch registered ships regained and increased their hold on the Baltic trade. Especially the blockade of Emden by the Dutch navy in 1574 forced the Dutch merchant to return. Most went to Amsterdam (Brandt et al. 1994: 200). One indicator of the intensity of this relation is that still in the seventeenth century 3.5 % of all marriage partners in Amsterdam were born in Emden or its immediate vicinity. This was three times as many as the marriage partners from the much larger cities of Hamburg and Bremen and about a tenth of the total number of foreign born marriage partners (39%) in Amsterdam (Diederiks 1983: 339).

THE SEVENTEENTH CENTURY

Emden's decline deepens in the seventeenth century. Figure 3 shows that it is one of the few examples where the regional development in the seventeenth century was different from the previous century. In general, regional development in the seventeenth century is an elaboration of the previous century but very distinct from subsequent centuries. In the seventeenth century the decline in most German regions deepens, while the Dutch dominance intensifies. The Dutch merchants not only controlled the trade on the North Sea and the Baltics, but also achieved a dominated position in more distant trade. The role of Dutch merchants and pirates in the transatlantic trade increased in the first part of the seventeenth century. Especially merchants from Zeeland played an important role in the slave trade. The Dutch merchants had also profitable trade links with Southeast Asia. Asia was then still outside the world-system, while the European did not control the local economy (Wallerstein 1974).

Figure 3. Regional Development in the Seventeenth Century



Regional development spread in this century from Holland to most other Dutch regions. The inland spread of development from the Dutch coastal zone reflects territorial consolidation of the Dutch state in their struggle against the Hapsburgers. It also indicates the Dutch rise to hegemony in the world-system. On the other hand, the decline of the German inland trading cities intensified during the Thirty Years War. Destruction of buildings, depopulation and desertion by long distance traders reduced towns like Hildesheim, Siegen and Einbeck for a long time to agricultural settlements within the old city walls (Kaemling 1995: 69, Hucker et al. 1997: 260). The Dutch controlled sea based trade replaced the old hanseatic network. The inland old hanseatic trading towns also lost their political autonomy. The Thirty Years War not only destroyed many cities, but also their political autonomy. The growth of the capital region of Hannover, one of the new territorial states emerging after the Thirty Years War, reflects this changing political situation.

However, a few old hanseatic towns like Hamburg and Bremen prospered. Maritime shipping was an important structuring element of the emerging world-system. This gave opportunities to some, but not all seaports to develop. Which seaport flourished depended also on specific factors, like location and especially political factors. Emden was too close to Holland. It was more a potential competitor in the same network, while Hamburg was more a distant ally which extended the Dutch trading network. During the Hanseatic League, Hamburg was Lubeck's outport to the North Sea. The emerging world-system reduced Lübeck to Hamburg’s outport to the Baltic (Stoob 1995: 364). Hamburg profited from the revolt in the Low Countries at the end of the sixteenth century. It benefited from the influx of merchants and workers. After the fall of Antwerp in 1585, they formed a quarter of its population (Möller 1999: 25). Hamburg had in 1500 the same population (15.000) as Amsterdam. Both three doubled their population in the

sixteenth century, due to refugees and the developing North Sea trade. They operated however in very different contexts. Amsterdam was part of a developing regional urban network spreading across Holland, which it increasingly dominated. It was also the staple port of trade with the Baltic, the America's and Asia. Hamburg did not profit from these trade links with the all parts of the world-system. It had a more isolated position. Its development mirrored the disintegration around it. Hamburg was an important refuge for Germans fleeing the destructions of the Thirty Years War. In the seventeenth century, the population growth of Amsterdam accelerated from 54.000 to 200.000, while the growth of Hamburg slowed from 40.000 to 70.000 (Bairoch et al. 1988). Hamburg became a subordinate node in the Amsterdam centered trade network.

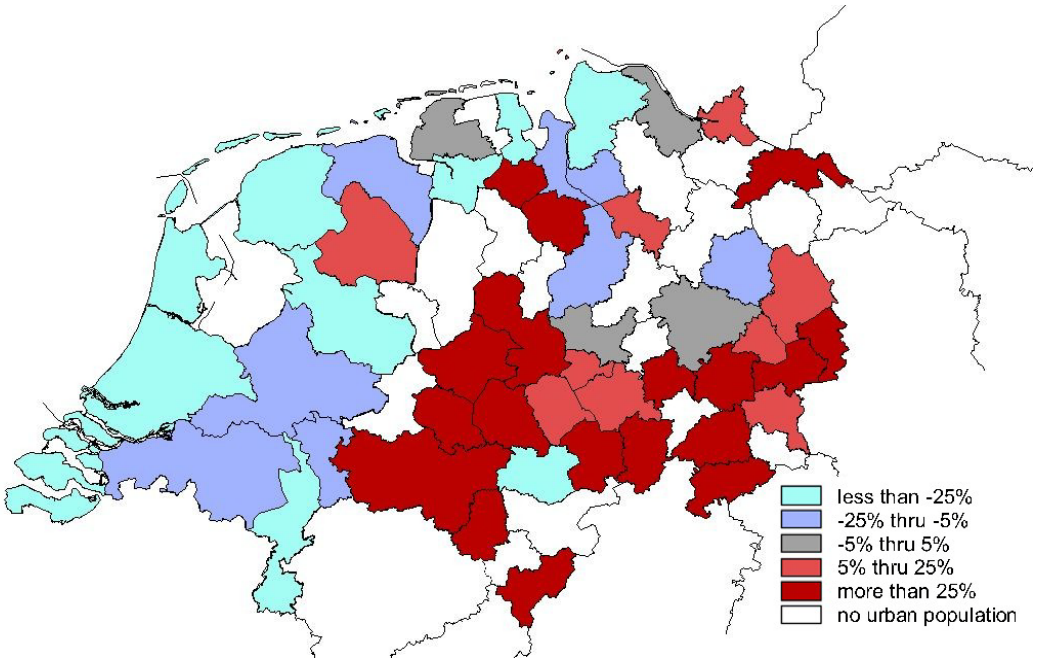
There emerged in the seventeenth century a *von Thünen* like division of labor focusing on the Amsterdam market (Nitz 1989, 1993). Accessibility to the Amsterdam market depended not only on distance, but also on water transport. In Germany, the Dutch centered division of labor integrated the regions along the Weser and the Leine as wheat export zones. The regions without urban population were not unaffected by the new spatial division of labor in the world-system. This was not just a zoning of land use, but also a spatial division of labor connecting social classes in different zones. Some agricultural unproductive regions became labor pools for nearby commercial agricultural regions and developing cities since the seventeenth century (Lucassen 1984). The Hümmling in the Emsland was one of those regions in the western part of the frugal zone characterized by seasonal labor migration. The agriculture in these regions was unimportant for the functioning of the world-system. Their role in the world-system was based on their cheap labor as semi-proletarians. Their too meager subsistence farming forced them to sell their labor cheap. They could survive on lower wages than the more fully proletarianized urban labor force because they had other sources of food through their subsistence farming. This was the basis for seasonal labor migration and a home industry.

Political expediency also helped the development of some German regions. The Dutch protected their borders with allies. At the North Sea coast, Emden even had a Dutch garrison. Part of the Ruhr area belonged to Kleve, which was for some time controlled by the Dutch and later taken over by the Dutch ally Brandenburg (Prussia).

This dominance of the Dutch in the emerging world-system was the result of the successful resistance of Dutch merchants to attempts of the Hapsburgers to centralize political control and create a world-empire. Their defeat gave room to the emerging world-system to develop, and gave the Dutch in the beginning of the seventeenth century hegemony (Wallerstein 1974). The regional development in our study area reflects their hegemony and a new economic division of labor based on the growing trade of agricultural products favoring coastal regions.

THE EIGHTEENTH CENTURY

Figure 4. Regional Development in the Eighteenth Century



The pattern of regional development in the eighteenth century (figure 4) is almost the opposite of the previous centuries. With the exception of the continued decline of the regions near Emden, the persistent development of Hamburg and the rise of Oldenburg, the regional development in the eighteenth century is the reverse image of the seventeenth century. The loss of hegemony resulted in stagnation and decline in especially the sea-based regions in the Netherlands. This reflects the declining importance of Dutch merchants in long-distance trade networks, which in this century became increasingly dominated by the British. In contrast, German regions gradually recovered from the destructions of the Thirty Years War. Many old hanseatic towns, depopulated in the previous period, became once again urban centers.

The emergence of strong rivaling territorial states characterizes this period (Wallerstein 1980). Their rivalry fuelled the development of market forces which are outside the control of individual states. The international division of labor in the world-system regulates the production of the resources states need to compete. Successful states improved their economic control over their territories in their pursuit for resources to compete with other states. Their rivalry limited the scope of their success, but helped the creation of national markets. This further institutionalized the world-system, and changed the pattern of regional development.

The Dutch Republic based on an urban alliance of merchants had been effective in the struggle against the imperial ambitions of the Hapsburgers. The treaty of Westphalia of 1648 formalized the Dutch victory over the Hapsburgers, and was an important milestone in the Europe

wide development toward the modern state based on territorial sovereignty (Wallerstein 1974, 1980). The Dutch Republic based its state formation on the wealth of its merchants. When the agriculturally based international division of labor stagnated and interstate rivalry intensified, the Dutch state lost out to states with more resources. Large territorial states performed better in this period with economic stagnation and increased rivalry. By increasing their control from the center, they not only extracted additional resources from their large territory through coercion, but also created a large national market, which provided new spaces for capitalist development (Tilly 1990, Braudel 1986: 277-385).

Although Germany was late in developing a united territorial state, the general political situation in Germany improved in this period. German states like Hannover, Oldenburg and Prussia became more effective, expanded their territories, and later on increased their economic cooperation. This development toward German unity helped the regional development of all German regions, but Prussian territories profited the most. Prussia's rise was an essential element in this integration process. The territories under its control profited from the expanding modern Prussian state that needed and helped economic development. This contrasted with neighboring German territories, which generally had a more conservative and anti-industrial agricultural regime based on landed gentry (Seedorf and Meyer: 1996).

The world-system wide economic stagnation in the eighteenth century shaped the regional development in this period. The sea-based regions lost ground to the land-based regions that profited more from the growth of territorial states and national markets.

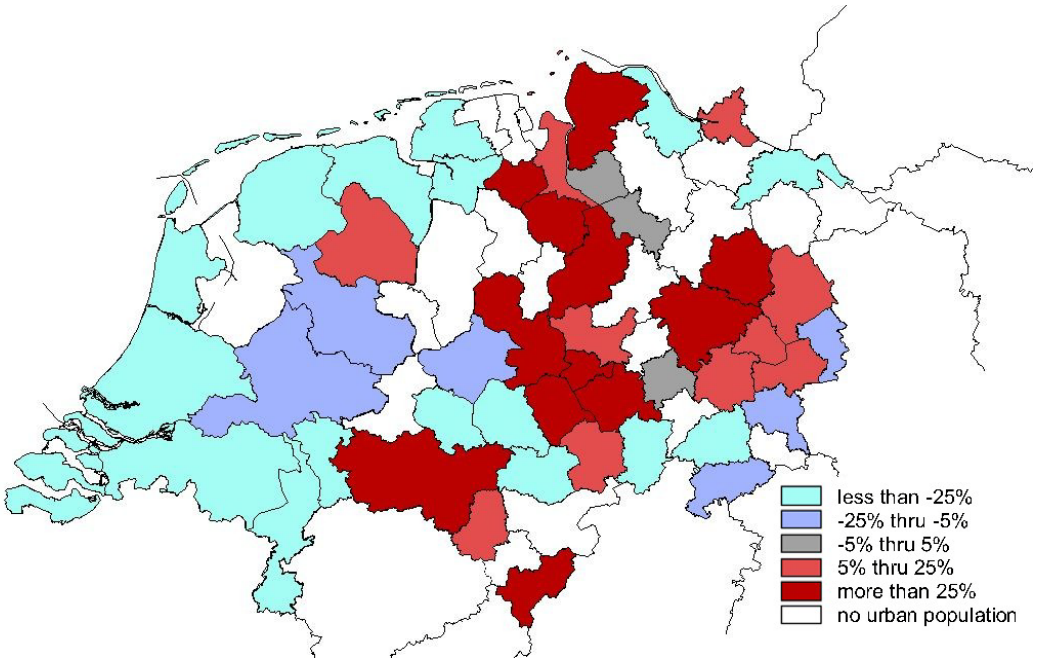
THE NINETEENTH CENTURY

The world-system expanded again in the nineteenth century until it covered the whole world at the end of this century. It expanded not only into new territories, but also market forces penetrated new parts of society (Wallerstein 1989). In this century the Dutch state expanded its control over its colonies. Especially its Indonesian colony became an important source for cheap imports. This colony also attracted Dutch migrants although North America was a more popular destination. German migration to North America also increased strongly in this period (Therborn 1995, 42).

Industrialization shaped the regional development in this period as depicted in figure 5. The growth in the Ruhr area dominates the regional development. Prussian sponsored industrialization in an integrating Germany made this an important core state in the world-system. Prussian lead German unification also helped the rise of other German regions with favorable conditions for development in this period. Urban centres and large scale infrastructure, like harbors and railways, generated a pattern of regional development in Germany concentrating on a few core regions. This German pattern of development contrasts with the general decline in the Netherlands.

British hegemonic decline and the growing rivalry in the international political system enabled Prussia to integrate Germany. The Prussians transformed the British pioneered industrial development. The interventionist Prussian state sponsored close linkages between banking and industry, supported large-scale industrialization, and transformed the Ruhr area into an integrated industrial region. Not only coal mining and the steel industry linked up, but also the steel industry became functionally integrated with machine building and chemical industries (Terlouw 2003).

Figure 5. Regional Development in the Nineteenth Century

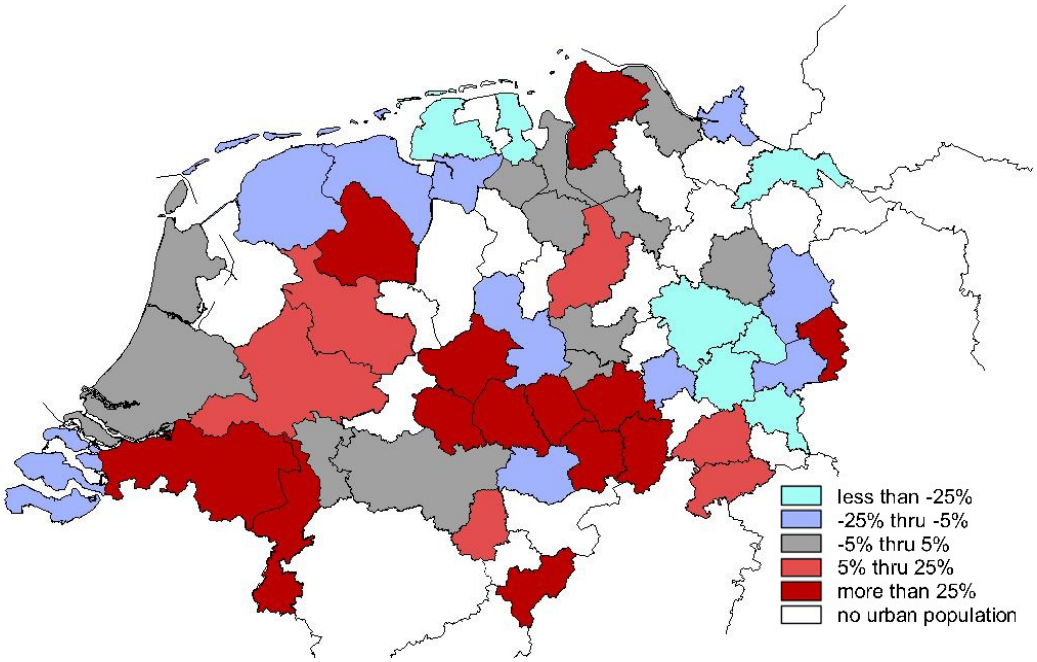


The economics of scale created a concentrated pattern of regional development in this period. Although the Ruhr area dominated, Prussian lead German unification also supported development in other urbanized regions. This includes the heartland of the kingdom of Hannover conquered by Prussia in 1866. The Prussians dislodged the conservative land-based regime with the modern expansionist Prussian administration. Annexation by Prussia freed Hannover also from the burdens of a small German state and opened a wider national market in which they had a central location. Hamburg, the other national core in the study area, continued to develop. With its good harbor and connections to the hinterland, it profited from the integration of the German national market and the growing overseas trade of Germany. Its urban mass also attracted industrialization. Bremen's development was similar, but not so concentrated. It was not only smaller, but its shallow harbor forced it to create a new harbor at the coast in Bremerhaven. Together with the other new Prussian navy port Wilhelmshaven this dispersed the regional development over the Weser estuary.

The pattern of regional development of the nineteenth century builds on that of the eighteenth century. The decline of Dutch regions continued. Only the sparsely populated province of Drenthe became less marginal. The different fortunes of the two nation states dominate the overall pattern of regional development in these centuries. Within Germany the eighteenth century was a period of recovery, while the nineteenth century showed new patterns of regional development focused on a few centers of industrialization.

THE TWENTIETH CENTURY

Figure 6. Regional Development in the Twentieth Century

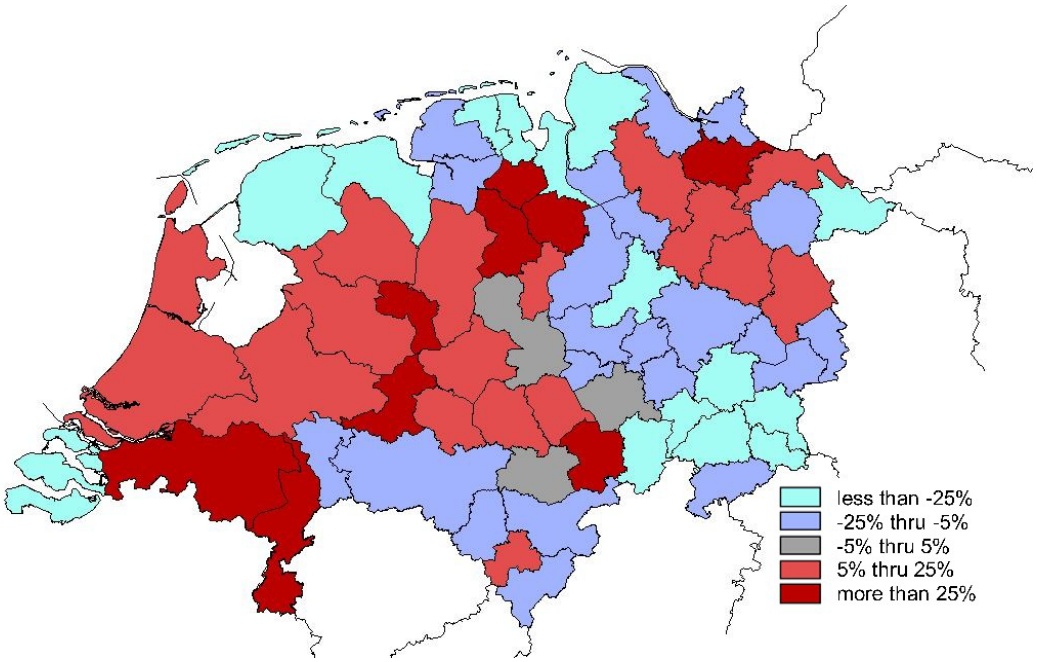


The pattern of regional development in the twentieth century is roughly the opposite of the previous centuries. The spread of development contrasts with the previous concentrated industrialization. This spread of development takes place at different scales. The Dutch state re-entered the core of the world-system after centuries of stagnation. Many other former peripheral and semi-peripheral states improved their position in the world-system in the twentieth century (Terlouw 1992, 2002). As globalization, it now threatens the competitiveness of the industries in the old core states.

This spread of development from core to (semi-)periphery also characterizes regional development at sub-national state level. Figure 6 shows this. In addition we included figure 7 which is based not on the urban population, but on the total population for which there are only data for this period. This enables us to have a more detailed look at the regional development in this period. Figure 7 shows the rise of the border regions. This reflects the changing role of the German and Dutch states in regional development. At the regional scale, the influence of the nation state clearly diminishes in the unifying Europe. The border has lost its negative influence on regional development within the European Union. The further economic integration of the world-system gave developmental opportunities to new regions. Technological innovations, diminishing transportation and communication costs, enabled companies and commuters to become more footloose. This gave opportunities to new locations outside the national cores. The problems accompanying development accumulating in the core regions make them less attractive for housing and businesses. The inertia in the core regions generates an outward search for

flexibility (Dodgshon 1998: 190-198). Figures 6 and 7 show the growth of many regions close to urbanized core regions.

Figure 7. Regional Development in the Twentieth Century: Total Population



However, development spreads not to all surrounding regions. Intrinsic qualities of a region, like landscape, settlement structure and social climate, increasingly determine the developmental potential of regions. The calculable production potential of a region has lost much ground to perceived consumption possibilities. Agriculture no longer dominates rural economies, but influences indirectly the quality and intensity of subsequent regional development. The idyllic landscapes it has produced can make it very amenable for new developments. The traditionally less well-off agricultural regions with infertile sandy soils have diverse small-scale landscapes, free space, low land prices, and a social structure more open to new developments. On the other hand, a long history of intensive commercial agriculture produces unattractive monotonous large-scale landscapes. Areas with fertile clay soils along the coast and with loess soils at the feet of the more mountainous areas in the southeast developed in the past on this basis. These specialized large-scale production landscapes contradict nowadays the imagery of an original landscape that suits the leisure and identification needs of the new middle classes. This layer of previous development hinders future developments (Massey 1984; Lamb 1975; Murdoch and Day 1998).

The twentieth century is characterized by a spread of development in different forms and at different scales. This gives new opportunities to previously underdeveloped regions whose success is still linked to historically formed characteristics.

CONCLUSION

This article demonstrated that the world-systems approach is suitable to analyze long term regional development. The developments in the world-system generate distinct phases with very divergent patterns of regional development. Neither the emergence of the world-system in the sixteenth century, nor the subsequent new phases of development, including the recent phase of globalization homogenizes space.

The creation of the world-system generated a new pattern of regional development. The coastal regions benefited from the general increase in sea trade. They also profited from their relative inaccessibility of the Dutch coastal regions over land for armies. This was a crucial factor in the struggle between local merchants and the Hapsburgers, who tried to control the emerging capitalist world-system and transform it into a world-empire. In the seventeenth century this struggle between the Dutch and the Hapsburgers became part of a wider European power struggle. The economic and naval superiority sheltered the Dutch territory from the military destructions of the seventeenth century. In contrast, many inland German regions were destroyed during the Thirty Years War. However, the small and decentralized Dutch state later lost out to the larger European territorial states. The eighteenth century was beneficial for the emerging German territorial states. The subsequent process of German unification and industrialization further favored urbanized German regions in the nineteenth century. In the twentieth century regional development became more diversified. Regional development spread out from the old centres and the importance of national paths of regional development diminished. Specific regions, for instance previously hindered by their border location or having specific amenities, profited from new developmental opportunities.

REFERENCES

Bairoch, Paul, Jean Batou and Paul Chèvre. 1988. *The Population of European Cities: Data Bank and short Summary of Results*. Genève: Droz.

Bairoch, Paul. 1988a. *Cities and Economic Development: from the Dawn of History to the Present*. Chicago: The University of Chicago Press.

Brandt, Klaus, Hajo van Lengen, Heinrich Schmidt and Walter Deeters. 1994. *Geschichte der Stadt Emden von den Anfängen bis 1611*. Leer: Verlag Rautenberg.

Braudel, Fernand. 1974. *Capitalism and Material Life: 1400-1800*. London: Fontana.

Braudel, Fernand. 1986. *The Perspective of the World: Civilization and Capitalism 15th-18th Century*. New York: Harper and Row.

Braudel, Fernand. 1990. *The Identity of France : Volume Two, People and Production*. London: Fontana.

Brenner, Neil. 2004. *New State Spaces: Urban Governance and the Rescaling of Statehood*. Oxford: Oxford University Press.

CBS. *Regional Statistics*. Voorburg: Centraal Bureau voor de Statistiek.

Diederiks, Herman. 1983. "Amsterdam 1600-1800: Demographische Entwicklung und Migration." In: Wilfried Ehbrecht and Heinz Schilling. *Niederlande und Nordwestdeutschland: Studien zur Regional- und Stadtgeschichte*

Nordwestkontinentaleuropas im Mittelalter und in der Neuzeit. Köln: Böhlau Verlag, 328-346.

Dodgshon, Robert A. 1998. *Society in Time and Space: a Geographical Perspective on Change*. Cambridge: Cambridge University Press.

