WORLD
ECONOMICS
ASSOCIATION
BOOKS

The Scientist and the Church

Shimshon Bichler
and Jonathan Nitzan

The electronic version of this work is protected by CreativeCommons
Attribution-Non Commercial-No Derivatives 2.5 Canada

You are free to share, copy, distribute and transmit the **electronic version** of this work, in whole or in part, under the following conditions:

- **Attribution**. You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work).
- **Noncommercial**. You may not use this work for commercial purposes.
- **No Derivative Works**. You may not alter, transform, or build upon this work.

For any reuse or distribution, you must make clear to others the license terms of this work. The best way to do this is with a link to the original web page of this publication. Any of the above conditions can be waived if you get permission from the copyright holder. Nothing in this license impairs or restricts the author's moral rights.

The Bichler & Nitzan Archives

The Scientist and the Church

Shimshon Bichler and
Jonathan Nitzan

Copyright © 2015 Shimson Bichler and Jonathan Nitzan

All rights reserved.

ISBN: to follow

Published by World Economics Association
http://www.worldeconomicsassociation.org/

Cover artwork: Section taken from Heisser Ort by Paul Klee, 1933

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise without prior permission, in writing, from the publisher.

About the Authors

Shimshon Bichler teaches political economy at colleges and universities in Israel, while Jonathan Nitzan teaches political economy at York University in Toronto. Their co-authored books include *The Global Political Economy of Israel* (Pluto, 2002) and *Capital as Power: A Study of Order and Creorder* (Routledge, 2009). All of their publications, reviews, interviews, conference presentations and course material are available for free under the Creative Commons license from *The Bichler & Nitzan Archives* (http://bnarchives.net).

Content

Illustrations

Figures

Pictures

Tables

Introduction

Human society, one may argue, is propelled by a dynamic clash of two primordial drives: creativity and power. The urge to invent confronts the impulse to conserve, the desire to change contests the quest to impose, the will to transcend conflicts with the impetus to restrict, harness and sabotage. It seems that the ever-present need to create something new always stands against the itch to redistribute and appropriate.

Arthur Koestler described this clash, somewhat romantically, in his masterful history of cosmology, *The Sleepwalkers* (1959). His lone scientists grope in the dark. They search for cues, hints and leads. They often stumble, falling flat on their faces. Rarely do they know exactly what they are looking for. But they go on. And then, suddenly, comes a revelation. The scientist sees a spark. Many a time the spark fizzles out and dies. But sometimes it persists long enough to ignite a fire. Novel ideas, syllogisms, explanations, equations and theories start to emerge in quick succession. Before long, a whirlwind of light builds up in the middle of the darkness. The whirlwind twists and turns, drawing in other scientists, generating more light, more ideas, more findings. In rare cases, it even gives rise to a totally new cosmology.

But this creativity is never easy to manifest. Wherever they go, the scientists find themselves faced with a monolithic wall of resistance. Confronting them are the dominant power institutions of society, the opaque and seemingly impenetrable complex of church, academy, state, army and business organizations that control and leverage the prevailing beliefs, ideologies, dogmas and paradigms. Occasionally, a single scientist manages to break through the wall. Kepler, Galileo, Newton, Maxwell and Einstein, among others, were immortalized for doing so. But of those who try, the vast majority fail and sink into oblivion. The odds are overwhelmingly against them. To

challenge power with creativity is to risk your life, job, reputation, family and future – as the heroic Cecilia Paine, the first to discover what stars are made of, was to learn the hard way (see Chapter 11). Those who contest the dogma – like the poet in George Orwell's *Keep the Aspidistra Flying* (1936) – face ridicule, poverty, life in the shadows. No wonder most people end up taking the safe route of consent, moving obediently with the herd.

The First Mode of Power

Many of those who examined the clash between creativity and power – from Socrates and Plato to Freud and Marcuse – searched for universal drives and inhibitions, for the eternal underpinnings of Eros and Civilization. But while the drives and inhibitions may be universal, their social manifestations are often unique. The clash of creativity and power is the engine of the social *creorder* – the ongoing creation of order that propels and transforms all historical societies. And so, whatever its sources, this clash is always specific to the mode of power in which it is manifested.[1]

The first mode of power we know of was born in Mesopotamia, about six thousand years ago. Although the conflict between the inventive creators and their imposing rulers was rarely if ever recorded, the *effects* of this conflict are amply documented.[2] The archaeological remnants and written tablets attest the invention of organized agriculture and planned irrigation – as well as the subjugation of large populations to a rigid palatial regime of canal digging and maintenance, field work and animal husbandry. We have evidence of innovative construction, including the invention of the 'building block' (mud brick) and advanced architecture – as well as the extensive use of hard labour to erect religious/statist monuments for the glory of the gods-rulers. And this record sits well with the Mesopotamian myth-of-creation-read-power-relations. According to this myth, the gods had invented human beings simply so that they . . . could work for them: 'Let him [man] be burdened with the toil of the gods, that they may freely breathe' (Frankfort *et al.* 1946: 185; see also Kramer 1956: Ch. 13)

The Mesopotamians are believed to be the first to have invented writing – and therefore the ability to articulate, develop and record complex ideas, art, poetry and literature. But the writing they invented was also kept deliberately complicated, accessible only to a narrow stratum of priests, palace officials and clerks. Along with Mesopotamia's complicated number system, writing became an effective means of exclusion, a way to organize the mode of power, control the dogma and hold the underlying population in line.