Genet-Rouffiac, Nathalie. 1995. "Jacobites in Paris and Saint-Germaine-en-Laye". In: Eveline Cruickshanks, Edward T. Corp (eds.) *The Stuart Court in Exile and the Jacobites*. London: Hambledon Press, 15-38.

Gottmann, Jean. 1947. De la Méthode d'Analyse en Géographie Humaine. *Annales de Géographie* 56: 1-12.

Gottmann, Jean. 1969. *A geography of Europe*. New York: Holt, Rinehart and Winston.

Hall, Peter and Dennis Hay. 1980. *Growth Centres in the European Urban System*. London: Heineman.

Hanna, Stephen P.. 1995. "Finding a Place in the World-Economy: Core-Periphery Relations, the Nation-State and the Underdevelopment of Garett County, Maryland" *Political Geography* 14: 451-472.

Hoekveld, Gerard A. and Gerda Hoekveld-Meijer. 1994: The Regional Development of France: an Application of a Regional Geographic Methodology. In: C.P. Terlouw (Ed) *Methodological Exercises in Regional Geography: France as an Example*. Utrecht: KNAG, 23-62.

Hucker, Bernd Ulrich, Ernst Schubert and Bernd Weisbrod. 1997. *Niedersächsische Geschichte*. Göttingen: Wallstein Verlag.

Kaemling, Werner. 1995. *Atlas zur Geschichte Niedersachsens*. Braunschweig: Holtzmeyer Verlag.

Kuznets, Simon. 1968. *Modern Economic Growth: Rate, Structure and Spre*ad. New Haven: Yale University Press.

Lamb, Richard F.. 1975. *Metropolitan Impacts on Rural America*. Chicago: University of Chicago.

Lucassen, Jan. 1984. *Naar de Kusten van de Noordzee : Trekarbeid in Europees Perspektief, 1600-1900*. Gouda.

Lucassen, Jan. 1988. „Quellen zur Geschischte der Wanderungen, vor allem der Wanderarbeit, zwischen Deutschland und den Niederlanden vom 17. Bis zum 19. Jahrhundert". In: Ernst Hinrichs, Henk van Zon. *Bevölkerungsgeschichte im Vergleich: Studien zu den Niederlanden und Nordwestdeutschland*. Aurich, 75- 89.

Massey, Doreen. 1984. *Spatial Divisions of Labour: Social Structures and the Geography of Production*. Houndsmills: Routledge.

Mitchell, Brian R. 1980. *European Historical Statistics 1750-1975*. London: MacMillan.

Möller, Ilse. 1999. *Hamburg*. Gotha: Klett-Perthes.

NLS. 1995. *Bevölkerung der Gemeinden 1821 bis 1993*. Hannover: Niedersächsisches Landesamt für Statistik.

Murdoch, Jonathon and Graham Day. 1998. "Middle Class Mobility, Rural Communities and the Politics of Exclusion". In: Peter Boyle and Keith Halfacree *Migration into Rural Areas. Theories and Issues*. Chichester: Whiley, 186-199.

Nitz, Hans-Jürgen. 1989. "Transformation of old and Formation of new Structures in the Rural Landscape of Northern Central Europe during the 16th to 18th Centuries under the Impact of the early Modern Commercial Economy". *BEVAS/SOBEG* 58: 267-290.

Nitz, Hans-Jürgen. 1993. "The European World-System: a von Thünen Interpretation of its Eastern Continental Sector". In: Nitz, Hans-Jürgen *The early-modern World-system in Geographical Perspective*. Stuttgart: Franz Steiner Verlag, 62-83.

Paasi, Anssi. 1991. "Deconstructing Regions: Notes on the Scales of Spatial Life" *Environment and Planning A* 23: 239-256.

Pounds, Norman J.G.. 1990. *An Historical Geography of Europe*. Cambridge: Cambridge University Press.

Reekers, Stefanie. 1956. *Westfalens Bevölkerung 1818-1955*. Münster: Aschendorff Verlag.

Seedorf, Hans Heinrich and Hans-Heinrich Meyer. 1996. *Landeskunde Niedersachsen, Band 2, Niedersachsen als Wirtschaftsraum und Kulturraum*. Neumünster: Wachholtz.

SLH. 1981. *Statistisches Jahrbuch 1981*. Hamburg: Statistisches Landesamt der Freien und Hansestadt Hamburg.

Slicher van Bath, Bernard. 1978. *Geschiedenis: Theorie en Praktijk*. Utrecht: Het Spectrum.

Steinberg, Heinz Günter. 1978. *Bevölkerungsentwicklung des Ruhrgebietes im 19. und 20. Jahrhundert*. Düsseldorf: Düsseldorfer Geographische Schriften.

Steinberg, Heinz Günter. 1985. *Das Ruhrgebiet im 19. und 20. Jahrhundert: ein Verdichtungsraum im Wandel*. Münster: Selbstverlag der Geographischen Kommission für Westfalen.

Stoob, Heinz. 1985. *Die Stadt: Gestalt und Wandel bis zum industriellen Zeitalter*. Koln: Böhlau.

Stoob, Heinz. 1995. *Die Hanse*. Graz: Verlag Styria.

Taylor, Peter J.. 1988. "World-systems Analysis and Regional Geography". *Professional Geographer* 40: 259-65.

Taylor, Peter J. 2000. "World Cities and Territorial States under Conditions of Contemporary Globalization" *Political Geography* 19, 1: 5-32.

Terlouw, Kees. 1992. *The Regional Geography of the World-System: External Arena, Periphery, Semiperiphery, Core*. Utrecht: KNAG.

Terlouw, Kees. 1996. "A general Perspective on the Regional Development of Europe from 1300 to 1850" *Journal of Historical Geography* 22, 2: 129-146.

Terlouw, Kees. 2002. "The Semi-Peripheral Space in the World-System". *Review* 25, 1: 1-22.

Terlouw, Kees. 2003. "Semi-Peripheral Developments: from World-Systems to Regions". *Capitalism Nature Socialism* 14: 71-90.

Tilly, Charles. 1990. *Coercion, Capital, and European states: AD 990-1990*. Oxford: Blackwell.

Therborn, Göran. 1995. *European Modernity and beyond: the Trajectory of European Societies 1945-2000*. London: Sage.

Vries, Jan de. 1984. *European Urbanization: 1500-1800*. Cambridge, Mass.: Harvard University Press.

Wallerstein, Immanuel. 1974. *The Modern World-System: Capitalist Agriculture and the Origins of the European World-Economy in the sixteenth Century*. New York: Academic Press.

Wallerstein, Immanuel. 1976. "The Rise and Future Demise of the World Capitalist System". *International Review of Sociology* 12, 3: 171-213.

Wallerstein, Immanuel. 1979. *The Capitalist World-Economy*. Cambridge: Cambridge University Press.

Wallerstein, Immanuel. 1980. *The Modern World-System II: Mercantilism and the Consolidation of the European World-Economy 1600-1750*. New York: Academic Press.

Wallerstein, Immanuel. 1989. *The Modern World-system III: The second Era of great Expansion of the Capitalist World-Economy, 1730-1840s*. New York: Academic Press.

Wallerstein, Immanuel. 1989a. "France: a Special Case? a World-systems Perspective". In: Eugene D. Genovese and Leonard Hochberg *Geographic Perspectives in History* Oxford: Blackwell: 144-157.

Wee, Herman Van der. 1988. "Industrial Dynamics and the Process of Urbanization and De-urbanization in the Low Countries from the late Middle Ages to the eighteenth Century: a Synthesis". In: Herman Van der Wee *The Rise and Decline of Urban Industries in Italy and in the Low Countries.* Leuven: Leuven University Press: 307- 381.

APPENDIX

AMM	Ammerland
AUR	Aurich
BEN	Bentheim
BOR	Borken
CEL	Celle
CLO	Cloppenburg
COE	Coesfeld
CUX	Cuxhaven
DIE	Diepholz
DRE	Drenthe
EMS	Emsland
FLE	Flevoland
FR	Friesland
FRI	Friesland
GEL	Gelderland
GIF	Gifhorn
GOS	Goslar
GÖT	Göttingen
GRO	Groningen
GÜT	Gütersloh
HAM	Hameln-Pyrmont
HAN	Hannover
HAR	Harburg
HEL	Helmstedt
HER	Herford
HIL	Hildesheim
HOC	Hochsauerlandkreis
HOL	Holzminden
HÖX	Höxter
KLE	Kleve
LEE	Leer

LIM	Limburg
LIP	Lippe
LÜC	Lüchow-Dannenberg
LÜN	Lüneburg
MÄR	Märkischer Kreis
MIN	Minden-Lübbecke
NIE	Nienburg
NOO	Noord-Brabant
NOR	Northeim
OLD	Oldenburg
OLP	Olpe
OSN	Osnabrück
OSTH	Osterholz
OSTR	Osterode
OVE	Overijssel
PAD	Paderborn
PEI	Peine
ROT	Rotenburg
SCH	Schaumburg
SIE	Siegen-Wittgenstein
SOE	Soest
SOL	Soltau-Fallingbostel
STA	Stade
STE	Steinfurt
UEL	Uelzen
VEC	Vechta
VER	Verden
WAR	Warendorf
WES	Wesermarsch
WIT	Wittmund
WOL	Wolfenbüttel

HYDROPOLITICAL COMPLEXES AND ASYMMETRICAL POWER: CONFLICT, COOPERATION, AND GOVERNANCE OF INTERNATIONAL RIVER SYSTEMS

Jenny R. Kehl, Ph.D.
Department of Political Science
Rutgers University-Camden
jrkehl@camden.rutgers.edu

ABSTRACT

Hydropolitical complexes are emerging to negotiate water-sharing policies that promote political stability, regional security, economic prosperity, and environmental sustainability. Yet interstate disputes are occurring within most hydropolitical complexes, and weak riparians are often coerced to agree to water-sharing policies that adversely affect them. This research examines the strategies weak riparians use to assert leverage in international river basins with asymmetrical power, and the success of those strategies in achieving cooperation versus conflict. Grounded in the theoretical framework of hydro hegemony, hard power, and soft power, this study uses cross national analysis to test the effects of geographic, military, political, economic, technological, and external influence on water governance in eight international river systems. The results demonstrate that weak riparians mobilize the assets and capacities of external actors, such as donor countries and the World Bank, to increase their leverage within hydropolitical complexes. The study finds that strategies to balance hard power are largely ineffective; they fail to achieve cooperative water-sharing arrangements and often exacerbate conflict. In contrast, strategies to balance economic power and soft power, such as market access and political legitimacy, are more successful in promoting cooperation and preventing conflict in hydropolitical complexes.

INTRODUCTION

Hydropolitical complexes are emerging to negotiate water-sharing policies that promote political stability, regional security, economic prosperity, and environmental sustainability. Yet international water disputes are occurring within most hydropolitical complexes. The decision to resolve these disputes through negotiated settlements or to escalate the disputes into violence is a complicated and contentious calculation. Water-based explanations of conflict and cooperation need to incorporate economy, ecology, technology, security, politics and policy. As Arun Elhance articulates in his seminal work *Hydropolitics in the Third World: Conflict and Cooperation in International River Basins*, the multiple-use of transboundary water makes hydropolitics "one of the most urgent, complex, and contentious issues that the developing countries and the international community will have to face and resolve in the next century" (1999:4). Although there are successful water-sharing arrangements, the cooperative management of international water basins is still extremely rare (Elhance 2000). One substantive impediment to cooperative management is power asymmetry in hydropolitical complexes, which affects the legitimacy, complexity, and feasibility of international water-sharing arrangements.

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 218-235**
ISSN 1076-156X

The purpose of this research is to examine the dynamics of hydropolitical complexes – international organizations of states that share a river system- and the strategies weak riparians use to promote cooperation in international river systems with asymmetrical power. Riparians have a land bank adjacent to a natural watercourse or body of water, and they have a right to reasonable use of the water, albeit undefined. International river systems have multiple riparians, which are sovereign but interdependent.

Strong riparians with a disproportionately high amount of political, economic, and military leverage can often coerce weaker riparians to agree to water-sharing policies that adversely affect them. Weak riparians do not have sufficient resources to balance asymmetrical power, so they frequently appeal to international actors outside the hydropolitical complex. The cross sectional analysis in this research provides empirical evidence to support the importance of external international influence on asymmetrical power relations, negotiations, and cooperation within hydropolitical complexes. The research also offers additional insights to support previous work that has illustrated the complexity and necessity, in many cases, of international involvement in river system management. Three important examples stand out: first, the research of Ariel Dinar and Senai Alemu on the impasse in the negotiations over the Nile water-sharing policies in 1997, which resulted in the Nile riparians requesting the involvement of the World Bank to provide financial incentives to promote cooperation (Dinar and Alemu 2000). Second, Greg Browder's research on the Mekong Agreement emphasizes the role of donor assistance to overcome the mistrust that had tainted negotiations in the past (Browder 2000). Finally, Elhance and Dinar's critical works on hydropolitics conclude, "during the long and often frustrating process of negotiating water-sharing agreements many formidable obstacles have to be overcome. Sustained support by third parties is often critical in creating and maintaining the momentum for such negotiations" (Dinar 2000:220; Elhance 2000). In the interest of understanding the role of third parties and the strategies of weak riparians to promote cooperation in international river systems with asymmetrical power, the guiding questions of this analysis are: How do weak states encourage strong states to establish equitable water-sharing agreements? How do weak states gain leverage in negotiations? How do weak states re-negotiate water-sharing policies that adversely affect them in the long-run? To what degree do weak riparians turn to external forces, resources, and allies to balance power within the hydropolitical complex?

The theoretical framework of hard and soft power (Nye 2004) holds considerable explanatory value for addressing these questions, particularly regarding the hard power of geographical riparian location, military capacity, and the "sticky power" (Mead 2004) of economic influence. Hydropolitical complexes differ from traditional security complexes in several ways. The most important distinction is that traditional security complexes are organized to balance the power of external actors or adversarial security alliances, while hydropolitical complexes are organized to address conflict between the riparians within the hydrological basin or international river system. In the Nile river system, for example, Egypt has the greatest military capacity, economic dominance, and political power in comparison to other riparians such as Ethiopia, Sudan, Rwanda, and Tanzania. This power translates into a disproportionately high amount of water use for Egypt, even though Egypt does not control the headwaters of the Nile and depends on the deference of other riparians (Klare 2001). The weaker riparians can leverage their geographic advantage of controlling the headwaters of the Nile but this provokes volatile conflict with Egypt, which threatens to use military force if necessary to protect its disproportionately high access to the water from the Nile. To avoid conflict with Egypt, the

weaker riparians are coerced by Egypt's hard power to agree to inequitable water-sharing policies that may adversely affect them in the long run.

To complete the story, however, the Nile Basin Initiative demonstrates that the hydro hegemonic power (Zeitoun and Warner 2006) of Egypt is not total, and cooperative frameworks for water-sharing continue to develop. The hard power of geographic riparian location, in addition to the external influence of the World Bank and United Nations Development Programme, have left room for the otherwise weak riparians to negotiate water-sharing arrangements. The Nile Basin Initiative has achieved a remarkable amount of credible commitment and cooperation, "given Egypt's regional dominance and historical disregard for other riparian states" (Posthumus 2000), but faces substantial obstacles to the sustainability of the agreements. Most of these obstacles are related to hard and soft power asymmetry within the hydropolitical complex: specifically, the ongoing conflict of interests between upstream and downstream riparians, the lack of legal codification and institutionalization, economic inequality, trade dependence, and persistent armed conflicts between the riparians and throughout the region.

This research augments regional insights and anecdotal evidence from pervious work by developing a database and conducting a systematic empirical analysis of power dynamics within several hydropolitical complexes. Cross-sectional regression analysis is used to test the effects of geographic, military, political, economic, and external factors on water conflict resolution in eight major international river systems. The results expose the asymmetrical power dynamics within hydropolitical complexes, and suggest internal and international adjustments to make weaker riparians less easily exploitable in water-sharing policies. In sum, this analysis specifies the political, economic, and international conditions in which weak riparians and dominant riparians assert distinct types of power, and the success or failure of those strategies to promote cooperation versus conflict.

ANALYTICAL FRAMEWORK

One of the difficulties in analyzing cooperation in international river systems is that the same factors, such as water scarcity or economic development, can trigger conflict or cooperation. Hydropolitical complexes are evolving as transnational institutions to facilitate cooperation by providing incentives and imposing constraints, as well as disseminating information about the costs and benefits of cooperation versus conflict. It is generally accepted that transnational institutions have boundaries, structures, rules, coherence, and agency (Wallerstein 1974), but it is often forgotten that the refinement of the transnational institutional framework was influenced by research on geo-ecological regions that cross state boundaries (Braudel 1979). This legitimation of geo-ecological regions as units of analysis is important for the study of water basins that cross political boundaries. Hydropolitical complexes negotiate policies and treaties for geo-ecological regions identified by a shared international water resource. Transnational complexes can increase the benefits of cooperation and increase the costs of conflict for member states. However, relative inequality and power asymmetry within hydropolitical complexes can distort the distribution of costs and benefits, and can be used to compel weak states to agree to water-sharing policies that adversely affect them in the long term. This study examines the internal power asymmetries and power dynamics of hydropolitical complexes, as well as the ongoing dependence of the weakest riparians on external actors and the foreign interference effect.

Relative inequality and power asymmetry between the member states in a hydropolitical complex can distort the costs and benefits of conflict versus cooperation. An influential study by Bertram Spector concludes that one of the crucial variables in facilitating conflict or cooperation is the relative inequality between parties (Spector 2000). The inequalities in hydropolitical basins are long-standing. The most fundamental inequality stems from nature's unequal distribution of natural resources. Natural geographic and environmental inequalities have been exacerbated by population growth in developing countries and unprecedented levels of human consumption in wealthy and newly industrializing countries. Historical and structural inequalities such as the legacy of colonization, primary commodity dependence, and global trade practices perpetuate core-periphery inequalities. In the context of this global system, hydropolitical complexes function as "mini world systems" (Wallerstein 1974) in which weak states have structural disadvantages that cause them to develop in a way that reproduces their subordinate status (Chase-Dunn and Grimes 1995). Structural, political, economic, and environmental inequalities are exacerbated by power asymmetry in hydropolitical complexes, and affect the type of leverage riparian states use to negotiate water-sharing arrangements.

In hydropolitical complexes with relative inequality and asymmetrical power, leverage is asserted through the geographical location of riparians, financial resources, commerce, access to information, technology transfer, military capacity and mobilization, and other sources of power that vary widely between riparians. A parsimonious framework for understanding these dynamics is the asymmetry of four types of hard and soft power: structural power, sticky power, political power, and ideational power. Hard power includes military might, geographic location, and hydro hegemony (Zeitoun and Warner 2006), in which the hydro hegemon, such as Egypt on the Nile, asserts structural power over other riparians in the hydrological basin. The indicators of hard and structural power for this analysis are domestic military capacity, international military support, military mobilization, hydro hegemony, and geographic riparian position at or near the headwaters of the river system. The substantive discussion of these factors is narrowed for the statistical analysis, which uses the variable of military mobilization to indicate leveraging of hard power and the variable of proximity to the headwaters to determine the level of control over the headwaters. Sticky power (Mead 2004) is economic power. It is the capacity to leverage trade and aid over other riparians that may be economically dependent. For this analysis, sticky power and economic dependence are measured as economic capacity (GDP), amount of trade plus aid from other riparians, amount of trade plus aid from external actors, international financial aid as percent of GDP, and level of market access. For the statistical analysis, the leveraging of economic power is measured as the amount of bilateral trade plus aid from another riparian in the hydropolitical complex. Trade plus aid from an external source (external to the hydropolitical complex) is considered in the section on external influence on hydropolitical conflict and cooperation. Soft power, as articulated by Joseph Nye, comes in the form of political power and diffusion of ideas (2004). Political power is the capacity to control political decisions and secure compliance. This capacity is indicated by political legitimacy, pre-existing legal agreements, and political leverage. Political legitimacy in the form of democratic accountability is considered to be one of the strongest predictors of the sustainability of water-sharing policies (Elhance 2000), and is used as a regressor for the statistical analysis. Ideational power is generally defined as the diffusion of ideas, technology, culture, and values (Lukes 1997). It is difficult and subjective to quantify the variables of ideational power. Therefore, this study uses the variable technology

transfer, which is quantifiable and reliable, to indicate ideational soft power. The variable specification is discussed in the Methodology and Elements of Analysis section.

The internal power asymmetries in hydropolitical complexes hold substantial explanatory value for understanding cooperation and conflict in international river basins, and for identifying the reasons weak riparians often comply with disadvantageous policies. Yet internal power dynamics alone do not capture the consequential relationship between hydropolitical complexes and the global system. The analytical framework would be incomplete and the model would be misspecified if it did not consider the foreign interference effect. Weak states may not have the resources or power to offer incentives for cooperation and impose constraints on stronger riparians, however, they frequently turn to foreign states to provide the necessary incentives and constraints. Foreign states play a crucial role in levying resources and leveraging power in international water systems, and this role may become increasingly important as water resources become increasingly scarce and international water-sharing practices become increasingly contentious. As articulated by Arun Elhance, "sustained international initiatives and support are often needed to overcome the many barriers to interstate cooperation in hydropolitics and to persuade and enable the respective riparian states to see cooperation as a "win-win" situation for all concerned" (1999:7). Strong riparians have the power to compel weak riparians to comply with water-sharing arrangements that may adversely affect them, but if the weak riparians gain the support of external actors to provide incentives and impose constraints, the strong states may not be able to "win" unless they participate in a cooperative negotiation process and a more equitable water-sharing policy.

The Nile Basin hydropolitical complex illustrates the link between theory and practice, and exhibits all the major elements of the analytical framework: the internal power dynamics of the hydropolitical complex as well as the dependence of weaker states on appeals to external sources of power. The strongest riparians control the headwaters or upriver points of contention, have superior military capacity, can assert political pressure over weak riparians, have strong economies that other riparians may be dependent upon for trade or aid, or have access to advanced water-extraction and water-use technologies. Hydro hegemons and other strong riparians have several overlapping advantages. For example, Egypt has clear economic, political, and military dominance over weaker Nile riparians, even though Egypt does not control the headwaters. Egypt uses that leverage to control decisions about water-sharing, and to coerce weak riparians to agree to polices that may adversely affect them in the long run. Past leadership in Egypt has successfully asserted its military power by threatening that Egypt will go to war, if necessary, over water. The weaker riparians, however, have appealed to the external influence of the World Bank to provide exogenous incentives for Egypt to cooperate. The World Bank finances most of the world's major hydroelectric projects, but refuses to fund projects that do not have the full cooperation and compliance of all riparians in the international river system. Therefore, Egypt will not receive World Bank funds for its water projects in Egypt or elsewhere on the Nile unless all riparians give their consent for the project. It is important to recognize that this power dynamic can be utilized by both weak and strong riparians, depending on the preferences of the World Bank or other external forces. This dynamic alone merits an independent study, but for this analysis it illustrates one of the ways weak riparians may be able to identify less traditional sources of leverage or appeal to external forces to compensate for their lack of capacity and resources to influence water-sharing arrangements.

METHODOLGY AND ELEMENTS OF ANALYSIS

Cross Sectional Time Series regression is used to test statistical correlations in this analysis because it can illustrate spatial relations and temporal dynamics of the strategies that promote cooperation versus conflict. It identifies distinct patterns in the use of geographic, military, political, economic, technological, and external-appeals strategies by the weak riparians and strong riparians, and the outcomes of those strategies in achieving cooperation and preventing conflict. The analysis also tests the effects of contributing factors such as ethnic conflict, economic inequality, and the level of dependence on the shared water source. The data consist of 52 country-cases in eight major international river basins from 1950-2007: the Nile, Zambezi, Parana-La Plata, Amazon, Jordan, Ganges-Brahmaputra, Indus, and Tigris-Euphrates basins. If cooperation is achieved and a water-sharing agreement is established in an international river system, the study assesses the sustainability of the negotiated settlement by testing a lag to verify if the agreement was maintained or broken within a year.

The cross-sectional analysis addresses four basic statistical considerations common to CSTS in the interest of correctly establishing correlation: time order, heteroskedasticity, auto-correlation, and spuriousness. Time order is assumed for this study. The data are structured in time-series panels, chronologically by year, so the assumption of time order is not problematic. However, time-series analysis can produce heteroskedasticity, which results in biased and inconsistent results. This study uses panel-corrected standard errors to correct for heteroskedasticity in the error term and to provide better coefficient estimates. Another common problem in CSTS regression is autocorrelation, the correlation of the variables beyond the boundaries of the dataset and the time constraints. Panel-corrected standard errors are used to make minor statistical corrections, although autocorrelation is not shown to be highly problematic in this particular study. Cross-section analysis can also suffer form spuriousness, which exposes the possibility that the statistical relationship is caused or distorted by variables not specified in the model. Non-spuriousness is achieved by controlling for the three most plausible sources of spuriousness in the analysis of hydropolitical complexes: economic inequality, ethnic conflict, and the level of dependence on the shared river.