---

[1] The societal consequences of creativity and power were central to the works of Thorsten Veblen (1898, 1904, 1919, 1923) and Lewis Mumford (1934, 1961, 1967, 1970). On the concept of *creorder*, see Nitzan and Bichler (2009a: 305-306 and Chapter 1 below).

[2] For classic accounts, see Jacobsen (1943), Frankfort *et al.* (1946), Frankfort (1948, 1951), Kramer (1956) and Evans (1958). For a comparative study of early civilizations, see Trigger (2003).

Democratic Writing

But the sabotage exerted by a mode of power, no matter how totalizing, is never complete. Force always invites and creates a transformative counterforce, and that is what eventually happened with writing. In due course, the elites' stranglehold over this complex symbolic technology was loosened. The key breakthrough might have occurred in the fifteenth or fourteenth century BCE, in the Egyptian turquoise mines of Serabit el-Khadim in the Sinai Peninsula. The walls of these mines reveal an-easy-to-read alphabetic script, the first radical departure from the complicated Egyptian hieroglyphs.[3]

We don't know who invented this ingenious script. Perhaps it was the western-Semitic Apiru, or Amurru, who worked as zapping labourers in the imperial mines. Being semi-nomadic and relatively independent, they probably weren't pulped into total submission by the Egyptian Sun-God king. And maybe, possibly as a consequence of disputes with their employer, they invented a new form of writing to contest and resist their harsh treatment. Whatever their identity and reasons, though, the alphabet they created set off a revolution: it started the democratization of knowledge, an open-ended process that seven centuries later would give rise to science and philosophy.

Autonomy

Science and philosophy were born in the Greek poleis of the fifth century BC.[4] Historically, it was a giant quantum leap. In the midst of an oriental world, controlled by despotism, tyranny and god-kings, there emerged, suddenly and without warning, a new culture based on democracy, science and philosophy. The roots of this transformation remain heatedly debated, partly because the character of the Greek polis was so special, if not entirely unique. For the first time in history, man no longer slaved for the gods and their earthly representatives.[5] From a lowly, subservient creature, he became the centre of the universe. The human being was now recognized as the creator of the *nomos* (society), while the human mind was made the final interpreter of the *physis* (nature). Gone was the heteronomous rule of kings and priests. Instead, there arose an autonomous society, conceived, created and regulated by its own members. And with open autonomy came explosive creativity. The art and science of philosophy, literature, dialogue, mathematics, logic, theatre and history all flourished. This burst of creativity owed much to the elimination of external power and arbitrary coercion: it was driven not by force and adulation, but by idle curiosity and the quest for

[3] See for example Giveon (1978), Naveh (1987) and Nitzan and Bichler (2009a: 267). The precise dating of this script remains debated. Recent discoveries date a similar script in Egypt's Western Desert to the nineteenth century BCE.
[4] For an enlightening analysis of this birth, see Castoriadis (1991a).
[5] Although women and slaves were liberated only millennia later, the principles that emancipated them were the same as those that liberated Greek men.

truth; it throve not on obedience and dogma, but on scepticism and self-criticism; and it was fuelled not by conflict and violence, but by the love of life and the admiration of beauty.

In an autonomous society, where humans are neither subservient to nor in command of others, their agreement is predicated on common logic, broad dialogue and inclusive planning. And that is what happened in some of the poleis. Autonomy went hand in hand with the Pythagorean invention of the *proof* – the need to *convince* your equals using logical, agreed-upon principles. And there was more than pure logic here. The concept of proof was complemented and greatly enriched by the recognition of human limitations and the desire to transcend them – hence the critical bent of historical narrative, the bitterness of tragedy and the ridicule of comedy. In this way, the democratic quest for pure knowledge both implied and depended on the desire to understand the beauty of the universe and the urge to create a good society. This triangular model of philosophy-science-democracy is perhaps the greatest societal invention ever.

Science and Church

The third historical leap in the conflict between creativity and power happened in the sixteenth century, with the emergence of capitalism.[6] This emergence was accompanied by a deep political-scientific revolution. Cities and towns were growing in leaps and bounds, the printing press was spewing out new books, pamphlets and scientific articles, and more and more people were becoming mesmerized by novelty and hooked on change.

The crown achievement of this revolution was the mechanical worldview spearheaded by Kepler, Galileo and Newton. The introduction of this new cosmology exposed the inherent conflict between scientific *re*-search and static dogma. The new scientists still feared the authorities and were keen to avoid the wrath of the Holy Inquisition, and Galileo, whose open-ended explorations challenged the Church's Aristotelian dogma, was nearly executed by Pope Urban VIII. But the fault line of the *ancien régime* was now laid bare for all to see. The power of the monarchy, nobility and Church was increasingly viewed as dark and backward. And even if the people of that epoch hadn't quite realized it, we can say that, for the first time in history, the good of society was explicitly associated with forward-looking novelty and creativity, progressive education and political freedom.

[6] The seeds of this leap are beautifully narrated in Umberto Eco's Middle-Age thriller, *The Name of the Rose* (1983).

The Science of Society

The mechanical-bourgeois revolution gave rise to the first science of society – the study of 'political economy'. Adam Smith and David Ricardo, the key founders of this new discipline, were social scientists: they searched for the natural laws of society; they looked for the rules that governed production, consumption and exchange; and they developed the first theories of prices. Their science was deeply revolutionary. It contested the old regime and offered a totally new framework to understand and benefit from the new. But their innovative achievements were soon arrested and eclipsed by the rising academic church of neoclassical political economy, later to be renamed and scientifically suffixed as 'econom*ics*'.

Headed by Stanley Jevons, Leon Walras, Carl Menger, Alfred Marshall and John Bates Clark, the neoclassicists abandoned the open-ended intellectual inquiry of their classical predecessors, replacing it with a narrow, rigid dogma. By the late nineteenth century, capitalism was clearly victorious, and the role of bourgeois theorists was no longer to attack, but defend. There was a pressing need for a new, secular religion, and the neoclassical economists rose to the occasion. They articulated a new faith and nominated themselves its principal gatekeepers. To ward off outsiders, they erected insurmountable disciplinary walls and replaced plain text with indecipherable mathematical scriptures. To extinguish free thinking, they imposed impossible-to-believe assumptions. To eliminate open dialogue, they carefully restricted the questions economists were allowed to ask. And they triumphed.

A century later, their neoclassical faith reigns supreme. Having more followers than all of the world's religions combined, their dogma dominates the mindset of rulers and subjects alike. It justifies and regulates the capitalist mode of power. And faced with no real competitors, it seems almost unassailable. But then, that is often what hubris looks like when a regime approaches its peak power, just a short moment before it falters.

Marxism

Whereas the neoclassicists sought to defend the victory of capitalism, Marx and his followers tried to annul it. A man of his time, Marx was deeply influenced by the scientific-mechanical revolution. But whereas the bourgeois theorists of society used their science to tie humanity to the machine, Marx's goal was to liberate it from it. He wanted to develop an alternative, *universal* social science, an emancipatory, rational framework for a new social order born out of the contradictions of the old.

Eventually, though, Marxism went into retreat. Its liberatory impulse was fatally wounded by the totalitarian record of Soviet regimes, its autonomy was compromised by frequent realignments with Communist Party shifts and changing political fashions

and its scientific vitality was drained by attempts to reconcile Marx's scriptures with the rapidly changing reality.

The consequences of these developments were dire. Like bourgeois political economy, Marxism also disintegrated. But whereas bourgeois political economists eagerly endorsed and hastened this disintegration by creating mutually exclusive 'social sciences', Marxists tried to hold onto the former universality of Marx's theory – even when that universality was no longer there. Since the late nineteenth century, Marxism was gradually fractured into many different and often contradictory sub-disciplines. Its original totality gave rise to irreconcilable diversity, and its scientific research programme gradually succumbed to increasingly rigid dogmas and anti-scientific, postist sentiments. By the second half of the twentieth century, it no longer offered a cohesive theoretical and empirical account of capitalism, let alone a convincing alternative to it.

Value Theory

Perhaps the most important – and paradoxically least recognized – consequence of these developments is the collapse of value theory. Capitalism is a commodified social order. Everything in this order – including the central process of capital accumulation – is related to everything else through prices. This is why the classical cosmology of capitalism – both bourgeois and Marxist – started from and was based on a theory of value.

But that is no longer the case: nowadays, there is *no viable theory of value*.

Marx's labour theory of value rests on the elementary particle of socially necessary abstract labour time – but that particle, while perhaps intuitively appealing in Marx's time when the joule was first invented, can no longer be identified and quantified in today's capitalism. And the situation is even worse with neoclassical value theory: the elementary particle of this theory – the 'util' – was already deemed quantitatively meaningless by the theory's own founding fathers, and no neoclassicist has managed to prove them wrong since.

The net result is that neoclassical and Marxist theories now hang on the thread of cognitive dissonance. They conceive capitalism as a quantitative mode of consumption and production, but the material/productive units on which their theories depend – the util and socially necessary abstract labour time – are entirely fictitious. They think of capital as if it were a quantifiable economic entity, but the way in which they 'measure' this supposedly real entity is, in fact, completely arbitrary and forever irrefutable.

The Capitalist Mode of Power

Our own work, which started when we were students in the 1980s, seeks to break this impasse. It calls for a new cosmology of capitalism: one that sees capital not as a productive economic category but as capitalized power, and that conceives and researches capitalism not as a mode of production and consumption but as a mode of power. The articles collected in this volume outline the general contours of our approach and flesh out some of our recent research. The first ten papers were written during the period of 2012-2015, while the last one – *The Scientist and the Church* – was posted on our website in 2005. All are reproduced here in their original form.