The 52 country-cases are standard and designated by the official United Nations' definitions of the countries and territories in each international river basin (See Appendix I for country-cases listed by river basin). It is important to note that the country-case total includes large country-cases such as India and China that are riparians in two different hydrological basins. For example, India is a country-case in the Indus hydrological basin and the Ganges-Brahmaputra hydrological basin, and India is a member-state of each hydropolitical complex. The distinct cases are referred to as India-Indus and India-Ganges.

The international river systems are selected based on wide variation in the power distribution within the hydropolitical complex and the types of strategies used to assert influence, which translates into maximum variation in the independent variables for the statistical analysis. The second essential consideration in the case selection is the availability of data that are double documented. The eight international basins selected for this analysis have data that can be measured and documented, whereas other basins require additional data collection in the field before the variables can be quantified and verified. Substantive examples from the Nile Basin are used to illustrate the central points of this quantitative analysis, which will be followed by a

qualitative comparative case study of hard and soft power dynamics in the eight hydropolitical complexes, a seven-year field work study nearing completion in 2009.

Dependent Variable

Conflict and Cooperation. The dependent variable, cooperation versus conflict, is specified on a spectrum developed by the North Atlantic Trade Organization (NATO): 1) negotiated settlement, 2) qualified negotiated settlement, 3) unresolved dispute, and 4) violent conflict (NATO 1999). At the turn of the century, NATO re-articulated its definition of security alliances with a stronger emphasis on the relationship between energy security, resources security, and economic security. Applied to international water management, NATO describes a *negotiated settlement* as the result of cooperation to achieve a water-sharing policy or to resolve a water dispute. A *qualified negotiated settlement* is cooperation that is preceded by any form of military action or perceived threat. An *unresolved dispute* is the failure to achieve a negotiated settlement, and *violent conflict* is the failure to avoid the use of violence in addition to the failure to achieve a negotiated settlement (NATO 1999). Hydropolitical complexes are not always in a state of negotiating settlements or experiencing conflict, and the absence of conflict does not necessarily indicate the presence of cooperation. Thus, for the purpose of this study, the dependent variable measures a change in the status quo of conflict or cooperation, or lack of either. The NATO designation of the dependent variables is widely accepted and internationally recognized as a measure of cooperation and conflict; and, despite its limitations, holds considerable explanatory value for understanding the levels of conflict and cooperation in hydropolitical complexes.

Independent Variables

The independent variables represent conceptual categories of power. The variables are indicators of military, geographic, economic, political, technological, and third-party sources of leverage. The conceptual category of hard power, or structural power, includes military and geographic variables.

Military mobilization. The leveraging of military power is indicated by the change in the level of military mobilization at the border of other riparian countries. The level of military mobilization is measured as troops levels and documented by the Correlates of War project. The variable is calculated as the change in the level military mobilization. Change is measured and standardized on an interval scale, meaning the difference between the levels of an attribute that are positive (affine) and linear, which is appropriate for regression analysis.

Control of headwaters. Geographic location is the most intuitive type of leverage in hydropolitical complexes, and the most static: measured as proximity in kilometers to the headwaters. The countries that control the headwaters or the points of contention can assert leverage by threatening to alter the water supply to countries down river. Although the proximity (distance in kilometers) to the headwaters can be found in many data sources, this study uses UN-Water data, managed through UNESCO, because it is consistent and uses the geographic identification of the water source, rather than localized or politicized identifications of the water source.

Economic power is a conceptual category, often referred to as sticky power, which encompasses production, consumption, market size, market access, trade and aid rules and

practices. Most of these variables co-vary, which generates statistical problems, so this study selects the type of economic power that is leveraged most often in negotiations over water-sharing agreements: trade and aid.

Trade and aid. Trade and aid can be easily leveraged. Riparians can promise to increase trade and aid as an incentive to promote cooperation, and they can threaten to reduce trade and aid to enforce cooperation. It is important to note that economic leverage can also be used to compel dependent riparians to agree to water-sharing policies that adversely affect them in the longrun, for fear of loosing trade and aid from wealthier riparians. The variable *trade and aid* is measured as the bilateral trade plus aid between diads of riparians, as a percent of GDP. The total amount of trade plus aid is important in transnational negotiations, and the percent of GDP can infer a level of dependence on trade and aid, which might affect the outcome of asserting economic power.

The conceptual category of soft power refers to political power and ideational power. Soft power is asserted to compel agreement and enforce compliance, and often takes the form of legitimation and diffusion.

Political accountability. Political power is the capacity to offer political gains or threaten political condemnation, which affects economic relations, diplomatic relations, military relations, and inclusion in the decision-making structure of the hydropolitical complex. The efficacy of offering political gains or levying political threats is largely determined by the credibility of the regime that leverages the gains and losses. Illegitimate regimes do not have the political credibility or accountability to assert political power, especially at the international level, although they often compensate by using other forms of power such as structural, economic, or military power. Political credibility, in the form of political accountability, is also salient for hydropolitical complexes because accountability is a strong indicator of the willingness of states to enter into water-sharing agreements with other states. Political accountability increases trust and decreases risk for riparian states. It has been stated that "…democratic polities are also often the best guarantors of the acceptability and longevity of international water accords" (Elhance 2000:215), but this variable posits that it is the broader concept of political accountability, which may or may not manifest as democratic polities, that increases credibility and political power.

Technology transfer. Another source of soft power that can be leveraged is ideational power: access to and diffusion of information and advanced technologies. Accurate information, reliable data, energy, infrastructure, and access to technologies that improve water-use efficiency in industry or agriculture are highly valuable in water-scarce regions. Access to information and technology can be transferred or withheld in order to affect the outcome of negotiations over water-sharing policies. Technology transfer has only recently been quantified and recorded as data, and is not available for most of the fifty-seven year time-span of this study. Thus, technology transfer is measured as a change in the level of technological capacity, documented by the World Bank, which can be indicative of diffusion.

External power. If riparians do not have the resources or domestic capacity to assert leverage in negotiating water agreements, they can appeal to external international actors for support. Hydropolitical complexes are intended to offer incentives to cooperate and impose constraints on conflict over shared water. However, weak riparians often do not have the resources or power to offer incentives and levy constraints, and may appeal to external international actors to do so. Foreign governments, non-governmental organizations, and international financial institutions may assert economic, political, or military leverage on the

member-states of hydropolitical complexes, if it is in their interests to promote cooperation versus conflict. Although external power has many dimensions, magnitudes, and measures, this study uses the change in total trade plus aid from external sources (external to the hydropoltical complex) to indicate the foreign interference effect.

Additional contributing factors include economic inequality, ethnic conflict, and the level of dependence on the shared-water source (what percentage of a country's water comes from that water source alone).

Economic inequality. The level of economic inequality between the riparians within a hydropolitical complex affects the utility of different types of leverage. For example, if there is a high level of economic inequality, measured as the disparity in GDP per capita between states, economic leverage such as trade and aid might be more effective.

Ethnic conflict. Ethnic conflict may disrupt or distort the negotiation process of establishing water-sharing agreements. Ethnic conflict also destroys infrastructure, absorbs resources, and generates opportunity costs that affect the possibilities for cooperation in water-sharing policies. Ethnic conflict is measured as the events of ethnic conflicts that report human injuries, as documented by the Correlates of War database.

Dependence on the shared river. The level of dependence on the shared river also affects conflict and cooperation. Some riparians may be more dependent on one water source, whereas other riparians may have access to alternative water resources. For example, Egypt is almost entirely dependent on the Nile for its water. Therefore, Egypt may be more likely to heighten the intensity of conflict in order to maintain its dominance in the hydropolitical complex and its control over water-sharing policies. The level of dependence on the shared river is measured as the amount of water extracted from the river as a percent of total water use, which is documented as data by UNESCO and UN-Water.

It is important to reiterate that the measurements of the variables are interval data, which are appropriate for regression analysis. Most of the variables measure change, to indicate the leveraging of types of power rather than the static levels of power, except for geographic power. More information about the indicators, measurements, and data sources can be found in the variable chart in Appendix I. The temporal dynamics of the variables in the CSTS analysis are also informative, as the correlations alone do not demonstrate the direction of causality. For example, an increase in economic leverage, such as market access, may be correlated with an increase in cooperation between riparians in the hydropolitical complex, but the correlation does not determine whether the increase in market access promoted hydropolitical cooperation or the hydropolitical cooperation facilitated an increase in market access. The element of time in the CSTS and the original data must be reviewed to determine whether change in the independent variable precedes change in the dependent variable. Recall, time order is assumed for this analysis because the data are structured in chronological time-series panels with panel-corrected standard errors. This study focuses on factors that contribute to cooperation in hydropolitical complexes and negotiating water-sharing policies, thus, it analyzes the correlations in which changes in the use of political, structural, geographical, ideational, and economic leverage precede changes in the level of conflict or cooperation in international river systems.

RESULTS

Table 1. The Effects of Specific Types of Leverage on Cooperation versus Conflict in Hydropolitical Complexes

Regressor	Type of Leverage Used by Weakest Riparian			
	EQ_1	*Outcome*	*EQ_2*	*Sustained*
Geographic	.81*	Conflict		
Military	.27*	Qualified Negotiation	.09	No
Political	.04			
Economic	.11*	Negotiation	.01	Yes
Technological	.08*	Negotiation	.01	Yes
External	.73*	Negotiation	.28*	Yes
Incentive	.39*	Negotiation	.07*	Yes
Constraint	.07			
Economic Inequality	.19*	Qualified Negotiation	.09	No
Ethnic Conflict	.22*	Conflict		
Basin Dependence	.40*	Conflict		
Number	102		31	
R-square	.57		.38	

Regressor	Type of Leverage Used by Strongest Riparian			
	EQ_3	*Outcome*	*EQ_4*	*Sustained*
Geographic	.68*	Conflict		
Military	.43*	Qualified Negotiation	.02	No
Political	.19*	Qualified Negotiation	.01	No
Economic	.17*	Negotiation	.09	Yes
Technological	.09*	Negotiation	.01	Yes
External	.01			
Incentive	.33*	Negotiation	.01	No
Constraint	.09			
Economic Inequality	.08*	Qualified Negotiation	.01	No
Ethnic Conflict	.21*	Conflict		
Basin Dependence	.23*	Conflict		
Number	102		18	
R-square	.49		.21	

Table 1 Continued…

Notes:

Central tendency and dispersion for x<-(number=102, mean=0, standard=1): minimum -1.12, mean 0.17, maximum 1.41

** Statistically significant at the 0.05 level, two-tailed test.*

Equation One: How do the types of leverage used by the weakest riparian affect the outcome of cooperation versus conflict?

EQ_1: *cooperative, negotiated settlement versus conflict* $= b_1 + b_2(\text{geographic}) + b_3(\text{military}) + b_4(\text{political}) + b_5(\text{economic}) + b_6(\text{technological}) + b_7(\text{external}) + b_8(\text{incentive}) + b_9(\text{constraint}) + b_{10}(\text{inequality}) + b_{11}(\text{ethnic}) + b_{12}(\text{dependence}) + e$

Equation Two: If a cooperative, negotiated settlement is achieved, is it sustained?

EQ_2: *cooperative, negotiated settlement* $= b_1 + b_2\,(\text{military}) + b_3(\text{economic}) + b_4(\text{technological}) + b_5(\text{external}) + b_6(\text{incentive}) + b_7(\text{inequality})$ *at* $t_{+1} + e$

Equation Three: How do the types of leverage used by the strongest riparian affect the outcome of cooperation versus conflict?

EQ_3: *cooperative, negotiated settlement versus conflict* $= b_1 + b_2(\text{geographic}) + b_3(\text{military}) + b_4(\text{political}) + b_5(\text{economic}) + b_6(\text{technological}) + b_7(\text{external}) + b_8(\text{incentive}) + b_9(\text{constraint}) + b_{10}(\text{inequality}) + b_{11}(\text{ethnic}) + b_{12}(\text{dependence}) + e$

Equation Four: If a cooperative, negotiated settlement is achieved, is it sustained?

EQ_4: *cooperative, negotiated settlement* $= b_1 + b_2(\text{military}) + b_3(\text{political}) + b_4(\text{economic}) + b_5(\text{technological}) + b_6(\text{incentive}) + b_7(\text{inequality})$ *at* $t_{+1} + e$

Weak riparians in hydropolitical complexes are often coerced to agree to water-sharing policies that adversely affect them. The primary contribution of this research is to provide systematic analysis and statistical evidence to demonstrate that weak riparians can assert economic and soft power in water-sharing negotiations by appealing to and utilizing the capacities of external actors; and that economic and soft power are the most successful in achieving cooperative agreements in hydropolitical complexes. In other words, weak riparians may turn to external third parties such as foreign governments or international financial institutions to assert influence on the strong riparians within the hydropolitical complex, because the external forces have the resources to compensate for the disproportionately low amount of influence of weak riparians. The international community should be knowledgeable about this dynamic because as water scarcity increases and water-sharing policies become more contentious, the role of international actors

will become more consequential. International influence will be a significant factor in promoting cooperation or provoking conflict in hydropolitical complexes, which affects regional stability and international security.

The results indicate the leverages and strategies used by weak and strong riparians, the outcomes of conflict or negotiated settlements, and the sustainability of the negotiated settlements.

Structural and Hard Power

Geographic Leverage. In all cases in the study, the country with the geographic advantage asserted it. This is not surprising. If a country controls the headwaters or the upriver point of contention, it uses the geographic advantage as leverage over other countries that may have an advantage in political power, military might, or economic dominance. Ethiopia, for example, is no match for the political, military, and economic prowess of Egypt, but Ethiopia controls the water upriver from Egypt on the Nile. Thus, Ethiopia has at least one powerful bargaining chip, and uses it in times of extreme scarcity; although this test of Egypt's resolve has not been pushed to the point of escalating conflict. The future power plays of Ethiopia and Sudan with Egypt, as well as plausible riparian alliances, is receiving an increasing amount of scholarly attention (Klare 2001) but has yet to produce a source of hard power that trumps the military hard power or economic "sticky" power of Egypt.

The problem verified in this study, however, is that asserting geographic leverage results in conflict in almost all cases. In the case of the Nile, when Ethiopia asserts its geographic advantage, Egypt responds by increasing its political pressure, military threats, and economic leverage, which often exacerbate conflict rather than promote cooperation. In sum, geographic leverage is statistically significant because the riparians that have the geographic advantage use it, but the use of geographic leverage is highly correlated with conflict, not cooperation.

Military Strategy. Countries will mobilize their militaries to protect access to vital water resources. Part of the objective of hydropolitical security complexes is to minimize the need for military mobilization around contentious water issues, and to promote cooperation between interdependent states in international river systems. The results of this research demonstrate that many negotiations over water-sharing policies are *qualified negotiated settlements*, which indicates that a form of military leverage such as threats or mobilization preceded negotiations. This suggests that the application of military leverage can bring both sides to the negotiation table because military threats, mobilization and use of force are not generally ignored, especially if the military power of the weaker riparian is asserted through terrorist attacks or backed by external military capacity. Other types of leverage such as economic constraints can be neglected while time passes, even if the initial water-sharing dispute is not resolved. The problem with bringing riparians to the negotiating table by threatening or mobilizing military options, is that the subsequent settlements are not sustainable.

Sticky Power

Economic Leverage. Weak riparians use economic leverage to achieve negotiated settlements on water-sharing policies, and the negotiated settlements are sustainable for at least a year. This can be explained, in part, by the reality that market access is highly coveted. The promise to increase

market access can serve as an incentive to promote cooperation. Leveraging market access can alter the cost-benefit analysis by making cooperation more beneficial: cooperation will result in gaining access to markets, conflict will be more "costly" because it will result in sanctions or the loss of access to markets. The difference between strong and weak riparians in this regard, is that the strong riparians can assert economic leverage based on their own markets and assets, while weak riparians often have to turn to external actors such as the World Bank to provide economic incentives and constraints on their behalf to promote cooperation in the region.

External Influence

To avoid being coerced to accept water-sharing policies that adversely affect them, weak riparians often appeal to external forces to assert power and leverage in the negotiations of hydropolitical security complexes. The use of external influence is statistically significant in promoting cooperation in hydropolitical complexes, and the negotiated settlements are sustainable. As concluded by Arun Elhance, international financial institutions can offer "powerful economic leverages to persuade reluctant states to cooperate," and the cooperative arrangements tend to endure at least as long as the aid keeps flowing (2000:216). The promise of international aid can serve as an incentive to resolve resource disputes through cooperation. Donor organizations can design aid programs to alter the cost-benefit analysis of resolving disputes through negotiated settlements as opposed to violent conflict. Recipient countries can use international financial aid to promote development, build infrastructure, increase government capacity to provide public services, and many other projects to increase economic and political stability. Financial aid operates through mechanisms such as contingencies on how the money can be used and what degree of accountability must be achieved. In addition to general development goals, "aid conditionality can help strengthen incentives for ending conflict and discourage a return to war" (Boyce 2002). For example, the World Bank will give financial aid to help develop large regional water supply systems for potable water, irrigation, and hydroelectric projects. However, the loans are contingent on the agreement and cooperation of all riparians. If one riparian does not agree with the proposed water development project, the World Bank will withhold financial aid until a negotiated settlement can be reached.

Soft, Political, and Ideational Power

Political Leverage. Political leverage is not a statistically significant factor in the capacity of weak riparians to promote cooperation, but it does correlate with the ability of strong riparians to achieve negotiated settlements. This is interesting for two main reasons. First, political legitimacy is significant for strong riparians but not for weak riparians, presumably because strong riparians meet a threshold of legitimacy that allows them to offer credible political gains and to allocate political losses, whereas weak riparians do not generally have the capacity to do so. Second, it exposes a probable source of multicollinearity, which was tested and verified, between military power, political legitimacy, and economic resources. Political leverage is only effective in cases where the riparian has overlapping advantages in military capacity and economic assets that can be leveraged. In addition, the settlements are *qualified negotiated settlements*, which means that the negotiations were preceded by military actions such as threats or mobilization, and the settlements are not sustainable. The weaker riparian may have

succumbed to political pressure to conform to policies that adversely affect them, but these policies may not be sustainable if the political pressure lets up for any reason in the future.

Diffusion of Technology. The capacity to leverage access to valuable technologies can bring riparians to the negotiating table. Both strong and weak riparians can offer to provide or use technologies that increase water-use efficiency or produce hydroelectric power, which may have distinct benefits or consequences for different riparians. The primary issue with leveraging technology, however, is that most countries will turn to external sources to gain access to new technologies or the money to finance them. International financial institutions such as the World Bank typically get involved in large infrastructure development projects and technology transfers. The definitive work of Bertram Spector demonstrates that cooperation often depends on external "facilitating elements" such as technology, which can be engineered to promote cooperation and prevent conflict (Spector 2000: 224).

Contextual Factors. There is a complicated relationship between economic inequality and regional conflict. Economic inequality can provoke violent conflict within and between countries. Regarding resource disputes, however, economic tensions have a dual effect: inequality can exacerbate conflict or bring countries to the bargaining table. The statistical results of this study show that economic inequality results in *qualified negotiated settlements*; negotiations that follow volatile disputes, which indicates that contradictory forces are in play. In contrast, the effects of ethnic conflict are clear and consequential. Ethnic conflict disrupts the negotiation process and distracts the attentions and resources of the participants. It is not surprising that ethnic conflict has a statistically significant correlation with the continuation of conflict. Another complicating factor is the level of dependence on the shared river system. A high level of dependence means a high likelihood of conflict. However, the implications of this finding are more substantial. As demand increases and water scarcity increases, the level of competition to control the resource will also increase. Strategies for conflict prevention and resolution will need to address this increase in the intensity of competition to control the water source.

CONCLUSION

Weak riparians are most successful at influencing water-sharing policies when they utilize the resources of external actors to augment their economic and technological capacity. With external support, weak riparians can assert economic leverage and soft power, which this study shows to be the most effective in achieving cooperation in hydropolitical complexes. However, these exogenous sources of influence are used the least often. The types of power that are asserted most frequently are geographic location and military capacity, which are shown in this study to be the least successful in achieving consistent cooperation and sustainable settlements. The general conclusion is highly problematic for the cooperative management of international river systems: the strategies that are the most successful at promoting cooperation are used the least often. This is, in part, because hydropolitical complexes are intended to be regional security organizations that promote regional stability and prosperity concerning shared water resources. However, if weak riparians find that they are being coerced to accept water-sharing policies that adversely affect them, owing to power asymmetry in the regional complex, they may turn to external actors to gain the leverage necessary to negotiate better arrangements. A positive spin on this finding is

that the external actors tend to augment economic and soft power, as opposed to promoting hard power. There are known strategies for asserting economic power, such as altering the amount of trade and aid, and for leveraging soft power, such as technology transfers, that can be used to increase cooperation. This serves the objectives of hydropolitical complexes, albeit indirectly, to increase regional cooperation and achieve negotiated settlements for water-sharing policies in shared river systems.

The weakest riparians do not have the economic resources, political capacity, or non-violent leverage to balance asymmetrical power in hydropolitical complexes, so they often appeal to external actors to augment their power. The cross sectional analysis provides empirical evidence to support the importance of external international influence on asymmetrical power relations and cooperation within hydropolitical complexes. The role of external actors will become increasingly important in the internal power dynamics of hydropolitical complexes as competition between riparians intensifies. The decision to promote cooperation or provoke conflict will become more consequential as water use and water scarcity increase. International actors that choose to get involved in international water disputes and regional hydropolitical complexes will need to keep pace with these changes.

Future research needs to disaggregate the findings of this study, and others, as well as analyze the motives behind international involvement in hydropolitical complexes. We cannot ignore the temptation of external actors to manipulate water disputes in order to increase or maintain their own access to vital resources. New research also needs to be conducted on the effects of multinational corporations, as external international actors, asserting leverage in hydropolitical complexes. A systematic comparative analysis of variation in the strategies and outcomes of foreign influence by multinational corporations, foreign governments, and international financial institutions would be informative. As water becomes increasingly privatized and corporations consolidate their control over vital resources, it is useful to anticipate the impact on international river systems so that the international community can offer alternative forms of economic and soft power to promote cooperation and prevent conflict.

ACKNOWLEDGEMENTS

The author appreciates the generous financial support from the Research Council and Office of Research and Sponsored Programs at Rutgers University, as well as the constructive comments from a team of colleagues and anonymous reviewers.

REFERENCES

Boyce, James. 2002. *Investing in Peace: Aid and Conditionality after Civil Wars*. Adelphi Paper 351. Oxford: Oxford University Press for the International Institute for Strategic Studies.

Braudel, Fernand. 1979. *Civilisation matérielle, économie et capitalisme, XVe-XVIIIe siècle, le temps du monde vol. 3*. Paris: LGF Publishers (1979) and Berkeley: University of California Press (English translation 1992).

Browder, Greg. 2000. "An Analysis of the Negotiations for the 1995 Mekong Agreement." *International Negotiation* 5: 237-261.

Chase-Dunn, Christopher and Peter Grimes. 1995. "World-Systems Analysis." *Annual Review of Sociology* 21: 387-417.

Dinar, Ariel and Senai Alemu. 2000. "The Process of Negotiation Over International Water Disputes: The Case of the Nile Basin." *International Negotiation* 5: 331-356.

Dinar, Shlomi. 2000. "Negotiations and International Relations: A Framework for Hydropolitics." *International Negotiation* 5: 375-407.

Elhance, Arun P. 2000. "Hydropolitics: Grounds for Despair, Reasons for Hope." *International Negotiation* 5: 201-222.

Elhance, Arun P. 1999. *Hydropolitics in the Third World: Conflict and Cooperation in International River Basins*. Washington D.C.: United States Institute of Peace Press.

Klare, Michael. 2001. *Resource Wars: The New Landscape of Global Conflict*. New York: Henry Holt and Company.

Le Billon, Philippe. 2005. *Fueling War: Natural resources and armed conflict*. New York: The International Institute for Strategic Studies.

Lukes, Steven. 1997. *Power: A Radical View*. Palgrave Macmillan.

Mead, Walter Russell. 2004. "America's Sticky Power." *Foreign Policy* 141: 46-53.

NATO. 1999. See levels of conflict: durable peace, stable peace, unstable peace, crisis, war, with variations developed by NATO 1998, ratified and institutionalized in 1999.

Nye, Joseph. 2004. *Soft Power: The Means to Success in World Politics*. New York: Perseus.

Posthumus, Bram. 2000. "Nile Basin Nations Move Towards Cooperation." European Platform for Conflict Prevention and Transformation. *Conflict Prevention Newsletter Special on Water and Conflict, One World* 3: 4-7, 13-20.

Spector, Bertram. 2000. "Motivating Water Diplomacy: Finding the Situational Incentives to Negotiate." *International Negotiation* 5: 223-236.