The book is divided into five thematic sections. The first section (Chapters 1-3) sketches our notion of the capitalist mode of power. Chapter 1 takes on the common foundations of liberal and Marxist political economy. It dissects the conventional dualities of politics/economics, real/nominal, productive/unproductive and base/superstructure; it examines the mechanical assumptions underlying both the neoclassical utilitarianism of supply, demand and equilibrium and the Marxist materialism of exploitation and accumulation; and it shows how the rise of new power institutions, organizations and processes during the late nineteenth century made both approaches decreasingly relevant and increasingly dogmatic.

The alternative, we argue, is to bring power back in: to conceive power not as an extra-economic entity that distorts or supports capital from the 'outside', but as the basic relationship that *defines* what capital is in the first place. We should think of accumulation not as the amassment of utils or dead labour, but as the capitalization of power writ large. And to be able to do so, we need a new, *power* theory of value. We need a theory that is based not on production as such, but on the conflict between creativity and power; that focuses not on capital in general, but on dominant capital in particular; and that deals not with absolute accumulation, but with differential accumulation. Such a theory, we believe, can help us better understand the capitalist mode of power – as well as what needs to be done in order to undo it.

Of course, in order to develop such a theory, we need to restart from scratch, to go to the Cartesian roots, so to speak. A power theory of value requires a new political anthropology of capital as power; it needs to identify, articulate and analyse the foundational elements of the capitalist mode of power; and it has to create new methods to decode the logic, triumphs and crises of capitalized sabotage. The remainder of this book offers a sample of such endeavours.

We begin in Chapter 2 with the 'Asymptotes of Power'. No power, including capitalist power, is ever compete. Since power is always exerted against opposition, it is inherently bounded, so the first thing we need to examine is the asymptotes, or limits, that this opposition creates. Using the United States as our case study, the chapter offers an analytical framework for such an inquiry. By progressively decomposing the redistribution of U.S. national income – and the forces that this redistribution reflects

– we show how the ongoing systemic crisis has been tightly linked to U.S. capitalism approaching its multiple asymptotes of power.

Chapter 3 reflects on Robert Harris' financial thriller, *The Fear Index*. The popular perception, mirrored in the novel, is of a system running amok. According to this conventional creed, finance has now taken over production, speculators have substituted for investors and automated investment algorithms have replaced human discretion. It is as if the unchecked processes of financialization have totally 'distorted' capitalism.

Or have they? From the viewpoint of capital as power, there has been no distortion at all. Capital is finance, and only finance – or, in our terminology, capitalization. And capitalization is not an addendum to a mode of production and consumption, but the regulator of a mode of power. A symbolic representation of power, finance-read-capitalization measures the ability of owners to overcome resistance and automate society, to create a differential megamachine whose *raison d'être* is to beat the average and exceed the normal rate of return. In this sense, the capitalized rituals of 'finance', 'speculation' and 'automated trading' – along with the strategic sabotage they engender – represent not a muted form of capitalism, but the purest.

Crisis

The second section of the book (Chapters 4-5) deals with crisis. In Chapter 4, we disaggregate the processes of growth and stagnation. Conventional political economy, both liberal and Marxist, associates accumulation with overall economic growth and prosperity and *de*cumulation with overall stagnation, unemployment and crisis. From the viewpoint of capital as power, though, this association need not hold. Capital here represents not the accumulation of 'things', whether counted in utils or labour hours, but a differential measure of redistributional power. And since capitalized power operates through strategic sabotage, there is good reason to expect differential accumulation and aggregate prosperity to move in *opposite* directions – which is exactly what has happened in the United States since the Second World War.

From the 1940s onwards, the distributive income share of capitalists has moved positively with the rate of unemployment, while the share of the top 1% has moved inversely with the growth of employment. No wonder capitalists have learned to stop worrying and love the crisis.

Chapter 5 extends the analysis of crisis to the global arena, examining the historical links between differential accumulation, the corporations and governments of the Weapondollar-Petrodollar Coalition and Middle East 'energy conflicts'. According to the pundits, Middle East wars are hopelessly complex, often irrational and almost always unique. Regardless of how we approach them – whether we use the conventional or radical viewpoints of international relations, the idiosyncratic perspectives of culture and religion, or the economic standpoint of resource 'scarcity' – these wars are

difficult to understand and reason, let alone generalize about. In short, they are, by and large, *sui generis*.

But as we show in this chapter, these specificities and irrationalities could all be enfolded into the universal logic of modern capitalism – the differential accumulation of capital. Using our notion of capital as power, we find remarkably stable regularities linking the eruption of Middle East energy conflicts, the differential performance of the Weapondollar-Petrodollar Coalition and global shifts in the nature of differential accumulation. Over the years, our research has shown these regularities to have remained more or less unaltered since the late 1960s, and that stability has allowed us to predict – in writing and, in the first two conflicts, *ahead* of time – the three episodes of the Gulf Wars series.

***Re*-searching**

The third section of the book (Chapters 6-7) emphasizes the need to constantly re-examine our convictions and research our findings. In Chapter 6, we zero in on a basic constant of Marxist political economy – the nexus between imperialism and financialism. For many Marxists, this nexus is central to understanding the transformation of capitalism – yet the historical role they ascribe to that nexus has changed dramatically over time. The main change concerns the nature and direction of surplus and liquidity flows. In the early twentieth-century version of the nexus, the surplus was said to be exported to the colonies; in the neo-imperial theory of Monopoly Capital, it was domestically absorbed by the core countries themselves; in the World Systems version, it was imported from the dependent periphery; and in the more recent thesis of hegemonic transition, it has taken the form of global liquidity that U.S.-led financialization sucks in from the rest of the world.

Now, using the very same concepts to explain very different and often opposing processes is already confusing enough – particularly when nobody knows exactly what the surplus is, let alone how to measure it. And the confusion is only amplified when theorists advance arguments for which they furnish little or no evidence. This latter point is illustrated by empirically examining the hegemonic transition thesis. According to this thesis, the United States has been leading the global process of financialization – yet the facts show the exact opposite: based on its differential profitability, the U.S. financial sector appears to have been the *lagger*, not the leader in this process!

Chapter 7 explores the role of crime and punishment in the capitalist mode of power. The starting point is the 'Rusche thesis': the argument, made by George Rusche in the 1930s, that the ebb and flow of crime and punishment are closely related to the tightening and loosening of the labour market. The thesis never gained many followers: mainstream criminologists have tended to ignore it, while their Marxist counterparts, although often sympathetic, have been unable to empirically substantiate it. But, as the chapter shows, this wholesale rejection may very well be the result of a simple

misreading. Much like the early twentieth-century astrophysicists who misread the spectrometer measurements of solar radiation, today's criminologists have been misreading the connection between unemployment and crime: they have been looking at the right data, but in the wrong way.

A proper *re*-reading of U.S. statistics shows that Rusche was right on the mark: over the past century, the ups and downs of crime and punishment have been positively correlated with variations in unemployment, exactly as he predicted. Moreover, the correlation is so tight that there is almost no need for any other explanation!

But the nearly perfect fit contains two glaring exceptions. While the thesis holds under the normal circumstances of 'business as usual', it breaks down in periods of systemic crisis: during the 1930s and the 2000s, unemployment increased sharply, but crime and the severity of punishment, instead of rising, dropped perceptibly. This anomaly, we suggest, might be related to the nature of capitalist power and resistance to that power. Under normal circumstances, the counterforce to the capitalist sabotage of unemployment is largely personal and often criminal, hence the positive correlation; whereas during a systemic crisis the counterforce becomes more collective and political, hence the negative correlation.

Interviews

The fourth section of the book contains two wide-ranging interviews (Chapters 8-9). Nowadays, interviews are commonly seen as second-rate means of communication, a way to simplify difficult ideas for quick consumption by the impatient masses. Our interviews here, though, are different: they are long and thorough, and they don't cut corners.

In our books and articles, we have often found ourselves evading important issues whose elaboration would have taken us far afield and off topic. Although important, somehow these issues were deemed less urgent than the subject we ended up working on. And so they remained largely unaddressed, accumulating dust at the bottom of the still-to-deal-with heap.

And then came the systemic crisis. The calamity opened up a Pandora's Box of unanswered – and often unasked – questions, and it offered us the opportunity to deal with many of those bottom-of-the heap issues. So when Tim Di Muzio and Piotr Dutkiewicz suggested that we conduct lengthy, open-ended interviews, we gladly agreed.

The interviews deal with a variety of related topics and questions. They include, among issues, the notion of 'the market' and how it relates to our concept of capitalized power; the question of whether 'capitalism' is still the appropriate term to describe the world we live in; the fundamental difference between capital and wealth; the crucial significance of theory and research for political action; similarities and differences

between Marxism and our own theory of capital as power; the role of labour and production in the power theory of value; how the labour theory of value misinforms the class struggle; and the historical link between productive and unproductive labour on the one hand and mass murder on the other. The list goes on.

The Scientist and the Church

The final section returns to the theme of the book (Chapters 10-11). It begins with a eulogy to a scientist who enlightened us, the late Akiva (Aki) Orr. In Hebrew, his family name, 'Orr' (אור), means 'light', and we would like to suggest that this is not a mere coincidence. Aki Orr was a true path-breaker. As co-founder of the first radical political movement in Israel, the Marxist-Trotskyite MATZPEN, he and his friends were the first to shed new light on the Palestinian-Israeli conflict. As a universal activist, he was associated with numerous revolutionary movements around the world. And as an autonomous intellectual, he befriended and was close to many innovative scientists, thinkers and artists. His books and activism touched the lives and transformed the thinking of many.

Aki charted his own independent path. He never held an official position; he never drew a salary from any academic or political organization, established or contrarian; he never received any research funding. He was keen on understanding the world, and he explored it not in order to gain fame or earn a profit, but to better society. As a universalist, he loathed intellectual property rights and distributed his writing for free and without any legal protection. Many of his path-breaking ideas were later lifted, nonchalantly, by academics who, as it turned out, had 'known it all along'.