Wallerstein, Immanuel. 1974. *The Modern World-System, vol. I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York and London: Academic Press.

Zeitoun, Mark and Jeroen Warner. 2006. "Hydro-hegemony." *Water Policy* 8: 435-460.

APPENDIX

1.A. International River System Specification

Amazon Basin
Bolivia, Brazil, Colombia, Ecuador, French Guyana, Guyana, Peru, Suriname, Venezuela

Ganges and Brahmaputra Basin
Bangladesh, Bhutan, China, India, Myanmar, Nepal, Tibetan disputed territory

Indus Basin
China, India, Kashmiri disputed territory, Pakistan

Jordan Basin
Israel, Jordan, Lebanon, Palestinian disputed territory, Syria

Nile Basin
Burundi, Congo-Zaire, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, Uganda

Parana and La Plata Basin
Argentina, Bolivia, Brazil, Paraguay, Uruguay

Tigris and Euphrates Basin
Iran, Iraq, Syria, Turkey

Zambezi Basin
Angola, Botswana, Congo-Kinshasa, Malawi, Mozambique, Namibia, Tanzania, Zambia, Zimbabwe

1. B. Variable Specification

Category	Indicator	Variable	Measure	Data Source
Hard Power	Military	Level of military mobilization	Change in troop levels on the border of riparian states	Correlates of War
Hard Power	Geographic	Control of headwaters	Proximity to headwaters	UNESCO: UN-Water
Sticky Power	Economic	Total trade plus aid from a riparian state	Total trade plus aid from riparian state, as percent of GDP	World Bank, Bilateral Trade and Aid
Soft Power	Political	Political accountability	Change in level of democratic accountability	Governance Indicators, World Bank
Soft Power	Ideational diffusion	Technology transfer	Change in amount of technological capacity	World Bank
External Power	Involvement of a third party	Total trade plus aid from an external actor	Change in the level of total trade plus aid from external source	World Bank
Incentive	Perceived positive character of leverage	Incentive	Dummy variable, 1 = incentive, 0 = no incentive	Inter-coder reliability over 98%
Constraint	Perceived negative character of leverage	Constraint	Dummy variable, 1 = constraint, 0 = no constraint	Inter-coder reliability over 98%
Contextual	Economic inequality	Economic inequality between riparians	Economic disparity in GDP pc between riparians	UNDP
Contextual	Ethnic conflict	Ethnic conflict	Change in the number of ethnic events reporting human injuries	Correlates of War
Contextual	Dependence on shared river	Dependence on shared river	River water extraction as percent of total water use	UNESCO: UN-Water

BOOK REVIEW ESSAY:
UNDERSTANDING LATIN AMERICA IN THE ERA OF GLOBALIZATION

Glen David Kuecker
DePauw University
Greencastle, Indiana
gkuecker@depauw.edu

Robinson, William I. 2008. *Latin America and Global Capitalism: A Critical Globalization Perspective*. Baltimore: The Johns Hopkins University Press. 412 Pages. ISBN-13 978-0-8018-9039-0. Cloth ($55.00).

Despite the importance of globalization for understanding contemporary Latin America, we lack a comprehensive and theoretically substantive analysis of the phenomena. Duncan Green's early offering, *The Silent Revolution* (2003), was the lone monograph in the field, but even its second edition has become significantly dated. William I. Robinson's *Latin America and Global Capitalism* offers us a valuable contribution by filling the void. Robinson deploys a rigorous theoretical analysis in consideration of deep empirical data in offering explanations for why the region's free market transformation was a fiasco. The book clearly merits inclusion in the Johns Hopkins Studies in Globalization Studies series, and will stand as a benchmark for all future scholarship. When considered with Robinson's *Promoting Polyarchy* (1996), *Transnational Conflicts* (2003), and *A Theory of Global Capitalism* (2004), the author is now the top scholar in the field of critical globalization studies.

The first of Robinson's six chapters frames the book by placing Latin America within the context of what he describes as the "epochal shift in world capitalism." He understands contemporary globalization as constituting a new historical period, because the process of neoliberal market transformation generated the transnationalization of the elite class, corporations, and institutions of economic governance. This triad of transnationalization differs from earlier manifestations because of the scope, scale, and intensity of the process. Robinson maintains that it has generated "new forms of poverty and wealth, and new configurations of wealth and power" that carries with it a "new cartography" within the geographical divisions of the once modern world-system (p. 43). Globalization's new mapping blurs the distinctions between core, periphery, and semiperiphery through the transnational networks of capital, labor, and production. The glue holding the new globalized system together is a new a form of imperialism, itself a transnational form of hegemony. On these accounts, Robinson appears to be in camp with the post-modern wanderings of Antonio Negri and Michael Hardt's *Empire* (2001). Yet, Robinson's take on the transnational order, through his theory of polyarchy (defined below), keeps him firmly grounded in a radical critique of capitalism. Those familiar with Robinson's work, will see the maturation of his theoretical positions, which he now uses to set the stage for a rigorous and ambitious analysis of Latin America's experience with neoliberalism.

The book's core argument is established in the opening section of chapter two. He maintains that the political economy of globalized neoliberalism is profoundly unstable due to the deep contradictions of late capitalism. This argument, of course, has been articulated by many theorists, such as David Harvey in his classic *The Condition of Postmodernity*. Robinson's

Copyright ©2011, American Sociological Association, **Volume XVII, Number 1, Pages 236- 243**
ISSN 1076-156X

rendition of the argument has four steps. First, neoliberal globalization is vulnerable to collapse because of the highly speculative nature of the "global casino" of unregulated global finance, an argument validated by the current meltdown in global capitalism, but well anticipated by economists like David Korten in *When Corporations Rule the World* (2001). Second, the agricultural export sector is fragile due to unpredictable fluctuations in global supply and demand, especially the free-trade propensity toward over production. Next, Robinson maintains the neoliberal model does not account for societal needs, which stimulates discontent and conflict within the political order. Finally, he argues the neoliberal order is weak due to the vulnerabilities of the ruling elite and the increase in and novelty of social protest. These four vulnerabilities culminate at the start of the twenty-first century in a counter-hegemonic moment that finds radical alternatives to capitalism gaining power as neoliberalism falls deeper into crisis.

The balance of chapter two presents the first part of Robinson's consideration of Latin America's place in the global economy. The focus is on the agriculture sector, while chapter three considers what he calls "industrial subcontracting," along with the service sector, tourism, and migration. Robinson argues that with globalization "non-traditional agricultural exports" became the defining feature of Latin America's place within the "global supermarket." He provides several clear examples of the argument: cut flowers in Ecuador and Colombia; fruits and wines from Chile; soy from the Rio de Plata; and winter fruits and vegetables from Central America. The empirical data presented clearly and abundantly supports his main contentions about Latin American agricultural production as defined by neoliberalism. These are: transnational agribusinesses dominate; non-capitalist production methods are further displaced; such displacement results in migration; flexible labor systems dominate; women play an increasing role in the new labor regime; and local production systems are more tightly articulated to the global system. Pulling from the scholarship of particular case studies, Robinson's summary of the neoliberal agricultural political economy in Latin America is clear, precise, and substantive. It is the best statement on the topic to date.

When neoliberalism displaced the import substitution industrialization, Keynsian economic policies after the 1982 Mexican debt default Latin America experienced a transition toward a new system of production within the global economy. This new system is the topic of chapter three. Robinson's main argument here is centered on the free market system of flexible accumulation, which he contends made subcontracting, services, tourism, and migration the predominate sectors of the non-agricultural economy. While the notion of flexible accumulation has been well established by scholars like Harvey, Robinson significantly adds to our analysis with the empirical data supporting his presentation of these four sectors. Subcontracting is the part assembly sector, what is commonly known in Latin America as the "*maquiladoras*." Robinson's analysis illustrates the fragility of neoliberalism for countries like Mexico, where the subcontracting system has undergone major fluctuations since the 1980s. Vulnerable to the race-to-the-bottom, especially competition from production in China, the *maquila* sector is highly unstable. Its strongest base – auto parts production – was nearly eliminated with the collapse of the U.S. auto industry during this most recent crisis in global capitalism. Robinson adds to our understanding of Mexico by making a valuable analysis of subcontracting in Central America. His regional expertise is especially evident in this section. The discussion of South Korean transnationals in Guatemala, for example, offers a fascinating perspective on Latin America's new place in global capitalism, as well as the harshly exploitative quality of contemporary capitalism.

Robinson's evaluation of the service sector merges with his consideration of tourism, which offers wonderful analysis of this globalized industry. He demonstrates how the growing tourism sector is the consequence of the free market's division of global wealth and how its disparity converges with flexible accumulation's segmented labor force. Likewise, Robinson deploys the idea of neoliberalism's segmented labor force to drive his analysis of migration. Robinson builds on the already rich migration literature by advancing the argument that transnational migration serves as a structural mechanism for mediating social conflict, because remittances allow national economies and their local communities to reproduce. Each of these sectors are, however, grossly dependent on the growth and smooth functioning of global capitalism, which left Latin America's neoliberal system fragile and vulnerable to economic downturns.

In chapter four, Robinson brings focus to the transnational process by examining the changes in class, state, and again, migration. The argument holds that with neoliberalism each became dislocated from firm anchoring in the nation-state to become fluid factors within the circulation of global capital. In the area of class, Robinson shows how free market reforms caused profound change. The proletariat was increased due to a dual process of de-peasantization – itself caused by neoliberal policies of land privatization – and the collapse of the Keynesian era's middle sector. Proletarianization, however, was characterized by excessive marginalization, which caused a growth in Latin America's informal sector. These negatives marched forward along with the continued transnationalization of the elite class, which also accompanied its radical increase in wealth. Robinson meticulously traces how the elites formed transnational groups, and advanced an agenda of taking political control of the neoliberal state throughout the region. While some argue that the neoliberal state was weakened by globalization, Robinson makes a convincing case that it was "reorientated" toward the new regime of capitalist accumulation (p. 185). The reorientation finds the state functioning as the conduit between local and global. It is the manager of the free market, especially the process of decreasing the public sector in favor of the private. This section of the chapter concludes with interesting discussions of new consumer patterns, especially the "Wal-Martization" of Latin America, and the increasingly important role of China within the region's economy. Scholars examining these topics will be well served by Robinson's pioneering analysis of these last two points.

In the second half of chapter four, in a clumsy transition, Robinson discusses labor mobility as another area of Latin America's transnationalization. Others have done pioneering work on these topics, especially Lynn Stephen (2007), and given the importance of her work, Robinson's lack reference to her is conspicuous. He does add, however, important consideration of intra-Latin American migrations, and illustrates how they are key elements to the regional labor system and neoliberal capital accumulation. His overview includes discussion of the complex ways communities in Latin America have become transnational because of globalization's deep impact on labor mobility. Robinson challenges the migration scholarship that understands transnational communities as examples of a liberating autonomy for Latin America's marginalized by emphasizing the contradictions within the transnational community process. While it manifests proactive social behavior, such migration remains vulnerable to hyper exploitation, social pathologies, and enhanced dependence on capitalist wages for subsistence. Robinson concludes:

> The argument that communities may benefit *as communities* [italics original] from global integration seems to me to ignore the underlying structural constraints in the global political economy that originate from without and confront local communities, and how these constraints shape class and power relations both at the local level and between the local and the global (p. 224).

This thesis nicely complements Judith Hellman's recent work on migration, *The World of Mexican Migrants* (2008), which adds evidence that Robinson falls in nicely within the most recent scholarship.

Chapter five is the turning point of the book. It outlines the deep contradictions of neoliberal globalization that has led to its hegemonic decline. Taking from Marx, Robinson's analysis focuses on capitalism's unavoidable tendency for crises, especially those driven by the logic of overproduction. The economic crises, Robinson maintains, deepen social marginalization that gave birth to a rupture in the neoliberal order's political legitimacy. Concerning the economic crises, he anticipates the current financial catastrophe. Escaping the problem of overproduction, capitalists entered an unprecedented period of financial speculation as the only outlet for surplus capital. He also explains how the convergence of neoliberal economic policy with neoconservative geostrategy has extended the life of capitalism by creating the economic opportunities of permanent war. Deregulation, informalization, marginalization, and feminization serve as his analytical frame for evaluating the destruction of Latin America's social fabric through the pauperization of labor. As the race-to-the-bottom found its rock bottom, the neoliberal order fell into hegemonic crisis as the legitimacy of the system crumbled with a succession of economic crises, such as Argentina's December 2001 meltdown.

Management of the crisis of legitimacy has fallen to the "polyarchy," which "refers to a system in which a small group actually rules, on behalf of capital, and participation in decision making by the majority is confined to choosing among competing elites in tightly controlled electoral processes" (p. 273). This mode of political domination grew apace with neoliberalism's ascent, and was fully hegemonic once the free market crises hit the region. For Robinson, the measure of polyarchy's hegemony was the extent to which elected governments were able to push through structural adjustment policies of the 1980s and 1990s without falling from power. Robinson explains that within the post bureaucratic authoritarian transition to electoral democracy was the reality of authoritarian power that deployed sophisticated mechanisms of repression to keep the marginalized from threatening the free market. The resulting astronomical levels of inequity and inequality in the relations of power could only result in the neoliberal system's loss of legitimacy, which gave rise to a new wave of popular class resistance.

Indeed, in chapter six, the people strike back, and they do so through a diversity of social movements and leftist political projects. Robinson divides the task of analyzing the scope of resistances into consideration of the "pink tide" and the proliferation of social movements, before focusing on indigenous uprisings, immigrant rights movement, and the Bolivarian revolution. He finds the reformist, left-of-center politics of the pink tide – Lula's Brazil, Kichner's Argentina, and Ortega's Nicaragua – to have the potential for forming a radical subjectivity within the popular classes, especially as they clash with the polyarchy for power. Yet, Robinson sees the limitations to reform: opposition to neoliberalism is not necessarily anti-capitalism. He further understands the lack of radicalism to be the cost of electoral viability, which constitutes a major demonstration of polyarchic power. The pink tide's advance, Robinson argues, was made

possible by the groundswell of popular resistance to neoliberal policies. In his view, however, social movements are poor candidates for radical change, because they lack the ability to strike at capitalism, a job he leaves to formally organized unions that have the ability to withdraw labor from the system of production. Likewise, he finds little hope for radical change within the immigrant rights movement in the United States, because it is too vulnerable to domination and control by the neoliberal state. That leaves the Bolivarian revolution and indigenous movements like the Zapatistas as the remaining contenders for bringing about radical change in Latin America.

In Venezuela, the Bolivarian revolution has undertaken the explicit mission of building socialism for the twenty-first century. President Chavez has crafted an anti-capitalist bloc, anchored by Cuba, Bolivia, and Ecuador, that has succeeded in frustrating polyarchy's attempts at defeating it. Robinson highlights the unique feature of the revolutionary process in Venezuela as being the convergence of a horizontal, grassroots, poor-people's social movement with a vertical, top-down attempt at transforming the polyarchic state. While giving new life to socialism and clearly marking the demise of the "Washington consensus," Robinson invites us to consider the "much larger questions" (p. 340) presented by the Bolivarian revolution. Among these, he asks, "how do popular sectors push forward social change – or in the case of Venezuela, revolution – without a revolutionary state?" (p. 340). The Zapatistas of southern Mexico provide the material for addressing this question.

Robinson rejects the Zapatista attempt at having a revolution without taking state power. Despite the successes of the indigenous rebellion, he is clear:

> At some point popular movements must work out how the vertical and horizontal intersect. A 'long march' through civil society may be essential to transform social relations, construct counter-hegemony from the ground up and assure popular control from below. Yet no emancipation is possible without an alternative project, and no such project is possible without addressing the matter of power of dominant groups, the organization of that power in the state (including coercive power), and the concomitant need to disempower dominant groups by seizing the state from them, dismantling it, and constructing alternative institutions (p. 342).

Robinson's critique is premised on the notion that revolutionary change is only proactive if it has a program of transformation, one that brings about "a radical redistribution of wealth and power, predicated on the construction of more authentic democratic structures" (p. 347). This requires "an organized left and a democratic socialist program" (pp. 347-348). Apparently, only the Bolivarian revolution meets his criteria.

Robinson's analysis of Latin America's amazing diversity of leftist politics reveals the ideological nature of his work. It is clear from the pictures sandwiched in the middle of the book that Robinson is an academic-activist who understands his scholarship to be part of the people's struggle against capitalism. Perhaps Robinson needed some reflection on the relationship between leftist scholars and social movements, especially considering the significant engagements on the complexities of community engaged research by scholars like Charlie Hale (2008). His silence on the subjectivities of those he writes about and how their struggle produced the knowledge related in the book corresponds to Robinson's unwillingness to engage the "cultural turn" and the rich

social movement literature that emanates from the "politics of culture and the culture of politics" (1998). Given his embrace of Gramscian theories of hegemony, it is odd that Robinson rejects having a revolution without taking power. For some on the left, the anarchy-socialism divide, remains absolute. Yet, as the fascinating dialogue between Andrej Grubacic and Staughton Lynd (2008) amply demonstrates, it is possible for anarchists and socialists to find common ground against common enemies.

To draw the theoretical discussion of revolutionary potentials to a conclusion, Robinson provides a brief mapping in the final pages of the book. He contextualizes the mapping with a general frame, one that argues that future conflicts will not be between nation-states, but between the haves and the have-nots. Within the frame of globalized class warfare, Robinson places four scenarios. The first is a Keynesian reform of capitalism. The second is a "global fascism based on a new war order" (p. 355). The third is a victory by the forces of anti-capitalism that leads to democratic socialism. The final scenario is that we are headed for what Sing Chew (2008) terms the "new Dark Ages," which is an epoch defined by the collapse of civilization. This fourth scenario raises the central point of critique of Robinson's work, as well as globalization studies.

Viewed from the new Dark Ages perspective, we need to think through the place of globalization in the current historical moment and how that helps us to evaluate the four scenarios Robinson provides. Given the reality that capitalism is not compatible with sustainability, we clearly see the folly of Keynesian reform. As evidenced by the recent bail-outs of too-big-to-fail economic sectors, we can see that Keynesian approaches keep the system in overshoot and threatens to drive the process of systemic collapse deeper and harder. The potential of global fascism is a response to the realities of the opening days of the Dark Ages. The politics of fear, the need to protect, and the logic of militarized solutions to catastrophes all make the fascist scenario a real possibility. The happier scenario of creating social democracy offers us the solution of eliminating capitalism, but it carries the major limitation of still being a modernist ideology, and as such is implicated in all the factors generating the new Dark Ages. Nothing in socialism necessarily prevents or mitigates catastrophic collapse, and many of its elements are either dependent upon or contributors to the factors of collapse. The Bolivarian revolution for example, is entirely addicted to oil and has no real blueprint for democratic socialism in our historical era defined by the perils of the end of oil. Likewise, President Correa's Ecuador has unequivocally declared that its path to socialism requires large-scale mining projects that threaten destruction of some of earth's most important ecological terrain and is contrary to the demands of Ecuador's large indigenous population.

For the past two decades the social sciences have been dominated by the globalization paradigm. It has become a meta-narrative, the way that we make sense of the complex problems generated by late modernity. There is nothing inherently flawed with the paradigm, and as Robinson's monograph illustrates it has served us well with arriving at deeper understandings of the human condition. We have to consider, however, if we have left the period of globalization behind, and if the world has entered a new era, one defined by the Dark Ages. If yes, then we need to determine if social science theory that came into being in explanation of older era realities are the best forms of knowledge to deploy in understanding the new Dark Ages. Even the "global village idiot," Thomas Friedman has moved from a highly flawed globalization meta-narrative of *Lexus and the Olive Tree* (2000) and *The World is Flat* (2006) to the new Dark Age paradigm in his *The World is Hot, Flat, and Crowded*. From this perspective we need to ask if Robinson is operating in the wrong meta-narrative, and if this error renders his questions, themes, analysis,

and conclusions flawed in the face of the new Dark Age. Yet, it would be a mistake to not recognize the importance of Robinson's work. These are challenging theoretical questions, and they are ones that scholars now must contend with, especially the readers of this journal.

Latin America and Global Capitalism does provide valuable insights for thinking about social science analysis of the new Dark Ages. Robinson clearly shows the profound consequences that neoliberal globalization has had on Latin American society, politics, and economics. With its social fabric ripped to shreds, public sector debilitated, social sectors disarticulated from the state, and polyarchy entrenched, Latin America's ability to respond to the large-scale, multiple, and interconnected crises has been crippled right at the critical moment when a robust state, public sector, civil society, and citizenry is needed. Robinson's work is critical, then, for understanding this context, because he so clearly shows where we came from as we enter the new epoch. The catastrophic consequences of policies created by Adam Smith's invisible hand are now painfully obvious in the examples of Katrina and British Petroleum's deep sea drilling calamity. As we move deeper into the new Dark Age, such consequences will increase in frequency and severity. Neoliberal globalization's destruction of the Latin American commons means the region is less resilient in the face of the shocks of catastrophic collapse. These scenarios raise significant questions about Robinson's embrace of the Bolivarian revolution and rejection of the autonomous movements like the Zapatistas. Given Chavez's petroleum drenched clutch on the destructive forces of modernity, we might wonder if the Zapatista path of changing the world without taking power is the path of greater resilience in a global system catastrophically collapsing.

References

Alvarez, Sonia, E. Dagnino, and Arturo Escobar. Editors. 1998. *Cultures of Politics Politics of Cultures: Re-Visioning Latin American Social Movements*. Boulder, Co: Westview Press.

Chew, Sing. 2008. *Ecological Futures: What History Can Teach Us*. Lanham, MD: AltaMira Press.

Friedman, Thomas L. 2000. *Lexus and the Olive Tree*. New York: Anchor Books.

_____ . 2006. *The World is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus, and Giroux.

_____ . 2008. *The World is Hot, Flat, and Crowded: Why We Need a Green Revolution--and How It Can Renew America*. New York: Farrar, Straus and Giroux.

Green, Duncan. 2003. *The Silent Revolution: The Rise and Crisis of Market Economics in Latin America*. Second edition. New York: Monthly Review Press.

Grubacic, Andrej and Staughton Lynd. 2008. *Wobblies & Zapatistas: Conversations on Anarchism, Marxism, and Radical History*. Oakland, CA: PM Press.

Hale, Charlie. 2008. Editor. *Engaging Contradictions: Theory, Politics, and Methods of Activist Scholarship*. Berkeley: University of California Press.

Harvey, David. 1989. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. London: Blackwell.

Hellman, Judith A. 2008. *The World of Mexican Migrants: The Rock and the Hard Place*. New York: The New Press.

Korten, David. 2001. Second Edition. *When Corporations Rule the World*. West Hartford, CT: Kumarian Press.

Robinson, William J. 1996. *Promoting Polyarchy: Globalization, U.S. Intervention, and Hegemony*. Cambridge: Cambridge University Press.

_____ . 2003. *Transnational Conflicts: Central America, Social Change, and Globalization*. London: Verso.

_____ . 2004. *A Theory of Global Capitalism: Production, Class, and State in a Transnational World*. Baltimore: Johns Hopkins University Press.

Stephen, Lynn. 2007. *Transborder Lives: Indigenous Oaxacans in Mexico, California, and Oregon*. Durham, NC: Duke University Press.

BOOK REVIEWS

Burke, Edmund, III and Kenneth Pomeranz, eds. 2009. *The Environment and World History*. California World History Library, Vol. 9. Berkeley, California: University of California Press. 361 pages, ISBN-13 978-0-520-25687-3 Cloth ($60.00), ISBN-13 978-0-520-25688-0 Paper ($24.70).

Edited by two prominent world historians, this book covers different regional cases of state formation or state developmental pressures encouraging their own local, bad, environmental outcomes. The historical data is both material and ideological: it is mostly on state water management policy in different regions combined with how a state's social definition of its environment interacted with material environmental outcomes. Both the distant past and the present are treated in this same 'state developmentalist' model. That is their world historical contribution: to get away from Eurocentric historiographic concepts of epochs based on economics and to analyze instead common civilizational forms of political economy that have historically repeated the same environmental problems in the past or the present. Thus, the historical time periods of the chapters ranges from several thousand years (in the astonishingly good synthesis by Burke of multiple Middle Eastern river-canal agricultural systems created by ancient state developmentalism in this area) to only several hundred years (as in the case of European states' changes to the Rhine River).

Most analyses are single case studies of one region or one major state in a region dominating the environmental context (i.e., chapters on China or Russia), however, there are several comparative chapters like Burke's chapter on multiple state developmentalism in the same region of the ancient Middle East, another one by Michael Adas on comparative rice frontier expansions in Southeast Asia and the environmental effects it had on different delta regions, and somewhat in Sedrez's chapter on Latin America and the environmental contexts created by the policies of different states.