Chapter 11, titled 'The Scientist and the Church', deals with this type of appropriation. The concrete focus of the piece, originally written in 2005, is the UC Berkeley group 'Retort', but the lesson to be drawn from it is a general one. Retort here represents the dark forces of intellectual sabotage, the anti-scientific stance of the academic church. Dressed as a radical, 'Marxist' collective of professors-activists, the group plagiarized our broad theories, historical narratives and concrete arguments, along with our concepts, methods and research results. The uplifted material – massaged and calibrated to look and feel like novel-yet-legitimate Marxism (no less) – was neatly packed into a timely, politically-correct book on the second 'Gulf War'. The book was quickly printed by a politically-correct publisher, promoted by politically-correct journals and distributed to the unsuspecting, politically-correct laity. It looked like a real gem, certainly on the authors' CVs.

Unlike the venturing scientist Akiva Orr, Retort was steadfastly guarding the academic gates. Whereas Aki was interested in open-ended inquiry, creativity and novelty, Retort was keen on keeping the (Marxist) faith intact and the dogma unchallenged. Aki encouraged research in directions that might end up contradicting his own

– indeed, once convinced, he didn't hesitate to abandon the dogmatic aspects of Marxism in favour of Castoriadis' approach. By contrast, Retort was quick to disarm the innovators, dispossessing their insights as if they were theirs all along. Unsurprisingly, the radical UC Berkeley – which, incidentally, invented the first computerized tool to detect plagiarism – refused to expose its distinguished professors, while those who published-promoted the Retort fraud in the first place declined to print our contestations. But, then, these are the ways of the Church.

And that must be a sign of hope. The violence of the academic church is evidence of an underlying counterforce, a sign that creativity, novelty and the quest for truth are lurking under the surface. Wherever we find people such as Aki and his friends, we find light. Despite the Retort squads, the rigid academic dogmas and the mind-numbing Facebooks, there are always free-spirited creators, scientists and artists who look for a spark. Like any other mode of power, capitalism too creates its own negation – the quest for the light, the search for the 'Orr'.

The Capitalist Mode of Power

1

Capital as Power: Toward a New Cosmology of Capitalism [1]

Abstract

Conventional theories of capitalism are mired in a deep crisis: after centuries of debate, they are still unable to tell us what capital is. Liberals and Marxists think of capital as an economic entity that they count in universal units of utils and abstract labour, respectively. But these units are totally fictitious: they can be neither observed nor measured. In this sense, they do not exist. And since liberalism and Marxism depend on these non-existing units, their theories hang in suspension. They cannot explain the process that matters most – the accumulation of capital.

This breakdown is no accident. Capitalism, we argue, is not a mode of production but a mode of power, and every mode of power evolves together with its dominant theories, dogmas and ideologies. In capitalism, these theories and ideologies originally belonged to the study of political economy – the first mechanical science of society. But as the capitalist mode of power kept changing and the quantitative revolution made it less and less opaque, the power underpinnings of capital grew increasingly visible and the science of political economy disintegrated. By the late nineteenth century, with dominant capital having taken command, political economy was bifurcated into two distinct spheres: economics and politics. And in the twentieth century, when

[1] This paper was first published in *Real-World Economics Review* (Bichler and Nitzan 2012c, Issue 61, September).

the power logic of capital had already penetrated every corner of society, the remnants of political economy were further fractured into mutually distinct social sciences. Capital was completely monopolized by economists, leaving other social scientists with little or no say in its analysis. And nowadays, when the reign of capital is all but universal, social scientists find that they have no coherent framework to account for it.

The theory of capital as power offers a unified alternative to this fracture. It argues that capital is not a narrow economic entity, but a symbolic quantification of power. Capital is not absolute, it is relative. It has little to do with utility or abstract labour, and it extends far beyond machines and production lines. Most broadly, it represents the organized power of dominant capital groups to create the order of – or *creorder* – their society.

This view leads to a different cosmology of capitalism. It offers a new theoretical framework for capital based on the twin notions of dominant capital and differential accumulation, a new conception of the state and a new history of the capitalist mode of power. It also introduces new empirical research methods – including new categories; new ways of thinking about, relating and presenting data; new estimates and measurements; and, finally, the beginning of a non-equilibrium disaggregate accounting that reveals the conflictual dynamics of society.

The Capitalist Cosmology

As Marx and Engels tell us at the beginning of *The German Ideology* (1970), the capitalist regime is inextricably bound up with its theories and ideologies. These theories and ideologies, first articulated by classical political economy, are much more than a passive attempt to explain, justify and critique the so-called economic system. Instead, they constitute an entire cosmology – a system of thinking that is both *active* and *totalizing*.

In ancient Greek, the verb *Kosmeo* has an active connotation: it means 'to order' and 'to organize,' and political economy does precisely that. It explains, justifies and critiques the world – but it also actively makes this world in the first place. Moreover, political economy pertains not only to the narrow economy as such, but also to the entire social order as well as to the natural universe in which this social order is embedded.

The purpose of this paper is to outline an alternative cosmology, one that offers the beginning of a totally different framework for understanding capitalism.

Of course, to suggest an alternative, we first need to know the thing that we contest and seek to replace. To lay out the groundwork, we begin by spelling out what we think are the hallmarks of the present capitalist cosmology. Following this initial step, we enumerate the reasons why, over the past century, this cosmology has gradually disintegrated – to the point of being unable to make sense of and recreate its world.

And then, in closing, we articulate some of the key themes of our own theory – the theory of capital as power.

Foundation I: Separating Economics from Politics

Political economy, liberal as well as Marxist, stands on three key foundations: (I) a separation between economics and politics; (II) a Galilean/Cartesian/Newtonian mechanical understanding of the economy; and (III) a value theory that breaks the economy into two spheres – real and nominal – and that uses the quantities of the real sphere to explain the appearances of the nominal one. This and the following two sections examine these foundations, beginning with the separation between politics and economics.

During the thirteenth and fourteenth centuries, there emerged in the city states of Italy and the Low Countries an alternative to the rural feudal state. This alternative was the urban order of the capitalist bourg. The rulers of the bourg were the capitalists to be. They were the owners of money, trading houses and ships; they were the managers of industry; they were the enterprising pursuers of new social technologies, the seekers of innovative methods of production.

These early capitalists offered an entirely new way of organizing society. Instead of the vertical feudal order in which privilege and income were obtained by force and sanctified by religion, they brought a flat civil order where privilege and income came from rational productivity. Instead of authoritarian collectivism, they offered individual independence. Instead of the closed loop of agricultural redistribution by confiscation, they promised open-ended industrial growth. Instead of ignorance, they brought progress and knowledge. Instead of subservience, they offered opportunity.[2] Theirs was the *future regime of capital*, an explicitly 'economic' order based on an endless cycle of production and consumption and the ever-growing accumulation of money.

Initially, the bourg was subservient to the feudal order in which it emerged, but that status gradually changed. The bourgs began to demand and obtain *libertates* – that is, *differential* exceptions from feudal penalties, taxes and levies. The bourgeoisie recognized the legitimacy of feudal politics, particularly in matters of religion and war. But it demanded that this politics not impinge on its urban economy. In our view, this early class struggle, the power conflict between the declining nobility and the rising bourgeoisie, is the origin of what we now consider as the separation of economics and politics.[3]

The features of this separation are worth summarizing, beginning with the liberal view. Over the past half millennium, liberals have grown accustomed to classifying

[2] The historical tension between the civil urban space of economy and capital and the coercive violent space of politics and state is explored from different perspectives in Lopez (1967), Tilly (1992) and Lefebvre (2003).
[3] For more on this transformation and its associated debates, see Gerstenberger (2005).

production, technology, trade, income and profit as aspects of the economy. By contrast, entities like state, law, army and violence are classified as belonging to politics.

The economy is taken to be the productive source. It is the realm of individual freedom, rationality, frugality and dynamism. It creates output, raises consumption and moves society forward. By contrast, politics is conceived as coercive-collective. It is corrupt, wasteful and conservative. It is a parasitical sphere that latches onto the economy, taxing it and intervening in its operations.

Ideally, the economy should be left on its own. *Laissez faire* politics would produce the optimal economic outcome. But in practice, we are told, this is never the case: political intervention constantly distorts economics, undermines its efficient operation and hampers the production of individual well-being. The liberal equation, then, is simple: the best society is one with the most economics and the least politics.

The Marxist view of this separation is different, but not entirely. For Marx, the liberal project of severing civil society from state is a misleading ideal, if not outright self-deception.[4] The legal act of setting the private economy apart from public politics alienates property; and that very alienation, he says, serves to defend the private interests of capitalists against the collective pursuit of a free society. From this perspective, a seemingly independent political-legal structure is not antithetical but essential to the material economy: it allows the organs and bureaucracy of the state to legitimize capital, give accumulation a universal form and help maintain the capitalist system as a whole.

In other words, Marx readily accepts the liberal duality – but with a big twist. Where liberals see an inconsistency between economic well-being and political power, Marx sees two complementary forms of power: a material-economic base of exploitation and a supporting legal-state structure of oppression.

Historically, the coercive institutions and organs of the state evolve as *necessary* complements to the economic mechanism of surplus extraction: together, they constitute the totality that Marxists refer to as a 'mode of production'. But the relationship between these two aspects is not symmetric: in any particular historical epoch, the nature and extent of state intervention are predicated on the concrete requirements of surplus extraction. To illustrate, during the nineteenth century, these requirements dictated the hands-off methods of *laissez faire*; toward the middle of the twentieth century, they called for the macro-management of Keynesianism; and at the beginning of the twenty-first century, they mandate the multifaceted regulations of financialized neoliberalism.

So unlike in the liberal cosmology, where society consists of utility-seeking individuals for whom the state is a specialized service provider at best and a distortion at worst, in the Marxist cosmology the state is necessary to the very possibility of capitalism. But that necessity is conditional on the state being distinct from – and ultimately subjugated to – the imperatives of accumulation.

---

[4] Cf. Marx and Engles (1970: 64-5, 79-80) and Marx (1963: 19-20). See also Marx (1973a, 1973b).