The book is divided into three sections. Part one is called "Overview" though it is really a world historical theory of the editors' own (discussed below), with which some authors in the book's chapters disagree. Part two, "Rivers, Regions, and Developmentalism," has regional or comparative regional studies about water, shockingly leaving out North America and the hegemonic United States despite its ability to materially and ideologically determine much of the world's environmental conditions in different regions for much of modern history after World War II. I think the editors intentionally left out North America/United States because to include it would go against another part of their theory (this part is not demonstrated and is unconvincing, extremist, and artificially dichotomized) that intra-regionality is more tangible and more important than political economic theories of cross-regional pressures in world history. Thus world-embracing theories of dependency theory or world-systems analysis via commodity chains that have defined modernity as an innately cross-regional phenomenon, built states internationally, and defined environmental historiography from the global level inward to the regional is the epistemological 'other' with which they disagree. I am sad to see such a harsh methodological dichotomy 'theorized' between global and regional historical processes of politics because such an excellent regional book can only be improved by including this 'glocal' aspect of regional history. However, the book suffers from its lack of review of this perspective in

Copyright ©2011, American Sociological Association, Volume XVI1, Number 1, Pages 244-278
ISSN 1076-156X

environmental history and typically a lack of addressing it in the regional chapters. Part three, entitled "Landscapes, Conquests, Communities, and the Politics of Knowledge," deals with contention in social construction of the same regional environment for different uses by different interests, showing how selected definitions, ideologies, and certain interests can dominate the rules of definition of what the environment is to be used for—against other subaltern groups that lose their abilities to define their local environment for their own use.

As Pomeranz writes, the theme of the volume is "commitments to state-building, sedentarization, and intensifying the exploitation of resources [that] we have designated the developmentalist project." (p. 7). "What then were the concrete manifestations of the developmentalist project? Perhaps the most basic is a continuing increase in incentives and pressures to expand economic production" as a common theme, whether the distant past or the present. Thus state projects of developmentalism or state formation from scratch are what most authors analyze regionally, both for their ideological claims and their material policy power interactively across widely different temporal eras as similar. "We make state making processes drive the global intensification of land use…the latter cannot simply be ascribed to capitalism, much less to an Enlightenment [European epistemology later exported worldwide] that emerged when these processes were already in full swing." (p. 5) Ergo, shockingly, they edit entirely out any mention of inter-regional domination or mere inter-regional relation from the story of the world history of the environment!

This means they mischaracterize state formation in the modern world since much of state formation proceeded in the past several hundred years because of such world systemic dynamics instead of developing in autarkical isolation. Thus state formation is incapable of being understood without combing the local and international links. Further puzzling is that many other historians for generations have been aware of this interaction of regional and global politics in state formation. For instances of critiques of the editors' main thesis, Canada's 'national' sovereignty seemed required in the 1860s to justify bond issues being more sellable internationally for investment in a cross provincial network of railroads connected to international extraction regimes (reading any book by the pioneer historian of international raw material flows, Harold Innis). Second, state formation cannot be only a mere regional phenomenon since in oil rich areas of the world state formation and elaboration is keyed into the world system of oil commodity chains—particularly clear in Venezuela (reading Terry Lynn Karl's *The Paradox of Plenty*) or in Saudi Arabia and Kuwait (both sponsored into existence by British or American oil company aids; reading Brown's *Oil, God, and Gold: The Story of Aramco and the Saudi Kings* (1999)). Third, international coffee commodity prices and the material specialization of robusta coffee in mass market Brazil in the 1800s led to market specialization being possible for smaller territories globally in finer coffees. This encouraged state elaboration in Central America to arise in a particular time around coffee elites, simultaneously globally dependent upon conditions in the world system of coffee combined with the very different regional specifics: the local environment, previous land tenure relationships, and labor supply. It is impossible to understand Central American state formation without reference to the world, commodity, and price regimes in the world coffee markets (reading Robert G. Williams *States and Social Evolution: Coffee and the Rise of National Governments in Central America* (1994) [Editor's note: see John M. Talbot' review essay on coffee, *Journal of World-Systems Research* 16:2:291-301). Since oil and coffee are the first and third most profitable commodities in world trade (second is illegal drugs,

according to the United Nations), this is hardly a small issue in world environmental history if these states were built from the globalized 'outside in' instead of the regionalized 'inside out'.

So the editors' case is wrong in assuming a huge phenomenological difference where they claim that state formation is a regional phenomenon "opposed" to world system dynamics in more modern times. They seem unaware that the history of state formation in the past few hundred years has been a global phenomenon as well. Moreover, the 'second generation' of world-systems analysis and dependency theory have already integrated intra-regional and inter-regional processes into their analysis several decades ago. See Alvin So's review in *Social Change and Development* (1990).

The editors have another conceit that environmental conflict is very modern and localized: "Whatever one calls it, [state] developmentalism and resistance to it [i.e., its externalities] frame much of the environmental history of the last several centuries." However, this is another misleading intra-regional limitation on the history of environmentalism, as it ignores international networks of developmentalist pressures and revolts against them (like in Chiapas in Southern Mexico in opposition to international free trade zones); or ignoring that international war instead of local economic pressures is a major degradative force in 'local regions' (like in Afghanistan or Iraq with U.S.-led-NATO or U.S. military invasion and occupation for instance); or ignoring the internationalization of environmental movement networks (mentioned in history books that show environmental movements are innately internationalized and cross-cultural influences, seen in Guha's *Environmentalism: A Global History* (1999) or in Hawken's *Blessed Unrest* (2007)). Second, others have argued strongly against thinking that there is something exclusively modern about environmental protest. Sing Chew writes that state/social movement contention over environmental conditions is far older than "several centuries," in his three-volume work of world environmental history starting with *World Ecological Degradation (2001)*, which they should know about before thinking environmentalism is entirely a modern phenomenon. My *Ecological Revolution* (2009) came out the same month as their edited book, and I argue something similar to Chew. I cannot agree that environmental social movements are novel phenomena caused by such 'modern' scales of state economic intensification when worldwide environmentalist concerns are so deeply connected with the origins of ancient religious protest movements thousands of years ago or in the present.

Third, the editors claim to reject "periodization" strategies of world history though they really only reject periodizations of others. They dislike framing history in economically defined epochs or into Marxist theoretical modes of production, yet adopt their own economic periodizations [1] based on novel energy regimes making a presumed radical break from the past that potentially help us avoid 'declensionist' narratives, and [2] how recent state intensification of the economy of only the past several hundred years is responsible for mounting anti-systemic 'pro-environmental' pressures. Chew and I argue otherwise: that environmentalism and its cultural effects are a far older state-opposition phenomenon.

In short, they prefer to analyze state developmentalism as a common regional, existential issue worldwide without reference to global issues. "We treat European capitalism and science as culturally specific variants of patterns found much more broadly." This view would have been justified if they had more detailed European case chapters on this revisionist topic of treating Marxism or capitalism in Amer-European society as a Foucauldian 'power/discourse' that has affected the European/American environment's regional definitions, uses, or conditions. This would be interesting. Alas, they don't do this very much except for analysis of the 'capitalist

internationalization' of the Rhine River and its environmental effects, or where Weiner in his chapter argues how Marxist ideology contributed to ignoring of degraded conditions of the ex-Soviet Union, particularly in Maxim Gorki's writings. However, Weiner's chapter on Russia argued that Marxist discourse was not totally to blame for deep-seated Russian degradation since similar harsh state depredations and extractions on the people and environment extended back for a thousand years. What the book sorely misses is a chapter equally critical on how capitalist and state elites defined the U.S. regional environment to their benefit (or defined other people's regional environments worldwide for their region's benefit). However, they do not address the North American region or its regional relations to the rest of the world; nor do they address the Chinese state's modern and massive pull on cross-regional global transformation in African minerals and agricultural economies of states there in a novel 'Cold War' with U.S. influence in Africa (reading Engdahl's *Full Spectrum Dominance* (2009)), despite China being ranked as the number one consumer of materials worldwide for several years now.

Thus, there are many flaws to discuss. To summarize, first despite the book being a great overview of most world regional areas which I was overjoyed to see major world historians address, it has a very disjointed temporal coverage. Only Burke contributes to something that might be called world historical—with his 'longue duree' of the massive Middle East environment, analyzed from 1500 BCE to 2000 CE. Burke's chapter is worth the price of the book in his magisterial summary of much of his (and his mentor Marshall Hodgson's) lifelong work on the cultural heartland of Islam. Other chapters' temporal coverage covers mere 'modern times' of the past several hundred years. Second, mentioned above, the book has a strange lapse spatially by missing the major environmental regions of North America and Australia/New Zealand/Oceania—possibly because to include them makes them difficult to explain seriously without reference to cross-regional analysis. I found it annoying that there was nothing in the material section of the book on Latin American state formation that easily would have qualified the editors' thesis of intra-regionality dominance in state formation. Instead, Latin America is discussed only from the point of view of how historians have socially constructed environmental history there, instead of addressing material constructs there.

Third, this leads to how the book is methodologically flawed in two ways. First by its insistence to discuss only local regional pressures on environmental degradation and definition, yet the editors stretch what seems a biased sample of regional case studies into general principles dominating history simply by ignoring in their narratives much mention of cross-regional pressures in world environmental history. To the contrary, regional state formation and cross-regionality have been successfully integrated together in other historians' work. Therefore, the editors' insistence to place state formation as 'regional,' while cross-regionality is ignored as somehow opposed to state formation, is a false premise.

Thus the book's overview chapters read like an ideological argument framing intra-regional processes as 'the orthodox, real history' and mention of cross-regional ideas in world environmental history are framed as heretical. In the preface, the editors argue, "world history has done better at comparing regional-scale phenomena than at providing new narratives in which the global itself is the unit under consideration." This statement is offered without any scholarly review of the other epistemological views in world history where cross-regional dynamics are more important than internal regional ones, and it is offered without seeing how the division itself between the two levels has been successfully merged in other books above. What was shocking to me is that they fail to mention world systems theory even once, a huge flaw. Moreover, they

openly discusses dependency theory only to lambaste it—using these two theories I believe as an unvoiced foil without letting the reader openly know it is attempting a novel statement of world environmental history without them. Thus there is this tinny ideological tinge to some of the summary chapters or some regional chapters. Dependency theory and its senses that inter-regionality dominates world environmental history get mentioned only to dismiss them as "*narratives* of dependency (it's just a 'narrative' you see), victimhood, and romanticism." This is pretty hostile stuff from the two American editors, and even the authors from Latin America and India break rank with this view that inter-regional analysis in world environmental history is 'wrongheaded' or that 'declensionist' thinking makes no sense to their regions. On the contrary, the Latin American chapter says declensionism makes a great deal of sense there, even if this view has unfairly dominated the narrativization of the history of the region opposed to other environmental history topics equally interesting like urban environments or border environmental territories and the competition between Latin American states for them.

So the book becomes an unevenly selected series of autarkic histories of regional state developmentalism attempting to prove the mettle of such a perspective against cross-regional world environmental history. This is hard to justify when much of the book's temporal discussion is occurring in the midst of the expansion of European empires, their cash crop plantations, and water control measures worldwide. In other words, the editors face a serious disconnect between their grand theoretical views of world history and their sometimes myopic topics discussed in their case studies. The chapter on India is perhaps the only chapter in the book that loudly and openly disagrees with the editors by providing the required synthesis between intra-regional and inter-regional dynamics in its discussion of how the Indian state developmental project's definitions and strategies changed under the British Empire's pressures in India. Previously, state developmentalism pressures were kinder on nomadic populations and non-integrated populations that had a detailed, functional, and useful place in a native Indian state system. However, the British Empire's construction of the purposes of the environment in India was without a place for these issues even if the British were forced in some ways to adapt to them over time to make the Raj work.

In summary, I argue there is little 'world' historical about much of their empirical analysis except their theory chapters. A more accurate title of the book would have been "The Environment and Comparative Regional History, with Some World Historical Claims Drawn Exclusively from It." Despite stating their interest in singular regions comparatively, their theoretical claim is otherwise: it is entirely about global theories of history where intra-regional issues matter far more than cross-regional or world systemic ones. This dichotomy damages their historiography. Mentioned above, other regional state formation and state degradation studies that integrate global contexts show this divide can be removed in global environmental history. Second, if they do have a grand world theory, it is quite modernist: they feel state developmentalism is seen in the past or the present of course though more modern states' developmentalism has destroyed the "old biological regime" (of limited agricultural/energy production which Braudel or Malthus is seen by them to have described its 'real' dynamics). This has brought "new technologies and energy resources" that can potentially lead toward sustainability. "Thus we cannot assume that the developmentalist project invariably leads to environmental degradation," they say. However, the book imparts the opposite lesson in its regional histories. If they wanted to argue differently in theory like William McNeill does, that there is currently "something new under the sun" (pro-environmental technological movements,

summarized in his book of the same name which they are fond of quoting), they should have provided data to the effect. However, they do not provide that data for such optimism in any of their regional studies. I would have loved to see a good review of many intra-regional material and ideological pressures for sustainability. However, this is missing despite being a crucial argument of the editors. Fourth, this is the other flaw methodologically, and it follows from the first methodological critique: the editors disagree with 'declensionist' narratives of environmental decline theoretically (perhaps because these are so closely related to dependency narratives), yet declension and decline are seen throughout their regional cases. It does not make sense that they miss this glaring fault, though they do.

In conclusion, what they could have done was to remove an intellectualized false dichotomy 'between' regional and dependency or world-systems views by discussing the expansion of one region worldwide, or the expansion of scale of this constructed regionality worldwide over time, or how world cross-regional interaction created modern state formation and environmental conditions in the first place (mentioned in the books above). Such are the books the editors ought to examine to reevaluate their pointless attempt to differentiate between regional and global processes. I encourage more world historians to tackle environmental issues. The attempt to combine sociological theory of environmental problems with fine-grained regional histories of state degradation is a good start because there has been an analytic separation between much environmental sociology and deep historical analysis and because there has been an analytic separation between the biophysical environment and the social sciences in general. Both divides have been crippling for understanding long-term processual political pressures that create environmental problems. However, after solving the above two divides, the editors' insert a novel artificial divide between global and regional processes. World historians should take a more historical view of regionality by seeing a regional process as changing in scale over time typically toward a larger regional interaction. More time should be spent building bridges between sociology, history, and environmentalism. This book contributes toward it, though there are more bridges to build that are incomplete in this book.

Mark D. Whitaker
Professor, Sociology
Department of Sociology
Department of International Relations
Kookmin University
Seoul, Korea
Whitaker@kookmin.ac.kr

Turchin, Peter, and Sergey A. Nefedov. 2009. *Secular Cycles*. Princeton: Princeton University Press. 362 pages, ISBN: 978-0691136967 Cloth ($35).

Biologist Stephen Jay Gould used to tell the story of how physicist Richard Feynman once boasted to him about an amazing new discovery. Feynman had discovered evolution. In 1961 Feynman had the incredible biological insight that the distribution of genetic traits in a population should change over time due to the survival of the fittest. Within a week he had worked out the basics of sexual selection: why peacocks have fancy feathers, etc. He even rediscovered

evolutionary incentives for monogamy in females and polygamy in males. Feynman's idea was certainly brilliant; the only problem was that it was a hundred years too late.

Turchin and Nefedov's cliometric tour de force is reminiscent of Feynman at his best: absolutely brilliant, somewhat quirky, sometimes amateurish, but always provocative. The authors take a neo-Malthusian approach to interpreting the historical development of large-scale agrarian societies including pre-modern England, France, and Russia as well as an extended discursion into ancient Rome. One is tempted to call their approach "neo-Goldstonian," since for Turchin and Nefedov the only historical sociologist is Jack Goldstone (with an occasional nod to Theda Skocpol and Randall Collins). Their idea, in a nutshell, is that the histories of agrarian societies were dominated by demographic booms and busts not just of the general population, but of elites as well. They follow Goldstone in calling this the "demographic-structural" theory of history.

In the demographic-structural approach, demography is not determinative in itself (as for Malthus) but must be examined in conjunction with social structure (as for Goldstone). The authors present a simple model of agrarian societies, which they define as those in which at least 50% of the population and more often over 80%-90% of the population engage in agriculture. They reduce agrarian social structure to two classes (elite and non-elite) and study how the relative demographic weight of each changes over time. They posit four demographic-structural phases:

- Expansion phase: population grows from nadir; elite numbers low;
- Stagflation phase: population is high; elite numbers rise;
- Crisis phase: population begins to decline due to Malthusian pressures; elite overpopulation leads to political conflict;
- Depression phase: population stagnates; elite numbers are decimated by war and economic collapse.

The key driver of capital – H "History" in their model – the elite history of politics and wars, kings and castles – is elite overpopulation. To put it bluntly, as long as there is plenty of empty land to develop (expansion phase) or plenty of peasants to exploit per member of the elite (stagflation phase), elites focus on living the good life. However, once the carrying capacity of the land is reached (crisis phase), intra-elite competition starts to tear apart the fabric of society. Interestingly, Turchin and Nefedov see the rise of elite education and commoner artisanship as signs of crisis: elites seek university degrees and consequent bureaucratic employment only when opportunities to exploit rural peasants are scarce, and commoners turn to craft production for elite markets only when there is no free land available to farm. I had never thought of museum-quality artifacts in this way, but their analysis makes complete sense.

Similarly provocative is the authors' observation that secular cycles of the kind they describe would occur much more rapidly in societies that are characterized by elite polygyny. They cite Ibn Khaldun in noting that elite numbers can grow much more rapidly in traditional Moslem societies than in traditional Christian ones due to the very large number of inheriting children produced by Moslem elites. The result is that medieval Moslem elites soaked up any excess social production almost immediately after a demographic collapse, whereas medieval Christian societies took many generations. Cycles thus had a much shorter time from trough to trough in Moslem agrarian societies than in Christian ones.

The main shortcoming of this book is its lack of sociological grounding. To be fair, the authors are not sociologists – Turchin is a biologist and Nefedov a historian – but their material is fundamentally sociological. After all, if sociology is not the science of history, then what is it? The authors excitedly conclude that they are "optimistic about the future of history as science" (p. 314) but for the rest of us history has existed as a science since the days of Emile Durkheim, Vilfredo Pareto, and Max Weber, not to mention Karl Marx. Moreover, many contemporary sociologists (besides Jack Goldstone) are working on long-term historical dynamics. It is odd that the authors do not so much as cite Janet Abu-Lughod, Chris Chase-Dunn, Gunder Frank, Thomas Hall, Stephen Sanderson, or Immanuel Wallerstein.

This lack of sociological grounding is surely due in part to the authors' own background, bur poor editing must also take some of the blame. The authors write as scientists, taking a "just the facts, ma'am" approach to their subject that results in over 300 pages crammed with evidence – and very little else. For example, there is no preface. There is no explanation of why they wrote the book, why the topic is important, or how the authors' arguments fit into larger theoretical debates. There is not even a brief "about the authors" blurb. The text abounds with statements like "Here are some examples:" and "Here are some facts:" followed by long lists of data. These kinds of stylistic problems should have been addressed in the editorial process; it is odd to see a book from a major university press that is so poorly edited.

That said the intellectual content of the book is staggeringly impressive. It is hard to quarrel with Turchin and Nefedov's careful analyses, and their data sources are extensively documented. For anyone interested in applying social theory to historical data on pre-modern Europe, *Secular Cycles* will be a treasure trove of data from obscure sources; the authors have certainly done their homework. Turchin and Nefedov's demographic-structural model also has the potential to spark several Ph.D. theses applying it to societies other than the four studied here. In short, this is a solid and persuasive work, a true scientific monograph. It is certainly not easy going, but highly-motivated scholars will find it extraordinarily rewarding reading.

Salvatore Babones
Department of Sociology and Social Policy
The University of Sydney
sbabones@inbox.com
http://salvatorebabones.com

Beckwith, Christopher I. 2009. *Empires of the Silk Road: A History of Central Eurasia from the Bronze Age to the Present*. Princeton: Princeton University Press. 472 Pages. ISBN 978-0-691-13589-2 Cloth ($35).

Acknowledging the Other

Over world history, Central Eurasia has often been viewed as providing the conduit (the Silk Road) for trade to flow between the East and the West, and on different occasions, it has impacted on the social, political, economic relations in the East and West with the migrations/invasions of its nomadic tribes. That has been our understanding of world history as told to us by most historical studies of Central Eurasia. Christopher Beckwith's *Empires of the*

Silk Road seeks to provide us with a different view of this commonly accepted understanding of the role and function of Central Eurasia. Instead of placing Central Eurasia in its peripheral role, and hence part of the periphery of the world system, Beckwith proposes that Central Eurasia has played a key role in the making of the modern world. The book traced the history of Central Eurasia from the earliest times to the modern period documenting the dynamics of the relations of this region to what Beckwith has defined as the 'peripheral civilizations' such as China, India, and Europe. In an effort to break down the myth of Central Eurasia, Central Eurasians of the past according to Beckwith were not only nomads but as well agriculturalists, urbanists, traders, and merchants. Instead of our orthodox impression of these Central Eurasian tribes as invaders and pursuers of luxuries and other goods that they obtained through raids and invasions, Beckwith wants us to view them as tribal groups that charged out of Central Eurasia because their trading interests were restricted during certain periods of world history as a consequence of the geopolitical policies and dynamics of the peripheral civilizations such as China, etc. In short, to Beckwith, Central Eurasians of the past with its tribes and states were no different in terms of economic and political interests than their counterparts (peripheral civilizations) existing on the fringes of Central Eurasia. What this means is that these 'barbarians' as most historical accounts have pejoratively defined Central Eurasians, went to war because of trade restrictions like everyone else in the world system and not for lust.

Beckwith's explanation for the dynamics of the political economy of Central Eurasia over world history rests mainly on a cultural explanation. For him, the organization of the Central Eurasian political economy was around what he has termed: the Central Eurasian Culture Complex. The Complex is the basic social organization of tribal groups in Central Eurasia. The social relationship is that of the lord/ruler surrounded by his comitatus warriors whereby loyalty and fealty are rewarded with gifts from the lord/ruler to his followers. According to Beckwith, this social organizational feature generated a powerful economic need on the ruler/lord's part to engage in trade so that this basic exchange relationship can be maintained and consolidated. To such an extent, Beckwith even extended this explanation to suggest that the economic engine of the Silk Road was based on internal demand of Central Eurasians for the products of its own people, and that of the peripheral states neighboring Central Eurasia. Such is the crux of Beckwith's thesis and argument, and the book is replete with a detailed historical exposition of Central Eurasia's tribes, states, and empires. It is rather refreshing to read another revisionist's view of world history, and especially one covering a region which has not had much historical accounting. Unfortunately, Beckwith's history and its explanation for the historical processes, structures, and events remain limited as his narrative is guided by his penchant emphasis on the cultural dimension to explain the trajectory of the evolution of Central Eurasia in world history. Beckwith does not offer any other factors that might also provide plausible explanations for the dynamics of the political economy of Central Eurasia. In an era when the environmental factor has returned to be a useful accounting of socioeconomic and political evolution, Beckwith's book is quite silent on this dimension. There is no deliberation on whether this factor had conditioned the socioeconomic and political trajectory of Central Eurasia in world history. As recent studies have shown, environmental degradation and climate changes have impacted on the landscape of Central Eurasia, and consequently on the economics and politics of Central Eurasia over world history.

Notwithstanding the above, it is very clear from Beckwith's accounting that Central Eurasia participated in the system-wide process of capital accumulation in world history. If this is

the case, the dynamics of the world system such as hegemonic shifts and long cycles of economic expansion and contraction must have also shaped the political economy of this region. Beckwith does not pay much attention to these system-wide processes. Other than a few references to economic conditions at the system-wide level, his discussion of Central Eurasian historical structures and events overwhelmingly focus on a descriptive elaboration of conflicts and wars that Central Eurasian polities engaged in, instead of placing such events within long-term cyclical economic considerations.

Despite the above reservations, the book does have some insightful sections examining the spread of science and technology and how Central Eurasia has played a major role in the development of science and technology, the changing importance of land and maritime trade routes in global trade patterns between the rising West and the declining East, the critique of modernity/modernism and the implications it had for the underdevelopment of Central Eurasia in the modern era by the former 'Marxist' Soviet Union and Maoist People's Republic of China, and the orthodox misunderstanding of the Other (Central Eurasia) through the pejorative labeling of the peoples of these lands as 'barbarians'. No doubt, some will question Beckwith's interpretation of historical development in the modern era as it relates to Central Eurasia, especially to what Modernity has done to the underdevelopment of Central Eurasia via the policies of the former Soviet Union and Maoist China. Beckwith's reliance on the cultural/ideological dimension as a propelling force of social change has led him to such an explanatory account with which others might disagree. But at least he tries. This ambitious attempt to provide a broad accounting of the social, political, and economic changes of Central Eurasia over the course of world history to the present has to be commended.

Sing C. Chew
Humboldt State University and Helmholtz Centre for Environmental Research-UFZ
sing.chew@ufz.de
http://www.ufz.de/index.php?en=14507

Bedford, Kate. 2009. Developing Partnerships: Gender, Sexuality and the Reformed World Bank. Minneapolis: University of Minnesota Press. 292 pages, ISBN 978-0-8166-6540-2 Paper, ISBN 978-0-8166-6539-6 Cloth.

Kate Bedford's *Developing Partnerships* chronicles the shift in global governance from the coercive imposition of neoliberal capitalism on the developing world through structural adjustment programs to a more consensual and cultural means of ensuring neoliberalism's global hegemony. Through a careful analysis of the World Bank's Gender and Development (GAD) projects in Latin America and the Caribbean in the "post-Washington Consensus" era, Bedford illustrates the primary role that gender and sexuality play in embedding neoliberal logic into the cultural fabric of everyday lives in the global south. She demonstrates that it is through the promotion of heteronormative partnerships that the World Bank attempts to stabilize economic markets. As such, the book makes a compelling argument that links the promotion of normative intimacy with shifts in the global political economy.

In response to world-wide critiques and protests against the impact of structural adjustment on the economies and livelihoods of people in the global south, the World Bank

changed its development strategies in the 1990s to focus more on good governance, civil society, social safety nets, poverty eradication, and equity. These new strategies of governance are much more difficult to contest and have been adopted as the "new common sense of our times" (p. xx). The World Bank's GAD projects essentialize gender binaries, suggest that liberalization naturally leads to a more equitable household division of labor, and promote normative families as the "ultimate marker of good development" (p. 200). Bedford seeks to trouble and disrupt the hegemony of the gender and sexuality regimes being promoted through this post-Washington Consensus.

Bedford argues that in its 1990s transition, the World Bank paid heed to the specifically gendered effects of its 1980s neoliberal policies, namely the crisis of social reproduction produced by the feminization of the labor market, which both overburdened women and led to a "crisis of masculinity" amongst poor men in the global South who, the argument goes, were increasingly driven toward violence and alcoholism with the loss of their identities as breadwinners. The Bank seeks to resolve the tension between unpaid and paid labor through an emphasis on loving partnerships and strong family values. Under this new model, women are encouraged to enter the work force as a means of achieving autonomy and empowerment, whereas men are encouraged to take up the unpaid social reproductive labor women no longer have time to do. In this way, the family becomes a key mechanism for providing the social safety nets seen as crucial for poverty alleviation, and relieves the state of responsibility, thereby ensuring the continued privatization of social reproduction. Drawing on Nikolas Rose's critique of contemporary neoliberalism (*Powers of Freedom*, 1999, Cambridge), Bedford suggests that the Bank's GAD policies target women for entrepreneurialization and men for responsibilization – in order to turn them both into citizens who will govern themselves in the wake of the state's retreat.

Bedford argues that these new World Bank policies are deeply problematic because they are based on unjust characterizations of both poor men and women living in developing countries and because they sideline the important issue of child-care. Let me take each critique in turn. First, assumptions that poor, "Third World" men "act out their wounded masculinity through violence and drunkenness … echo colonial assumptions about lazy natives and barbaric brown men" (p. 31). In addition, the many unemployed men who contribute to unpaid household labor and the many absent husbands and fathers who migrate in search of work and contribute to the household income through remittances are rendered invisible by the Bank's assumptions of masculinity in crisis. "Making groups legible requires turning those who do not fit the frame into pathologies or anomalies that need to be transformed" (p. 85). In the chapter detailing the ethnodevelopment loan given to rural indigenous and Afro-Ecuadorian communities in Ecuador, Bedford illustrates the ways in which the Bank's gender development projects often promote and sustain racialized hierarchies. In addition, these projects make distinctions between appropriate and inappropriate performances of indigeneity based on the extent to which communities are willing to (or are perceived as willing to) assume the ideals of sharing and monogamous partnerships.

The second primary critique Bedford makes of the Bank's GAD projects is in reference to the promotion of women's employment as a means of achieving empowerment. In the chapter focusing on Ecuador's flower industry, Bedford uncovers a fundamental contradiction in the Bank's policy on women's employment: "on the one hand regarding women as self-interested autonomous actors enabled through wages to pursue their own erotic destinies, and on the other regarding them as necessarily attached, by enduring love, to specific others with whom they will

altruistically share their income" (p. 109). And in the chapter mentioned above on the Ecuadorian ethnodevelopment loan, Bedford shows how the Bank's desire to prove that women's employment leads to empowerment requires Bank employees to ignore the fact that many indigenous women were already working before the loans were introduced (p. 142).

Finally, Bedford points out that the Bank's new GAD projects sideline the question of child-care. Although the provision of child-care seems the most logical policy response to the crisis of social reproduction (and one which women in developing countries overwhelmingly called for), such an initiative could not be supported by the Bank because it would require governmental intervention and social spending. Husbands become the only agents available to relieve women of their overburdened double duty because they do not cost the state a penny. In addition, engaging in housework and child-care is supposed to make men more "responsible," thus shielding them from their proclivities toward alcoholism and violence. As such, the World Bank "hails gender balance to intensify the privatization of social reproduction" (p. 203).

With all of these important critiques, it is somewhat surprising that Bedford overlooks another crucial point. While the Bank congratulates itself for incorporating feminist critiques into its post-Washington Consensus gender and development projects, these policies remain grounded in a patriarchal logic which undervalues women's labor. The Bank accepts the assumption that women deserve to be paid less than men and that the low-wage jobs being created in many developing countries (such as service work, call centers, or sweat shops) *should* be "women's work." Bedford could have done more to demonstrate that the feminization of the labor market has occurred, in part, because jobs stigmatized as feminine are underpaid and insecure.

Bedford's methodological approach combines a discourse analysis of speeches and World Bank reports, interviews with World Bank staff at regional and local levels, and case studies of particular World Bank initiatives in Ecuador and Argentina. As such, she engages in what David Mosse has termed an "ethnography of policy and practice" *Cultivating Development*, 2004, Pluto) examining institutional bureaucracies and practices, the knowledge-production process, staff interactions with and interpretations of policy, and the ways in which these policies are both enacted and contested. Also important is her attention to the World Bank as a knowledge regime. In the second chapter, Bedford shows that the research that goes into World Bank reports and policy documents is often heterogeneous and complex, but "as research travels up the internal hierarchy of texts … this nuance tends to get lost, as the findings that resonate with certain framings of the gender-policy problem become increasingly prominent" (p. 60). Given an object of analysis as monolithic as the World Bank, Bedford proceeds with great skill and attentiveness, paying heed to the "contingencies" and "frailties" of policy, while simultaneously unveiling hidden assumptions and the operations of hegemony. Such a rich, careful, and multi-layered methodological approach is worthy of emulation and significant in its findings.

In the conclusion, Bedford admits that she has attempted to combine a glass-half-full reading of Bank policies that acknowledges the important ways in which feminists have had a hand in transforming the Bank's development approach as well as the creative ways that people have used Bank loans to promote feminist projects with a glass-half-empty critique that "pays attention to the dangers of the new common sense we are naturalizing about gender, sexuality, class and race" (p. 213). While I appreciate the difficulties that arise from trying to maintain such a tension throughout the book, there were several points in Bedford's analysis that called for a harsher critique of the *economic* impact of the Bank's policies. The maddening contradiction that really characterizes the so-called "reformed" World Bank is that while paying lip service to

poverty alleviation and equity, its bottom line is still the protection of free market liberalism which promotes corporate profit through the super-exploitation of the poor and the steady eradication of all social welfare. The subjectivities forged by the post-Washington Consensus model of development which insist on both entrepreneurial and responsible citizenry allow for the displacement of blame for poverty alleviation. Subjects of this new neoliberal regime are required to assume certain disciplined behaviors in exchange for social safety nets and the price to pay for failure is destitution and neglect. In addition, the Bank's new attempts to respond to the crisis of social reproduction very deftly deflect attention away from the fact that few new jobs have been created and existing jobs are both precarious and poorly remunerated. In fact, I would argue that Bedford's lack of attention to the Bank's primary economic motivation serves to naturalize the hegemony of neoliberalism, as if there really are no (longer) any alternatives.

That being said, Kate Bedford's argument that neoliberalism's global hegemony cannot be fully understood without a lens focused specifically on gender and sexuality is an essential contribution to the literature on international development, globalization, and neoliberal macroeconomics.

Claire Laurier Decoteau
Department of Sociology
University of Illinois at Chicago
decoteau@uic.edu

Cervantes-Rodríguez, Margarita, Ramón Grosfoguel, and Eric Mielants, eds. 2009. *Caribbean Migration to Western Europe and the United States: Essays on Incorporation, Identity, and Citizenship*. Philadelphia: Temple University. 261 pages, ISBN 978-1-59213-954-5 Cloth ($59.50).

Midst a flurry of recent scholarly and journalistic accounts of increasing immigration to industrial, capitalist democracies, *Caribbean Migration to Western Europe and the United States* offers a paradigmatic approach to understanding the complexities of immigrant integration and identity. The majority of recent comparative research tends to focus on European and American political responses to immigration rates or the impact of incorporation regimes or other national-level policies on immigrants' economic or cultural integration. While these remain important topics of inquiry, researchers privilege either variation in national policies or variation in the human capital of particular immigrant groups when explaining integration success or failure. Moreover, most studies lump together foreign-born populations when explaining native-born population's attitudinal or behavioral response to immigration. *Caribbean Migration* takes a different approach. In this edited volume, Margarita Cervantes-Rodríguez, Ramón Grosfoguel, and Eric Mielants bring together research that considers the legacies of colonialism on immigrant integration and identity. Ultimately, they provide an analytically refreshing and unique approach to understanding immigrant experiences.

In their introduction to the book, Cervantes-Rodríguez, Grosfoguel, and Mielants make a convincing case for applying the coloniality of power argument to the transnational experiences of Caribbean emigrants. Cervantes-Rodríguez and her colleagues make two important points. First, they argue that methodological nationalism has, ironically, imposed boundaries on

processes that are inherently peripatetic. Second, this has particular implications for migrants from the periphery to the core. Indeed, for centuries, Europeans conquered and colonized the Caribbean, creating a lasting legacy of unequal power-relations among nation-states. Since the post-World War II economic boom, millions of people from these non-independent territories and independent former colonies have migrated to the United States, Netherlands, United Kingdom, and France. Much of this migration is facilitated by the fact that citizens of these islands are also citizens of the Western country that colonized it. Thus, these migrants' experiences, by definition, can be described as transnational because their daily activities and identities are influenced by multiple social fields (Glick Schiller, pg. 29). More importantly, however, the historical relationships between these locales significantly affect migrants' economic, social, and cultural experiences.

The book is organized into three parts, which vary in their scope, empirical evidence, and theoretical contribution. The first section, titled "State Policies and Migrants' Strategies," is the most successful of the three in terms of advancing the coloniality of power argument. Through three separate case analyses, Michel Giraud, Eric Mielants, and Monique Milia-Marie-Luc demonstrate quite effectively the commonality of Caribbean migrants experiences—regardless of country of origin or destination. This is no small feat. By focusing on the economic and cultural integration of Caribbean immigrants in France, the Netherlands, and the United States, Giraud, Mielants, and Milia-Marie-Luc elucidate the impact of colonialism on native-born attitudes and the incorporation of these populations into European and U.S. societies. One of the most interesting and important insights is that, regardless of citizenship, integration is hindered by colonial legacies of racism. Immigrants from French Guiana, Suriname, or Puerto Rico are legally French, Dutch, or American; yet citizenship does not translate into increased opportunities or likelihood of economic success for these populations. In fact, these migrant groups tend to fare worse than foreign-born from countries without a shared colonial past. Modernization theory and other cultural explanations that look to migrants' human capital in order to understand immigrant integration have missed an important pattern here (Mielants, pg. 67). Giraud, Mielants, Milia-Marie-Luc cite research that shows that human capital cannot fully explain the low status of these immigrant groups. Indeed, racism and discrimination are the common denominators for these immigrants in spite of citizenship and regardless of origin. Native-born populations perceive immigrants from the Caribbean "as 'not completely belonging,' although they are not, strictly speaking, foreigners" (Giraud, pg. 45). Colonization, paternalism, and the historical construction of race prove significant obstacles to integration.

The next section, "Identities, Countercultures, and Ethnic Resilience," provides less evidence in support of the coloniality of power argument and focuses instead on both the common themes and case-specific nuances of transnational cultural processes. Lisa Maya Knauer addresses the ways in which immigrants use cultural practices and social spaces to connect with their "roots" and engage in bicultural identity work. Immigrants engaged in Afro-Cuban culture in New York are able to transcend geographic boundaries and experience "long-distance nationalism;" further, the existence of non-Cuban participants in cultural practices such as the rumba highlight the fact that non-migrants are part of these transnational social fields as well. Livia Sansone, also finding that non-migrants participate in the making of a "new black culture" in the Netherlands, provides supportive evidence of the effect of migration on the cultural practices in Western metropolitan centers. Elizabeth Aranda finds that transnational social spaces facilitate hybrid, or bicultural identity formation. Moreover, according to Aranda, global cities

such as Miami provide ethnic minorities a space to attain cultural citizenship, thereby reducing the stigma associated with being both Latino and Puerto Rican. These essays, although they focus on the idiosyncratic cultural experiences of different immigrant groups, call attention to general processes nonetheless.

The last section of the book is the least theoretically or empirically cohesive. In order to assess whether or not there is a common Latino experience, John R. Logan and Wequen Zhang document the social and economic characteristic of Hispanic groups in the United States as well as the demographic and socioeconomic make-up of immigrant neighborhoods in Miami and New York. They find more differences than similarities across populations and conclude that there is no "average Hispanic." Laura Oso Casas investigates the social-mobility strategies of female Dominican heads of household in Spain. Although her rich interview data reveals much about this particular group's experiences, unlike in the previous two sections of the book, there is no other chapter that offers evidence of similar phenomena in other destination countries. This does not mean that the occupational, martial, or educational strategies of Caribbean migrants in other countries differ, but the reader cannot generalize on the basis of Oso Casas' findings. Finally, Mary Chamberlain explores the personal narratives of migrant families in order to provide into insight into the Caribbean transnational family culture and complex network of familial relationships. According to Chamberlain, migration does not break familial ties; in fact, Caribbean migrants show greater reliance on extended kin networks, which include "those distanced genealogically, generationally, or geographically" (Chamberlain, pg. 236). Interview data indicates that this is not only an important strategy but also a point of pride for Caribbean migrants dispersed around the world.

Caribbean Migration to Western Europe and the United States offers a compelling look at the transnational experiences of migrants from former colonies and non-independent territories. For the most part the enterprise is quite successful. There are two weaknesses to the project, however. First, the tension between the book's paradigmatic approach and its case-study methodology is not fully resolved. When taken together, these essays do a good job demonstrating that, due to the historical legacy of colonialism, migrants from the Caribbean have comparable experiences regardless of country of origin or destination; yet some sections and particular essays, which compare multiple migrant populations, do a better job than others. Second, the volume's theoretical paradigm actually includes two theoretical perspectives: transnationalism and the coloniality of power argument. These approaches are related but also advance different agendas. Further, the coloniality of power argument is theoretically parsimonious, while a focus on transnational processes uncovers idiosyncrasies of particular migrant groups in particular countries. Nevertheless, the book contributes much to the literature, and its essays should be of interest to scholars of immigration across the social sciences.

Maureen A. Eger
Department of Sociology, University of Washington
meger@uw.edu
http://www.soc.washington.edu/people/grads_detail.asp?UID=meger

Yang, Bin. 2009. *Between Winds and Clouds: The Making of Yunnan Second Century BCE to Twentieth Century CE*. New York: Columbia University Press. 338 Pages, ISBN 9780231142540 Cloth ($60.00), ISBN 9780231512305 Gutenberg-e, http://www.gutenberg-e.org/yang/index.html, copyright 2008 on this version.

The fundamental argument of *Between Winds and Clouds* is that two over millennia of the history of Yunnan and most of Southwest China cannot be understood solely from a Chinese perspective. Nor is it solely a matter of a history of how China incorporated and changed Yunnan. Rather, this history must be understood in a global perspective. Furthermore Yunnan had significant impacts of the development of China, especially its multicultural qualities. Yang further argues that world-system analyses of incorporation are very useful in understanding this history, and notes in several places where the history of the incorporation of Yunnan can add to continuing development of world-systems analysis. This is a complex, yet subtle and nuanced argument, developed over seven substantive chapters. For readers coming from comparative political economy it is useful to note that the style of discourse is that of world history which draws on a large number of primary sources. For those who can read Chinese there is a glossary of romanized terms.

The introductory chapter summarizes the key arguments and gives a general background on the region. Yunnan is an ethnocentric Chinese construct which means approximately the land south of the clouds. The region had at least 25 different ethnic groups which outnumbered Han Chinese immigrants until just a few centuries ago. Yunnan's external connections to Southeast Asia – often known as the lands below the winds – were often as strong as or stronger than its connection to China. Hence, the book's title and a major reason why the region must be studied comparatively as part of a larger world-system.

Yang argues, "Studying how frontiers became peripheral areas in the first place will shed light on the theoretical development of world-system perspectives" (Ch. 1, para 54; p. 15 cloth). Indeed, one can read the entire book as an elaborate exploration of this argument. For traditional scholars of Chinese history an equally important thesis is that no part of China can be studied in isolation – either from the rest of China, or the rest of the world. Because Yunnan had such connections for over two millennia many nuances of creation and modification of a frontier can be examined. An important point is that Yunnan connected to what we now know as Tibet, India, and Southeast Asia via a Southern Silk Road which complemented and supplemented the northern overland Silk Road and the more southerly maritime Silk Road.

The second chapter focuses on the history of the Southern Silk Road. Ironically, silk was not a major trade item along the Southern Silk Road. Goods moved from Yunnan in all directions, thus Yunnan was a major source of information to China about Southeast Asia, especially what we know today as Burma (aka Myanmar). Two products in particular proved very valuable to China: horses and copper. Yunnan is mountainous and highly varied region, one source of its ethnic diversity. It has extensive mineral resources. Because of the altitude of much of the region it was relatively easy to breed horses. Thus, it became an alternative to the northern steppe pastoralists as a source of horses. This capacity was very valuable to China proper which could not breed horses in large numbers due to climatic conditions. The region was finally brought into the Chinese fold via the Mongol conquests in the thirteenth century.

The following chapter examines the many military encounters between Yunnan, or its sub-regions and outsiders, primarily China. Until its conquest, ironically by the Mongols, various

local kingdoms were able to use geographic, climatic, and geopolitical conditions to maintain a degree of autonomy and to negotiate, often favorably, the degree and type of incorporation the region experienced. In lowland areas presence of diseases not common in the north killed many invaders. Mountainous regions presented difficult terrain and at times extremes of cold. Early Han attempts to conquer the region (during the second and first centuries BCE) met with minimal success and were finally abandoned because of the much more serious threats from the Xiongnu in the north. Once the northern frontier was pacified, there were further Han forays into Yunnan, but serious attempts at conquest did not begin again until the third century during the Warring States period. Later one local kingdom, Nanzhoa, was able to play Tang China and Tubo (Tibet) against each other to maintain some autonomy. Early in the tenth century all three kingdoms collapsed. Yang uses this complex history to argue forcefully these interactions formed a regional world-system. This means, among other things, that traditional "national" histories are all misleading. Later interactions with the Song were tempered by Song Dynasty's dire need for horses.

Subsequent Mongol conquest was also relatively mild. The Mongols were not interested in territorial expansion per se but in trade and access to trade routes. As long as those goals were met, local rule prevailed. The following Ming Dynasty sought stronger conquest of the region so as not to be subject to the dependency that the Southern Song had experienced in their need of horses. The Ming sought "to make Yunnan a permanent part of China" (Ch. 3, para 77; p. 95 cloth).

The next chapter explores why and how rule of the region was primarily indirect through local, native or indigenous, leaders. Yang argues that "Sinicization and indigenization were two sides of the process through which a middle ground was negotiated" (Ch. 4, para 1; p. 102 cloth). Chinese began rule of frontier peoples based on native customs, but with the intentions of "civilizing" (sinicizing) them eventually. This took approximately five centuries in Yunnan hence it is an excellent locale to study these process. Throughout there was a balancing of a need to keep the frontier stable, to continue sinicization, and to use indigenous peoples to aid in frontier defense. While the aim was clear, the execution often was messy or even unsuccessful.

The technique, begun under the Mongols, extended into the succeeding Ming Dynasty. It consisted of a centralized, province wide administration. Then local leaders (princes) were appointed to rule subregions. Third, local leaders (native chieftains) ruled in rural areas where indigenous populations dominated. This constituted a "tripod" system. Local leaders had to pay tribute and meet other obligations. However, these obligations did not preclude their continuing payments to other states in Southeast Asia. During the Ming and Qing Dynasties the tripod was modified by a *gaitu guiliu* policy that transformed native chieftains into a part of the imperial administration. Over time this reversed the domination of ethnicity over administration to ethnicity becoming a subdivision of administration. Gradually the sons of native chieftains were taken to Chinese schools in central provinces and were trained in Chinese language and administrative processes. When they returned home and came to power they were in effect agents of sinicization.

The succeeding chapter (5) is in many ways the heart of the book. Yang shows that sinicization and indigenization were sides of the same coin. They contributed to the emergence of Yunnanese as provincial identity and in turn became an avenue for the absorption of some Yunnanese practices in general Chinese identity and culture. After years of immigration, settling of soldiers, and movement of traders by the end of the Ming the Han became the largest ethnic

population in Yunnan. In short, this is a detailed description of the development of a hybrid society. Yang begins with an overview of the various ethnic groups, then reviews the waves of Chinese immigration into Yunnan. Sinicization grows through bureaucratic administration and education of sons of local indigenous leaders into Confucian practices (Yang notes that Confucian practices are **not** identical with Han culture which includes many other aspects). Indigenization refers to the introduction of many "barbarian" customs and goods into Chinese culture such as some types of clothes, dances, chairs, and so on. Local climatic conditions forced changes in introduced agricultural practices. The existence of extensive mining communities led to different types of urbanization. Also coweries (shell money) continued in use longer than any other part of China, the topic of the succeeding chapter. Gender imbalances in immigration led to extensive intermarriage. But intermarriage also gave traders and others better access into local networks. This seems to be the main path by which different sexual practices and sexual tools from Yunnan were introduced into Chinese culture. All of these changes contributed to the emergence of a distinctive Yunnanese identity. Yang traces the roots of the *minzu* system (officially recognized minority groups) which is still in operation today: "In essence, the incorporation of Yunnan helped build China as a multiethnic entity" (Ch. 5, para 144; p. 182 cloth). What is clear in the book, but not is this brief summary is Yang's careful exploration and use of various concepts of ethnicity, and his detailed descriptions of how these changes actually worked.

The penultimate chapter is concerned with money, the redirection of the economy to China, and the increasing, if slow, shift from cowries to copper. Key to these changes was production of silver in Yunnan. By mid nineteenth century Han population outnumbered all non-Han peoples. Copper production reveals how Yunnan was connected to the Chinese world-economy and was incorporated into its administrative hierarchy.

Silver was so abundant that many Buddhist statues were made of it. By the end of the Ming Yunnan produced seventy-five per cent of China's silver, a scale comparable to New World silver imports. Thus, China became partially dependent on frontier and peripheral production. Cowries were useful for local small scale trade, and used extensively in slave trade. They were useful along the southern Silk Road routes because no one state could implement a currency policy. While cowries began to disappear from China about two millennia ago, they remained important in Yunnan. Cowries disappeared for a while during Han times, but when Han authority waned they returned. As late as the Ming Dynasty cowries were used to pay taxes, and used by the Ming to pay local salaries, and even for large transactions, including donations to monasteries.

By mid seventeenth century copper and silver began to replace cowries. The conventional internal explanation is that as trade increased cowries became less valuable than copper and so fell out of use. The conventional external explanation is that trade with coastal areas was disrupted by arrival of Europeans in Southeast Asia which dried up the source of cowries. Others argued that European commercial capitalism increased the cost of cowries so that Yunnan could no longer afford them. Yang combines these somewhat contradictory explanations and ties long persistence of cowry use to southern Silk Road trade, and their subsequent disappearance was due expansion of the European world-system into Southeast Asia. All in all Yunnan remained a frontier connecting multiple civilizations – China, Southeast Asia, and South Asia. He further notes this is grist for the debates about whether there was one or many world-systems and how they connected and merged.

Immigration, as noted, was gradual but increased during the Qing Dynasty. Migration was possible because of opening of hilly areas, especially through use of New World crops, notably tomatoes and corn. Migration led to population growth from about five million in 1700 to about twenty million by mid nineteenth century and to increased urbanization and industrialization. Furthermore there is evidence that the urbanization and industrialization drove growth in agriculture. There also was a see-saw pattern between peripheral and core population growth. These shifts helped promote the creation of a Yunnanese identity that remained somewhat distinct within overall Chinese identity.

The industrialization was due primarily to the growth in copper mining. Yunnan and Japan were key sources of copper. Curtailment of Japanese copper supply heightened interest in Yunnanese copper. This led to a concentration of miners, something that Chinese administrations sought to avoid in other areas of China because such concentrations had been sources of unrest. However, they were necessary in Yunnan. As would be expected the intensity of copper mining and smelting took a severe toll on local ecology. Lack of readily available charcoal eventually slowed copper production. Yang uses this analysis to critique Skinner's macro-regional analysis of the area. He also notes that unlike some other frontiers, the Yunnan frontier had significant impacts the overall world-system through its various external links.

The final substantive chapter is a fascinating discussion of the formation of Chinese identity which uses the variations in Yunnan's identities to explore the development of Chinese multi-ethnic culture. A key shift is from "barbarian" to imperial subjects, to "younger brothers" in the larger Chinese ethnic "family." The creation and history of the *minzu* (officially recognized ethnic group) is examined from a Yunnan perspective. This is a nuanced discussion which tries to sort out the variations of Chinese Marxism, the drive for Han cultural hegemony, and responses to perceived world pressures to recognize minorities. Throughout these changes the capacity of Yunnan ethnic groups to maintain a modicum of autonomy, and the development of a larger Yunnanese identity played key roles in shaping these policies. It is a striking example of how frontier processes and policies can shape national policies.

A brief conclusion sums up the finding from previous chapters. Among many conclusions are questions about whether or not the Chinese movement into Yunnan, Russian expansion into Siberia, and European expansion into the Americas were part of some "global project" or not at all related. This is a topic worthy of further exploration. But this question could not even be asked without this detailed history of the Yunnan frontier. Another interesting contrast is movement into Xinjiang, which is relatively recent especially with respect of Han migration in contrast with the much longer processes in Yunnan. This difference in time depth is at least a partial explanation of why there is considerable unrest in Xinjiang and little or none in Yunnan. Finally, this study illustrates "how both local (Chinese and non-Chinese) and global factors have made China a multiethnic unity" (Ch. 8, para 24; p. 286 cloth). While the claim that China is a "multiethnic unity" will raise some controversy, Yang clearly demonstrates that whatever Chinese identity is today it was constructed over millennia of complex interactions between local peoples and multiple connections with the outside world.

As lengthy as this summary has been, it barely skims of the surface of many of the issues examined in considerable detail. Yang employs many archival resources and uses accounts from outside China to present a more rounded picture of events. One might argue, based on his discussions, that it is not so much that China has been or ever was isolated, but rather too many Chinese scholars, and even some western scholars of China have been blinded or misled by an

overly ethnocentric view of Chinese history. Along the way Yang points to many fascinating topics worthy of further exploration that no doubt will cause some rethinking and elaboration of world-systems analysis. Further, *Between Winds and Clouds* is an impressive demonstration of the utility of a world-systems analytic approach to a "regional" history. The book is a fascinating read, but not one for the feint hearted. It is a demanding text because the issues it examines are complex. Yang provides sufficient background for non-specialists in Chinese history, but the subject matter itself is difficult for a beginner. Overall, though, the presentation is quite readable. It would be a great case-study for any graduate course that employs world-systems analytic approaches.

A final note on *Between Winds and Clouds* as an electronic publication is useful. Only the electronic version includes the many useful maps. They are not included in the cloth version, nor is their placement even noted. The electronic version is available through Gutenberg-e [http://www.gutenberg-e.org/]. If a reader prints from the e-version, the chapters must be downloaded individually and the maps must be downloaded separately. Paragraphs in each chapter are clearly numbered. The cloth version does not have an index. However, the electronic version is searchable, noting every instance of the search term throughout the entire text. It is a bit irritating in that it reports only the sentence in which the term occurs but not the paragraph number. There is no concordance between the cloth version and electronic versions. These advantages and disadvantages are part and parcel of the transition from paper to electronic publication. Overall the e-version is well done.

Thomas D. Hall
Department of Sociology and Anthropology
DePauw University
thall@depauw.edu

Hung, Ho-fung, ed. 2009. *China and the Transformation of Global Capitalism*. Baltimore: John Hopkins University Press. 244 Pages, ISBN 978-0801893070 Cloth ($50.00), 978-0801893087 ISBN Paper ($21.37).

Editor Hung has assembled essays on China's post-Mao rise. They interpret that extraordinary event from perspectives loosely tied to world-systems analysis. This approach assumes that a 1500 economic breakthrough associated with the rise of Europe has created a stable capitalist international order of core, semiperiphery and periphery that can only be humanely transformed by a world socialist revolution.

Other world-systems analyses of the post-Mao-rise of China have described that event as stabilizing a neo-liberal world order. In contrast, these authors interpret the Chinese rise as more on the side of a world socialist transformation. They do so in fundamentally conflicting ways, producing what Hung labels a "cacophony" (p. 188). His concluding chapter, the only part of the book, besides the chapter by Alvin So, which evinces a command of the scholarly literature on China's economic rise, takes issue with what Hung sees as overly optimistic trajectories imagined by the book's other contributors.

First, Giovanni Arrighi treats the pre-modern rise of China as peaceful, non-capitalist marketization. He sees the post-WW II Bretton Woods era rise of East Asia under American

hegemony in similar terms. Hence, China's recent rise, in building on both of these earlier phenomena, continues that peaceful non-capitalist market orientation. For Arrighi, world-systems analysis misleads because it is Eurocentric.

To make his argument about a peaceful market versus a war-prone "Western" capitalism, Arrighi recapitulates the CCP official story on the extraordinary 15th century voyages of Admiral Zheng He, not mentioning that the Admiral traveled with 30,000 troops as part of a southern imperial Chinese expansion that Indonesian students are taught to see as invasion and aggression. Arrighi also repeats the CCP narrative on the Opium War as making China poor. In contrast, Deng Xiaoping, the political leader of post-Mao reform, blamed China's prior immiseration on the self-sequestration of the late Ming, a self-wounding 15th century (after the Zhu Di reign era) policy emulated by Mao Zedong, under whose policies, from 1957 to 1977, China stagnated.

Alvin So reasonably explains China's "Developmental Miracle" as similar to "the East Asian developmental state miracle" (p. 50) which he then contrasts with a supposed "Western neo-liberalism model," as if studies of the global varieties of capitalism do not highlight the social welfare state Rheinish model of much of continental Europe as antithetical to neo-liberalism. In addition, So's description of "the Maoist state" providing "housing, healthcare, welfare, education, pension…based on need and free of charge to all citizens" (p. 52) ignores the 81 percent who were not on state payrolls.

Editor Hung cites data which contradict So's claim that China has "paid more attention to egalitarianism than its East Asian counterparts" (p. 60). In fact, inequality in China, Hung shows, is approaching Brazilian levels. In contrast to Arrighi's notion of a peaceful Chinese rise, So worries that "When China expands, it will inevitably run into conflict with other hegemonic states" (p. 62).

Richard Applebaum contends that a rising China, as other parts of East Asia, is undercutting the power of European and American retailers by using super-Fordist suppliers which invest heavily in research and product design, thereby creating "a dramatic shift of organizational power within global supply chains" (p. 67). Nike will fade. Yue Yuen will rise (p. 75). This Asian gain, however, is "devastating" for other developing countries.

Jósef Boöröcz imagines China's rise as part of the post-Bretton Woods era success of emerging market economies, that is, India as well as China, with "industrial production…moving away from the [OECD] core areas" (p. 88). The engine of the world economy is now said to be Asia, with the 150 year era of the "West…a brief and relatively insignificant interlude" (p. 100), until recently a minority view in world-systems analysis. Boöröcz imagines "Eastern Europe and northern Eurasia" (p. 102) as the losers, with China and India joining in a "development partnership" which "could invite Russian" partnership.

Boöröcz projects a future "Asian Union" (p. 104). That scenario ignores both the interests of key Asian polities, Japan and Indonesia (ASEAN) and also the tensions and rivalry between China and India.

Paul Ciccantell discusses China's quest for resources which is raising global commodity prices. He knows that world-systems analysts typically describe core powers as stealing the resources of the periphery, constructing what some call a neo-colonial relationship. He argues that China, although doing the same, is different because a late developer pays more, develops mines, and builds transportation. But imperial Japan did the same. "China is following the Japanese model" (p. 117).

Ciccantell then argues that Chinese steel manufacturers are trying to dictate terms to Australian and Brazilian iron ore owners. Although he refers to "raw material peripheries" (p. 126), it is not obvious how his analysis is linked to cores and peripheries. Is Australia usually considered semiperiphery? Is Brazil China's periphery?

What China is doing, as described by Cincantell, is better understood in terms of international relations realism. Beijing seeks oil from "Russia, Iran, Sudan and Venezuela…to reduce dependence" on U.S. firms and U.S. navy-controlled sea routes (p. 122). However, the last figure I saw in a Chinese source found that 88 percent of the energy pumped overseas by Chinese enterprises was sold for profit on the world market and was not imported by China. Nonetheless, Cicantell sees a Chinese attempt to steal raw material sources from America and Japan which could lead to war.

John Gulick claims that no nation can serve as a global economic hegemon in today's complex world. While China, supposedly wrongfully accused of manipulating its currency to enhance exports, is said actually to be structurally tied to Wall Street and about to suffer greatly from the 2008 forward financial crunch (Hung agrees), America is said to be moving in a protectionist, racist and anti-foreign direction. As a result China will join with Japan to build pan-Asian institutions and free Japan, "a pliant vassal of U.S. imperialism" (p. 137), from subordination to America. China will also partner with Russia to defeat American hegemony. The result, however, will be China and Russia "accorded roles in the trans-national capitalist order" (p. 144). But Gulick then says the change will "constitute the greatest danger to a liberal international order" (p. 146). Gulick does not explain how.

The chapters by Stephanie Luce and Edna Bonacich and by Beverly Silver and Lu Zhan link China's rise to a world socialist transformation. Luce and Bonacich accept that China manipulates its currency (p. 155). Their careful analysis of job losses caused by China's rise finds that it is greater for Mexico than for the USA (p. 156). In general, the rise of China, and the dynamics of the post-Bretton Wood era reduce "workers' power" (p. 157), contributing to "the race to the bottom" (p. 158). The question is, how should global labor respond?

Luce and Bonacich urge the workers of the world to unite. But the authors do not clarify why workers in emerging market economies to which production is being shifted should cooperate with labor in the OECD nations trying to protect jobs from being out-sourced. The goal of global labor standards imposed on the entire system, a policy which the authors embrace, is the position of the AFL-CIO (a group they damn) and is opposed by China, India *et al*. Luce and Bonacich hope that the CCP's phony national labor union will join with OECD unions to restructure the IMF. Their hope for "gaining power for the working class as a whole in relation to transnational capital" (p. 170) is not based on an extrapolation of on-going dynamics.

Yet Silver and Zhang argue from the perspective of a "militant working class" in China (p. 175). Consequently, to them, "it is not far-fetched to conclude that…China is becoming the epicenter of world labor unrest" (p. 176). Wages therefore will rise in China and Americans will no longer be able to purchase cheap consumer goods. The neo-liberal order will end. "Catastrophic" consequences (p. 184) are possible unless all sectors of the world agree to "a more equal world order" (p. 185).

Hung, in his skepticism about the rise of China, seems is suspicious about claims about fundamental global transformations. Assuming a stress on the forces that re-stabilize the world-system, perhaps one should expect a future where a Chinese bubble bursts (as with Japan in 1991

and Indonesia in 1997-98) or where America (or the OECD) and China (or emerging market economies) clash, producing a crash even worse than that of 1929.

Edward Friedman
Department of Political Science
University of Wisconsin, Madison

Tonio Andrade. 2008. *How Taiwan Became Chinese: Dutch, Spanish, and Han Colonization in the Seventh Century.* New York: Columbia University Press. 300 Pages. ISBN 978-0-231-12855-1 Cloth, ISBN 978-0-231-50368-6 E-book.

In *How Taiwan Became Chinese* (HTBC), Tonio Andrade revisits the history of Western mercantile powers' expansion in maritime Asia between the late sixteenth and seventeenth centuries. Andrade highlights the indispensable contribution of non-European actors in the rise and fall of the Dutch and Spanish colonial settlements in Taiwan (especially the former). These Asian actors—including the Han Chinese and Japanese traders as well as aboriginal people in Taiwan—were no longer Eric Wolf''s "people without history" (Wolf 1982: *Europe and the People without History*). Based on findings in Dutch, Spanish and Chinese archives, Andrade's in-depth analysis of formations and liquidations of the Euro-Asian alliances shed light on Andre Gunder Frank's "horizontal integrative macrohistory" paradigm (Frank 1998: *ReOrient*).

Taiwan, or the island of Formosa, became a strategic trading spot in its maritime Asia. Only 80 miles off China's southeastern coast and its Fujian province, the island was close to China's silk supply outlet, but was not so close as to be regulated by Chinese maritime policies. The Ming Empire lifted its maritime ban in 1567 and licensed Chinese seagoing merchants for overseas trade. Many of them skirted state regulations in order to avoid custom tariffs and to trade more freely. To conduct their illicit trade, unregulated traders (referred to as "pirates" in Chinese documents) used Taiwan to trade with Japanese and Europeans merchants there, as well as the island's aborigines. After the Chinese forced the Dutch to abandon its fort in the Pescadores (the Penghu Islands), they settled in Taiwan's southwestern plain in 1624. Two years later, the Spanish, too, set up a foothold on the northern tip of the island (Introduction).

When the Dutch entered Taiwan, the existing population (i.e., its aboriginal people) in the island was "a hundred times larger than the Dutch Republic" (p. 2). The Dutch strategy was to ally with the most active Chinese trading group, the Zheng, to create a new political and economic order. The Zheng group had developed into the paramount intra-Asian trading network beyond official Chinese control. But the leader of the group, Zheng Zhilong, shifted his allegiance to the Chinese Ming Dynasty in 1628. With that shift, Chinese officials authorized Zheng Zhilong the sole right to eliminate the pirates. His group thus dominated Chinese coastal trade. At the same time, in response to the resentment of the Sinkanders (an aboriginal tribe in Southwest Taiwan), whose earlier trade with the Japanese was interrupted after the Dutch arrived, the Dutch prioritized this tribe over other aboriginals on the island. Through the destruction of the traditional inter-tribal rotation of powers, Pax Landica was established. (Ch. 1, 2, and 3).

If the aboriginal people's support was a key to the making of Pax Landica in Southwest Taiwan, the same factor also accounted for the failure of Spanish rule in North Taiwan (1626–1642). First, unlike the predominant hunting-and-gathering society in Southwest Taiwan, trade

and handicrafts constituted the main livelihood of aboriginal tribes in North Taiwan. The latter viewed the Spanish as an economic competitor but not a provider. Second, the success of the Catholic missionaries, while helping the Spanish penetrate the aborigines' lives, also motivated the Spanish to become involved in inter-tribal warfare. Eventually, in 1642, due to Dutch envy of North Taiwan's gold mines and their desire to blockade the Manila trade, the Dutch expelled the Spanish with the assistance of northern aboriginal tribes (Ch. 4 and 5).

After the 1630s, the Dutch recruited Chinese agrarian settlers to migrate from China to Taiwan. Andrade coins the term "co-colonization" to highlight the indispensable Chinese contribution. The Dutch granted Chinese settlers several economic privileges, including property rights to farm land, exclusive permits for commercial deer hunting, and the sole rights to the highest bidder to trade with aboriginal villages, among others. These Chinese settlers were obliged to contribute to production quotas and to allow the Dutch to monopolize the exportation of their products. To effectively manage the growing Chinese community, the *cabassa* system was created, in which the Dutch selected ten Chinese translators to collect tax and sell residential permits. With the Chinese as the cultivators, hunters, and commercial bidders, the aborigines viewed the Chinese as the real challengers. Conflicts between the Chinese and aborigines ensued. The Dutch mediated the conflicts while reaping profits from both sides. For the Chinese, in addition to the required production quotas, the Dutch also imposed residency-permit taxes on them. For the aborigines, the Dutch presented itself as their protector from Chinese expansion. And to be a loyal vassal to the Dutch lordship, the tribes had to submit tributes and control Chinese smuggling and piracy. Financial pressure eventually generated resentments and eventually led to Kuo Huaiyi's leadership of a Chinese anti-Dutch rebellion in 1652. The Dutch pacified the rebellion through an alliance with the aboriginal people (Ch. 6, 7, 8, and 9).

The Dutch regime in Taiwan was ended in late 1661 by Zheng Chenggong, the son of Zheng Zhilong. After the Manchus entered the Ming capital, Beijing, in 1644, Zheng Zhilong shifted his allegiance from the conquered Han Chinese Ming Empire to the Manchus' Qing Dynasty. Known in Western documents as Koxinga, Zheng Chenggong used his family business to finance his anti-Qing mission to restore the Ming Empire. Some historians interpret Koxinga's conquest of Taiwan as an anti-imperialist action, while other scholars view those interpretations as politically distorted. In response, Andrade cites Koxinga's correspondence with the Dutch in 1660, "How can one know my hidden thoughts and tell what are my actual intentions, which have been revealed to nobody?" (p. 211). Andrade goes on to say, "We historians will perhaps do little better than his [Koxinga's] enemies at discerning his true aim" (p. 221). To understand Koxinga's rationale for attacking the Dutch in Taiwan, Andrade reconstructs the tension between Koxinga and the Dutch as a result of the operation of the intra-Asian trade.

The anti-imperialist thesis does not explain why Koxinga did not support the 1652 Chinese anti-Dutch uprising in Taiwan. Relations between Koxinga and the Dutch regime in Taiwan remained amicable prior to the late 1650s, when the Manchus began to implement a series of policies designed to uproot Koxinga's maritime businesses. Beginning in 1656, the Manchus ordered the execution of any Chinese involved in trade with Koxinga. And from 1660, the Manchus imposed a ban on maritime trading. To compensate, Koxinga increased his overseas business, which, however, intensified the competition between the Dutch Batavia and Spanish Manila in the intra-Asian trade. To revenge the capture of his junks by Dutch Batavia, Koxinga imposed a trade embargo against all junks from Dutch Taiwan. Eventually a war broke out in April 1661. Reinforcement from Batavia was too little and too late. And thanks to Sino-Dutch co-

colonization, thousands of Chinese settlers in Taiwan helped establish the first Chinese regime in the colony in 1662 (Ch. 11).

According to Andrade, Western colonialism in early modern Asia did not prove Western superiority in military technology, economic organization, or technological prowess. What distinguished the Europeans and their Asian counterparts was an unusual European motivation to extend their territory beyond what they could effectively control. The Chinese Empire's lack of interest in overseas expansion provided an opportunity for the Dutch and the Spanish to establish their colonial footholds in Taiwan. The Dutch regime lasted longer than the Spanish because they gained indispensable Chinese and aborigines' support, but, when the Chinese became interested in the island, the Dutch had to go.

This book is most welcome among world-system scholars, especially those who have been excited by Frank's *ReOrient* debate. Frank pointed out the importance of the global silk-silver trade in the early modern world system. Andrade further delineates how the trade in maritime Asia developed alongside Euro-Asian co-colonialism in the region. By emphasizing the shared economic rationale between the Europeans and the Han Chinese entrepreneurs, as well as his theoretical insights and historiography of co-colonialism, the author also revisits the myth about the association between Confucian cultural logic and Chinese business practices. At the same time, educators may find that the interactive maps, art work, and hyperlinks in the electronic version of the book make it a user-friendly means of introducing beginners to the Euro-Asian interaction in modern world history.

Dr. Huei-Ying Kuo
Assistant Professor of Asian History
Department of Humanities and Social Sciences
Rose-Hulman Institute of Technology
kuo@rose-hulman.edu

Moghadam, Valentine M. 2008. *Globalization and Social Movements: Islamism, Feminism, and the Global Justice Movement*. Lanham: Rowman and Littlefield Publisher, Inc. 180 pages, ISBN 0-7425-5571-2 Cloth ($70.00), ISBN 0-7425-5572-0 Paper ($22.95).

Over the past quarter century, critical questions have been raised about the relationship between social movements and globalization. A central challenge facing scholars who enter this terrain of scholarship is how to situate social movements within an ever shifting global context without falling into the traps of world-systemic over-determinism or idiographic particularism. Valentine Moghadam's book, *Globalization and Social Movements: Islamism, Feminism, and the Global Justice Movement*, asks how social movements and networks affect the evolution of globalization, and how globalization has transformed the nature of collective action. And in doing so, provides both a compelling set of substantive arguments regarding the nature of social movements in the contemporary era and a useful conceptual framework for understanding the interrelationship between global and local processes.

The central focus of Moghadam's book is a comparison of three transnational social movements (TSMs) from a world-systems perspective: the Islamist, the feminist, and the Global Justice movements. Moghadam examines the origins, similarities, and differences among the

three movements, situating each within the political, economic, and cultural dimensions of globalization. By situating each within a global context, she comes to a number of interesting conclusions. First, Moghadam states that equal attention must be paid to sub- and supra-state governance processes and nation-states, which continue to be relevant actors on the world scene. Second, the location of a transnational social movement within the uneven political, economic, and geographical context of the world-system affects its subsequent development. These processes span multiple scales, from micro (e.g., access to employment or education), to meso (e.g., area culture or regime type), and macro levels (e.g., neoliberal policies and technological expansion, which vary significantly from place to place). Third, all of these factors mentioned above shape individuals' worldviews, which in turn shape a movement's ideology, opportunities, and tactics to achieve group goals. Finally, a central distinction between groups which utilize violence to achieve their aims and those which eschew it, is the movement's desire to seek state power (p. 6).

Moghadam draws on evidence from case studies to support her arguments. She looks at Islamism, Feminism, and the Global Justice movement cases, and finds that the groups involved responded in different ways to global dynamics. She contrasts the Islamist movement with the feminist and Global Justice movements to illuminate how the heterogeneous economic, political, and cultural restructuring processes of globalization have impacted regions in the world-system differently. She concludes that TSMs have created multiple transnational publics that may overlap to varying degrees, facilitating a loosely interconnected global reach. These publics, which may overlap or diverge entirely, are comprised of actors that consciously communicate, cooperate, and organize across borders (p.121). Although TSMs are reacting to globalization by targeting both states and global order, they use the fruits of globalization, namely the internet, ease of travel, and developing technology, to promote and further their objectives. Collective action, networking, and recruitment have expanded into the virtual field. Ultimately, the polymorphic nature of globalization has yielded both progressive, democratic movements as well as conservative, violent groups (p. 122).

The book makes a number of contributions to TSM scholarship and has numerous strengths. First, its consideration of these three movements side by side leads to a deeper theoretical understanding of how globalization has fostered multiple, loosely connected transnational publics. These publics, in turn, yield both peaceful and violent TSMs based upon that particular public's ideological development and perceptions. Second, it develops an explanatory framework for understanding the complex relationship between globalization and TSMs. Further, it demonstrates how TSMs protests globalization while simultaneously depending on it. Next, it eloquently synthesizes broad bodies of literature to provide an insightful, careful analysis of the dynamic impacts of globalization on the mobilization of social movements. In addition, it thoroughly explores the historical roots and current developments of three empirical cases under the auspices of late stage capitalism. Finally, the book shows how TSMs balance strategic-instrumental considerations with emotional and altruistic ones.

However, despite its various strengths, there are some limitations within the book. First, Moghadam's analysis overemphasizes the presence of violent groups within the Islamist TSM, while understating their prominence in the other two TSMs. For example, the Zapatista movement (part of the Global Justice Movement) initially used armed strategies to achieve its goals. I would have liked to see a section discussing other anti-globalization social movements that currently use violence to further their objectives. Anti-globalization groups that use

repertoires of violence also have multiple publics where transnational dialoguing and networking are taking place. I felt that a brief discussion would have bolstered her points about the polymorphic nature of globalization fostering progressive and violent movements. Next, in relation to violent movements, Moghadam argues that groups utilize violence to seek state power. However, other scholars have found evidence showing groups use violence as a response to government repression. Other variables such as group ideology, identity, etc. may have explanatory power as well.

Despite these limitations, this is a compelling book. Social movement and globalization scholars will appreciate Moghadam's improvement upon both literatures and her explanatory framework she puts forth to remedy the theoretical gaps. The book will also be valuable in a graduate student seminar as an overview of contemporary transnational social movements and globalization. This succinct integration of topics such social movement theory, globalization processes, gender inequality, and religious fundamentalism also makes the information easily accessible to activists and public intellectuals.

Gina Marie Longo, M.A.
University of Wisconsin-Madison
Department of Sociology
glongo@wisc.edu

Babones, Salvatore. 2009. *The International Structure of Income: Its Implications for Economic Growth*. Saarbrucken, Germany: VDM Verlag. 180 Pages. ISBN: 9783639101591 Paper $105.

In *The International Structure of Income* Salvatore Babones addresses two interrelated questions. In the first half he addresses the *shape* or structure of the distribution of world-income at both the simulated person-to-person level (Chapter 3) and at the national level a la Arrighi and Dangel (1986, Ch. 4). In the second half he examines the consequences of the structure of the world-economy for economic development. Babones integrates a standard growth model from economics with the structural intuition of the world-systems perspective to suggest that specific growth mechanisms "differ systematically across the three zones of the world-economy" that he identified in the first half of the book (p. 5). The book is an excellent read for world-system scholars who take seriously the notion that social structure matters for economic development. It also provides solid reviews of the global distribution of income, neo-classical theories of growth, and a clear demonstration of simultaneous equation and instrumental variable regressions (which have yet to make it into mainstream sociology, but have been used in economics for over two decades).

Babones's motivation for the book includes a review of the relevant literature on global income inequality. He notes that the only conclusion one can draw from this literature is that inequality has remained fairly stable over the last half of the 20th century, after rising precipitously since the industrial revolution. This conclusion is based largely on the major difficulties regarding issues of national income measurement, sample selection, and the inherent ambiguity of summary measures of inequality themselves, all of which lead to different findings regarding the level of global income inequality and its trend overtime. Others have drawn similar

conclusions (Anand and Segal 2008). More importantly for Babones, however, is his conclusion that the stalemate warrants a fresh look from a different vantage point – the shape (or structure) of the entire distribution.

Thus, Chapter 3 examines "the full distribution of income in the world" by simulating a person-to-person (or at least national-sub group to national sub-group) distribution of income plotted against the size of each national-sub group (35). Babones's point of departure involves a method to generate a simulated distribution and an attempt to characterize the shape of the distribution rather than its variability. He finds a clear bimodal distribution, which casts some doubt on the analytical utility of common summary measures of inequality. Moreover, this finding lends itself immediately to an intuitive question – does the distribution become increasingly polarized over time? In other words, "the distance between the two modes of the global income distribution could be used as a rough indicator of the degree of global inequality" (58). Unfortunately, the intuition is made problematic because the absolute gaps do not give a sense of whether or not a given group is obtaining a different *share* of the income pie, since the absolute gap between the rich and poor will increase even if both grow at the same rate due to the larger initial income of the rich group. Moreover, Babones reaches different conclusions when he compares the gaps based on logged income and raw income. Here the gap declines with the logged data and rises with the raw data. The difference is an artifact of the logarithmic transformation which it picks up the *higher growth rate* of the poor mode (534% from the 1960s to the 1990s) relative to the rich mode (96.1%).

After reviewing several approaches to operationalizing positionality in the world-system (network based, continuum, and income based), Chapter 4 refines and extends the classic work of Arrighi and Drangle (1986) to simulate the distribution of national income, which is used to generate the world-system position of countries. Core countries occupy the wealthiest mode, semiperipheral countries occupy an intermediate mode and peripheral countries occupy the poorest mode. Unsurprisingly, Babones's findings suggest that a trimodal distribution of national income is extremely stable over time, and that the three modes generate a curvilinear association with within country income inequality a la Kuznets, at least when limited to "organic" zone members. That this measurement produces a stable three-tiered structure is immediately appealing to world-system analysts. However, I think that the review and criticisms of other operationalizations of the world-system were less than complete. Furthermore, the utility of the income approach quickly can lapse into tautology – peripheral countries are poor because they are located in the periphery, but we only know they are located in the periphery because they are poor. Moreover, the apparent curvilinear association with income inequality is plausibly due to cut points in a continuous distribution of national income.

The last two chapters of the book integrate the results from Chapter 4 with mainstream economic theories of growth by assessing the extent to which neo-classical growth mechanisms vary by world-system position. Following an excellent and accessible review of the neo-classical model of labor, physical and human capital, Babones estimates cross-sectional growth regressions separately for core, semiperipheral, and peripheral countries to see if "the structure of neo-classical economic growth differs dramatically across zones of the world-economy" (133). In one set of long-run models, physical and human capital matter for the core but not labor, only physical capital (and maybe labor) matters for the periphery and only labor matters for the semiperiphery. This makes some intuitive sense over the study period (1960-1999) because core countries have a distinctive abundance of physical and human capital; semiperipheral countries

started their developmental trajectories by exploiting abundant labor supply; and perhaps successful peripheral countries distinguish themselves foster development in labor-intensive manufacturing. These results were somewhat fragile to the time period, so one wonders if the apparent differences were due to differences in sample size across zones, which ranged from 9, to 20 to 34 for the core, semiperiphery, and periphery. Indeed, a second set of (medium-run) models that covers a shorter time span (1975-1995) but more countries (88) shows that the effects of neo-classical inputs are not "strongly differentiated by zone of the world economy, after all," because labor is the most robust input across all three zones even though capital seems to matter only in the periphery (134-5). This latter result prompts an interrogation of physical capital, which is differentiated between foreign and domestic sources in the context of additional growth models. The findings suggest that only domestic investment has a robust association with growth, and this is largely confined to the periphery. Yet, Babones suggests that a plausible explanation is simultaneity bias in the investment – growth link, where growth causes investment rather than the opposite. Indeed, the last empirical chapter conducts structural equation modeling with instrumental variables and shows that while growth tends to lead to both types of investment, the reverse is not true.

In sum, Babones's book will be intrinsically interesting to world-system analysts because of its explicit structural argument that the distribution of income among individuals and nations, and the process of economic development are patterned by the structure of the world-system. Indeed, I think that this approach provides the most fruitful road forward for world-system analysts because it represents both a willingness to cross-fertilize with other disciplinary perspectives on these issues and moves away from the kind of totalizing (and overly pessimistic) mood that has seemed to dominate world-systems analysis in years past. Moreover, Babones's work leaves open a number of research avenues. For example, while his method in Chapter 3 may not be the best way to assess the extent of polarization, other methods are available and may provide valuable descriptions of the distribution (Alderson, Beckfield, and Nielsen 2005). Similarly, Chapters 3 and 4 suggest a reasonable set of questions about global inequality that move away from describing variability toward describing the latent structure or shape of the entire distribution, though such analyses would be more compelling if accompanied by statistical tests for departures from "bomidality," "trimodality," or any other distributional shape (e.g. Korzeniewicz and Moran 2009). Finally, Babones's inquiry into differences in developmental paths across world-system zones suggests a whole range of potential inquiries. A plausible first step would be to replicate his analysis using pooled cross-section of time-series regression techniques that would increase the sample size and allow researchers to test explicit hypotheses about differences in the size and direction of coefficients across world-system zones and control for unobserved time-invariant country attributes. If world-system dynamics matter for economic development, then established correlates of economic development must themselves vary by world-system position so that world-system dynamics should have both direct and indirect developmental consequences.

References

Alderson, Arthur S., Jason Beckfield, and Francois Nielsen. 2005. "Exactly How Has Income Inequality Changed? Patterns of Distributional Change in Core Societies." *International Journal of Comparative Sociology* 46:405-423.

Anand, Sudhir and Paul Segal. 2008. "What Do We Know about Global Income Inequality?" *Journal of Economic Literature* 46(1):57-94

Korzeniewicz, Patricio and Timothy Patrick Moran. 2009. *Unveiling Inequality: A World-Historical Perspective*. New York: Russell Sage.

Matthew C. Mahutga
Department of Sociology
University of California, Riverside
matthew.mahutga@ucr.edu

Dylan, Riley. 2010. *The Civic Foundations of Fascism in Europe: Italy, Spain and Romania, 1870-1945*. Baltimore: John Hopkins University Press. xii + 258 Pages. ISBN: 13: 978-0-8018-9427-5 Cloth ($ 55.00).

Classical scholarship and intuitive political sense connects democracy with robust civic life and associates fascism with unthinking mobs narrowly concerned with private matters and easy answers. Indeed, the "Tocquevillian thesis" connects robust associational life with democratic government. "Mass society theorists" push the thesis to authoritarian states, arguing that social atomization and weak associational life allow for the political mobilization of an antisocial mass and the imposition of totalitarian rule. In *The Civic Foundations of Fascism in Europe*, Dylan Riley complicates these influential and common views of democracy and fascism by drawing Gramsci into the conversation and reformulating the question in the context of hegemony. This move creates analytic space for human agency, avoiding some of the pitfalls of both ahistorical, mechanistic, variable-testing positivism and suffocating, agentless historical materialism.

To frame and justify his study, Riley poses both an empirical puzzle and logical paradox. "[I]n roughly half of Europe, fascism followed [an] intense wave of associational growth. This outcome," Riley notes "is especially puzzling in countries such as Italy, Spain and Romania, which had well-established liberal institutions by the late nineteenth century" (pg. 1). The empirical puzzle is further complicated by the received wisdom. For Arendt and mass society theorists, fascism "is the result of *both* mass political apathy and fanaticism, and both of these outcomes derive from the collapse of civil society" (pg. 8, emphasis in original). Why did fascism follow the explosive growth of civil society in Italy, Spain, and Romania? Did fascism in these instances mobilize fanatic mobs or manipulate the apolitical mass? More generally, Riley's study raises the question of the relationship among the development of civil society, democracy and state-formation.

Gramsci provides both the missing piece to the puzzle and the resolution to the paradox. Noting that most literature focuses on the relationship between civil society and established liberal democracies, Riley reframes on the question on "the political consequences of civil society development" (pg. 2). Riley uses Gramsci to "focuses on the interaction of civil society and politics, rather than reading one off the other" (pg. 12). With this Gramscian conceptual framing, Riley finds that fascism emerged out of the self-reinforcing cycle of political decay or organic crisis that befell the young liberal states of interwar Italy, Spain and Romania. During their formative periods of national unification in the late 19th century Italy, Spain and Romania all failed to achieve intraclass hegemony: Piedmont conquered and co-opted the rest of Italy as much

as it unified it, failing to bridge the historic divide between north and south; Catalan and Basque elites were never fully integrated into Spain's governing coalition; while "the statist middle class" and old boyar aristocracy that led the Romanian national project failed to incorporate either large landowners or the Jewish bourgeoisie. These incomplete governing coalitions created systems of oligarchic liberalism (known as *transformismo* in Italy and the Canovite system in Spain).

While these nominally liberal regimes rested on restricted electorates, they did provide the necessary legal protections to allow for the development of voluntary associations in rural areas. In Italy, northern Italian liberal elites closely linked to the movement for national unification fostered the development of civil society as a patronage project to create a political base. After the 1890s, however, agrarian socialism and later Catholicism displaced elite-dominated rural associations with an increasingly autonomous civil society. In Spain, civil society had three distinct strands: (1) socialist and republican associationism (2) regional nationalist associationism and (3) Catholic associationism. The dominant position of the Catholic Church and the tendency toward regional nationalism (in Catalonia and to lesser extent Basque Country) created elite-led civic society organizations. In Romania, in contrast, the growth of civil society was a state-led initiative connected to a national policy of industrialization.

In the context of oligarchic liberalism, however, this flowering of civil society tended to further fragment the social elite and deepen organic crisis. While elites attempted to broaden the support for liberal institutions, they did so from a weak base as a result of the previous failure of intraclass hegemony. Attempts to create interclass hegemony only further weakened the support for liberal institutions. In Italy, Prime Minister Giovanni Giolitti stopped using police in labor disputes, and tried to forge an alliance with socialists, but left the south under the heel of the landed elite. In Spain, Primo de Riveria made a similar attempt to establish an alliance with the socialist party and pursue a project of state-led industrialization. Unlike Giolittian Italy, however, the Primoverrista dictatorship systematically destroyed the political parties and fledging liberal institutions. In Romania the attempt to establish interclass hegemony was more complete. The Partidul Național Țărănesc (National Peasant Party or PNȚ) initiated universal suffrage and land reform, something that both Italian and Spanish elites failed to accomplish. Despite these efforts, the failure to establish intraclass hegemony put obdurate limits on the ability of state managers to open their states to the popular classes, while retaining dominance of the ruling bloc. Giolitti limited effective suffrage to the North. Primo de Rivera's reforms benefited only a small segment of the working class. The PNȚ's land reform coincided with a new constitution that eased the application of martial law and the manipulation of elections. The growth of civil society, then, benefited Catholicism and socialism and only further discredited liberal institutions, as liberal parties consistently failed to win popular support.

The failure of intraclass and interclass hegemony, in turn, led to the failure of counterhegemony, creating a political vacuum for fascists to fill. Facing a fragmented dominant class with no clear project, democratic forces tended to split and fragment rather than unify. In all three countries, the urban working class, the peasantry and the petty bourgeoisie failed to come together in a meaningful alliance. In Italy, the Italian People's Party and Italian Socialist Party did not come together to create an effective governing coalition and, instead, pursued incompatible programs. In Spain, republicans and socialists remained divided, with the former committed to land reform and the latter wed to doctrinaire anti-clericism. Internal divisions within the Romanian PNȚ between the peasantist wing and urban bloc anchored in the petty bourgeoisie resulted in an incoherent platform that alienated the party's base. "The rise of a fascist

movement," Riley contends "was connected with the tendency of democratic forces to split and fragment. This tendency, in turn, was the result of the absence of a conservative pole with a strong hegemonic project against which the democratic forces could articulate a counter-hegemonic project" (pg. 200).

As a result of the failure of hegemony, fascism emerged as the resolution to the organic crisis that mired Italian, Spanish and Romanian politics in shortsighted, sectarian disputes. Fascism, Riley contends, emerged as authoritarian movement positioned against liberalism but not democracy. To support the controversial and counterintuitive claim that fascism represented authoritarian democratic movements in these cases, Riley notes that fascists relied on the language of civil society to position themselves as the true representatives of nation and co-opted civil society's social networks as the organizational resources to enliven their movements. Fascists idealized civil society as a zone of spontaneous cooperation that could only fully bloom when freed from the fetters of politics. Where liberal states failed to represent the complex of associations that made up modern societies, fascism sought to directly mobilize interest-based associations to either replace the liberal state or supplement it with more representative but less politicized institutions.

How fascism consolidated is directly related to civil society development. Italian fascism, like Italian civil society, was more autonomous. Terming it party fascism, Riley notes the Partito Nazionale Fascista and affiliated groups exerted pressure on Mussolini that pushed him into more radical positions. For example, fascist insurgency caused Musolini to abandon his pragmatic alliance among Italian industries, fascist syndicates and reformist socialists. Mussolini capitulated to squadrists, and moved to more radical positions, as Italian fascism emerged from below. In Spain, fascism relied on the social networks of Catholicism and, unlike Italy, had no separate fascist party structure. Riley terms this fascism traditionalist, as Spanish fascism rejected the view of the party as a pedagogical institution and held up the monarchy, the family and the church as the appropriate channels through which to represent the nation. Romanian fascism was divided among two competing tendencies, a party fascism associated Corneliu *Codreanu's Liga Apărării Național-Creştine* (League of National Christian Defense) and a statist fascism led by King Carol II. Reflecting Romanian's state-led civil society, party fascism lacked a popular support base in a union movement or confederation of agrarian cooperatives. Carol's attempt to create statist fascism from above overtook party fascism, which folded rather than imposing fascism from below.

Before explicitly drawing out the full ramifications of his study, Riley considers two alternative explanations: (1) Barrington Moore's thesis on fascism as an alliance among the state, a medium-strength bourgeoisie and labor-repressive agrarians under the pressure of economic competition and peasant and worker unrest; and (2) the Weberian thesis, which emphasizes the persistence of an authoritarian old regime in an advanced industrial society as the key element behind fascist regimes. The Weberian thesis quickly falls apart when applied to Riley's cases, all of which were oligarchic liberal regimes. Italy and Romania, most dramatically, had no "old regime" from which to draw. Moreover, Riley's three cases pose empirical problems for Moore's thesis too. In Italy, the labor-repressive agrarians remained sequestered in the politically marginalized south; in Spain, elite factionalism and regionalist nationalism fragmented the elite and prevented any effective coalition; while, in Romania, the PNT's successful land reform liquidated the labor-repressive agrarians as class. From here, Riley considers positive cases for Moore's thesis, Germany and Hungary and then applies his own civil society thesis as counter-

explanation. He concludes that Moore's thesis applies well as a description of prewar Hungary and Germany but as an explanation for fascism it falls short. German fascists seized state power only after the Moorian coalition collapsed during Weimer Republic. In Hungary, where this coalition persisted, it acted to block the full development of fascism. Hungary, the only member of the Axis to keep a parliament throughout the war, never became an openly fascist dictatorship. To conclude this discussion, Riley argues that his civil society thesis does more to explain the rise of fascism in Germany, which, like his cases, experienced dramatic growth in civil society and lacked hegemonic organization among the elite, creating an organic crisis which fascism resolved.

Fascism is a slippery subject to approach as it transcends the conventional right/left political dichotomy and presents puzzling empirical problems with its relation to civil society and democratization. Riley's innovative combination of Tocqueville and Gramsci does much to allow us to get a firm grasp on this mercurial subject. While Riley's characterization of fascism as authoritarian democracy may trouble some readers, I feel it is one of the stronger contributions of his work. It acts as a necessary corrective to ideological position that conflates democracy with liberalism. As Riley is correct to note, "A regime is democratic to the extent that its claim to rule rests on a claim to represent the interests of the people" (pg. 207). Fascism could emerge as a solution to the organic crisis exactly because its claim to represent the people was more credible than floundering oligarchic liberal regimes. Riley's addition of Gramsci and hegemonic struggle is essential. He reminds us that political struggle is not a zero-sum game. The failure of more democratic and/or socialist counter hegemony in Italy, Spain and Romania was directly related to the failure of intra- and interclass hegemony. "Gramsci," Riley contends, "gives a positive value to political struggle that is rare not only in the Marxian tradition but also in much political sociology. In short, Gramsci allows one to recognize the value of real political struggle, of hegemonic struggle, for liberal democracy" (pg. 211). Here, the full value of Gramsci becomes clear. Riley's work is exemplary in that it places intentional human action at the center of his analysis. In each of his studies he identifies critical moments of struggle where different outcomes were politically plausible and nearly became reality. This is a quality that is rare in studies of regime types and their origins and deserves to be commended.

One unfortunate shortcoming of Riley's work is its lack of greater world-historical contextualizing. Connections among the various cases emerge during the study (particularly in the Romanian case where fascists looked to both their Italian and German compatriots as models) but are underdeveloped. Is there an iterative quality to fascist regimes? Riley turns to Grasmci's concept of hegemony but he does not deal with his argument concerning the relationship between uneven development and fascism. Instead, Riley presents each case as a distinct time-space. The national and narrowly comparative constraints of the study limit the applicability of Riley's conclusions. Connections among the various cases emerge during the study (particularly in the Romanian case where fascists looked both their Italian and German compatriots as models) but are underdeveloped. Is there an iterative quality to fascist regimes? Is fascism a relevant concept outside of interwar Europe? Beyond the social scientific worth of this question, is a more urgent and political value. In the era of the British National Party, the French Front National, *Ülkücü Gençlik* and *Büyük Birlik Partisi* in Turkey, the Brazilian *Partido da Reedificação da Ordem Naciona*, *Vishva Hindu Parishad* and *Bharatiya Janata Party* in India, the South African *Afrikaner Weerstandsbeweging*, and perhaps even the Tea Party of the United States, the question as to whether a twenty-first century fascism is possible or probable is politically expedient. While

this question is not Riley's primary focus, his analysis tempts the reader to raise many provocative questions about the applicability of his analysis to the present. In such a clearly written and tightly argued book, it is regrettable that Riley chose not to draw out the contemporary relevance of his conclusions.

Brendan McQuade
Department of Sociology
Binghamton University (SUNY)
bmcquad1@binghamton.edu

Smil, Vaclav. 2010. *Why America is Not a New Rome*. Cambridge, MA: MIT Press. 226 Pages, ISBN 978-0-262-19593-5 Cloth ($24.95).

This book is entirely devoted to uprooting the myth that there are profound similarities between the Ancient Roman Empire and the United States, particularly in terms of the decline of empire—or in other words that America is somehow a "new Rome." Vaclav Smil is disturbed by the popularization of the analogy in the media, extended by figures such as Joseph Nye, Cullen Murphy, Tom Wolfe, and Peter Bender. In response, he produces a detailed argument on how the analogy is misleading. Comparisons of the two states tend to be based on superficial realities and mistaken understandings, or else universal human tendencies that are certainly not unique to the U.S. and Rome, and therefore not very illuminating when reduced to a Rome-America analogy. Smil is convincing, and he provides fairly comprehensive data to support his assertion that descriptions of Ancient Rome and the U.S. as powerful empires that can be meaningfully compared are drastically misguided.

Smil begins by discussing narratives that draw comparisons between the Roman Empire and states such as Britain and now the United States. He notes that comparisons generally rely on assertions about the populations, intents, and strength or power of the two states. Many commentators accordingly make the provocative suggestion that the U.S will follow in the footsteps of Rome—predicting a "fall" of massive proportions. But when Smil examines all of these proposed similarities systematically, he finds that there is little foundation for any of it.

I find Smil's treatment of the meaning of empire and its application to the U.S. to be the most fascinating and relevant discussion in the book. This part touches on the academic debate about whether the U.S. is imperial, and begs the question, what would constitute an empire in an integrated and truly global economy? He also explores the concept of the U.S. as a global hegemon, which he finds doubtful. For Smil, an empire exerts political control over a separate political unit (pg. 45). The U.S. does not qualify as an empire according to his examinations — seized territories have always been either incorporated or set free by the United States. Direct military rule by the U.S. has been limited and temporary. The military reach and global hegemonic power of the U.S. have been vastly exaggerated. Instead, Smil suggests that the concept of empire is entirely inappropriate, and that the U.S. is more accurately described as a limited hegemon. Certainly, the power exerted by the U.S. does not operate in the way of the Roman Empire. Further, Smil explains how even the mightiness of the Roman Empire is exaggerated and put out of context. It was neither the most extensive nor longest lasting empire

even among its contemporaries, and as he goes on to detail exhaustively, it was certainly not the most inventive nor productive state of antiquity (pg. 63).

Indeed, in some respects, the differences between the U.S. and Ancient Rome are vast. Smil describes how the Romans were not very impressive inventors or innovators, whereas the U.S. has been a leader of invention and innovation. The Roman Empire did little to advance scientific understanding, and their technical accomplishments occurred slowly over time. Ancient Romans were far more dependent on machines that were powered by people (slaves primarily) and animals. This is "fundamentally incomparable" to the U.S., which is powered overwhelmingly by machines and non-animal based energy (pg. 103). Whereas the Romans' energy use seriously constrained every aspect of Roman society, America's high energy availability has created massive opportunities and problems that are not comparable to the Rome of antiquity. Moreover, the U.S. is remarkable compared to contemporary states, whereas Rome's record in invention was not very impressive compared to Hellenistic Greece or Han China. Differences in quality of life between Ancient Rome and modern America are incommensurable, whether measured as GDP, GDP rate of increase, infant mortality, life expectancy, housing conditions, wealth inequality, reliance on machines, or energy use.

Smil concludes that "whatever lessons can be drawn from the demise of the Western Roman Empire are of little avail in illuminating the global reverberations of any dramatic weakening of America's standing in the modern world" (pg. 148). In terms of the fall of Rome and the predicted fall of the U.S., Smil maintains that there is little to support comparisons. One could even contest the idea that there was a fall of Rome, since in reality it was more of a slow decline (and applicable mainly to the Western Empire). Ironically, in this the two are reportedly similar: the U.S. has been experiencing "a gradual retreat encompassing all parameters that make a nation a great power" since World War II (pg. 168). It is not likely that its power will abruptly vanish. Smil argues that surmises of the dramatic fall of the U.S. in the near future are rhetorical hyperbole.

While Smil's book is thoroughly researched and appears adequately objective, I am not convinced that the designation of America as a New Rome is quite so rife within academic discourse to justify devoting an entire book to refuting it. Immanuel Wallerstein has already established that there is a difference between a world-empire and a world-economy, but Smil does not engage the world-systems perspective at all, either to critique or incorporate. Much of his examination of the differences between Rome and the U.S., which takes up about 50% of the book, seems to be overreaching the mark; it should be self-evident that daily conditions were very different between modernity and antiquity, especially with regards to common indicators. It would have been more interesting to me anyway if he had focused on the issue of the U.S. as imperialist, although even those debates generally recognize the vast difference between old world empire and the nature of empire in a modern world-system. At any rate, if I ever had any temptation to refer to America as a "new Rome," it has now been eradicated effectively.

Elizabeth Seale
Department of Sociology
State University of New York College at Oneonta
sealeek@oneonta.edu