Following the footsteps of his classical predecessors, particularly Adam Smith and David Ricardo, Marx, too, prioritized economics over politics. Enthralled by the methods and triumphs of bourgeois science, he looked for latent reasons, for the ultimate mechanical forces that lie behind and move the social appearances. And just like his bourgeois counterparts, he, too, found the locus of these forces in the 'economy'.[5]

The productive sphere, and especially the labour process, he argued, is the engine of social development. This is where use value is created, where surplus value is generated, where capital is accumulated. Production is the fountainhead. It is the ultimate 'source' from which the other spheres of society draw their energy – energy that they in turn use to help shape and sustain the sphere of production on which they so depend. And so, although for Marx capitalist economics and politics are deeply intertwined, their interaction is that of two conceptually distinct and asymmetric entities.[6]

Foundation II: The Galilean/Cartesian/Newtonian Model of the Economy

The new capitalist order emerged hand in hand with a political-scientific revolution – a revolution that was marked by the mechanical worldview of Machiavelli, Kepler, Galileo, Descartes, Hobbes, Locke, Hume, Leibnitz and, most importantly, Newton.[7]

It is common to argue that political economists have borrowed their metaphors and methods from the natural sciences. But we should note that the opposite is equally true, if not more so: in other words, the worldview of the scientists reflected their society.

Consider the following examples:

- Galileo and Newton were deeply inspired by Machiavelli's *The Prince* (1532). The Prince relentlessly pursues secular power for the sake of secular power. His concern is not the general good, but order and stability. And he achieves his goals not with divine help, but through the systematic application of calculated rationality.

[5] In a famous passage in *A Contribution to the Critique of Political Economy* (1859: 20-1), Marx writes: 'In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness'.

[6] This separation haunts even the most innovative Marxists. Henry Lefebvre (2003), for example, introduced the notion of urban society as a way of transcending the base-superstructure of Marx's industrial society – only to find himself describing this new society in terms of . . . economics and politics.

[7] The fascinating evolution and path-breaking heroes of the mechanical worldview are described in Koestler's unparalleled history of cosmology (1959). The philosophical underpinnings of the scientific revolution, particularly in physics, are examined in Bechler (1991).

- Hobbes' 'mechanical human being' was modelled after Galileo's pendulum, swinging between the quest for power on the one hand and the fear of death on the other – but, then, Galileo's own mechanical cosmos was itself a reflection of a society increasingly pervaded by machines.

- Newton could make up a world of independent bodies because he lived in a society that began to critique hierarchical power and praise and glorify individualism. He envisaged a liberal word in which every body was a lonely soul in the cosmos, interacting with but never dictating its will to other bodies. There is no ultimate cause in Newton, only *inter*-dependence.

- Descartes could emphasize the immediacy of cause and effect – the leaves move only if the wind touches them – because he lived in a world that increasingly contested religious mysteries and church-invoked miracles that operated at a distance.

- Lavoisier invented his accounting identity – the law of conservation of matter – while building a wall around Paris, trying to turn the city into a sealed container in order to capture the mass of its taxable income.

- Darwin's 'natural selection' was based on Malthus' population theory. And so on.

These relatively recent examples should not surprise us. Human beings tend to impose on the cosmos the power structure that governs their own society. In other words, they tend to *politicize nature*.[8]

In archaic societies, the gods are usually numerous, relatively equal and hardly omnipotent. Hierarchical, statist societies tend to impose a pantheon of gods. And absolute rule tends to insist on a single god and a monotheistic religion. In each case, the forces that make up nature reflect, and in turn are reflected in, the forces that shape society.[9]

Capitalism is no exception to this historical rule. Consider the mechanical worldview. The liberal God is nothing but absolute rationality, or natural law. The language of God is mathematical, and therefore the structure of the universe is numerical. The universe that God created is flat, filled with numerous bodies that are not subservient and dependent, but free and interdependent. These bodies are propelled not by differential obligations, but by the universal force of gravity. They are attracted to and repelled from one another not by the will of the Almighty, but through the interaction of force and counterforce. And, finally, they are ordered not by decree, but by the invisible power of equilibrating inertia.

---

[8] On the earliest history of such politicization, see Frankfort *et al.* (1946).
[9] The history of the notion of force, from ancient thought to modern physics, is told in Jammer (1957). The social myths of the gods are narrated and studied in Graves (1944, 1957).

This flat universe mirrors the flat ideals of the liberal order. A liberal society consists of equally small actors, or particles, none of which is large enough to significantly affect the other particles/actors. These particles/actors are energized not by patriarchal responsibilities, but by scarcity – the gravitational force of the social universe. They are attracted to and repelled from one another not by feudal obligations, but through the universal-utilitarian functions of demand and supply. And they obey not a hierarchical rule, but the equilibrating force of the invisible hand of perfect competition.

Foundation III: Value Theory and the Duality of Real and Nominal

Capitalism is a system of commodities and therefore denominated in the universal units of price. To understand the nature and dynamics of this architecture, we need to understand prices, and that is why both liberal and Marxian political economies are founded on theories of value – the utility theory of value and the labour theory of value, respectively.

Value theories begin by splitting the economy itself into two parallel, quantitative spheres: real and nominal. The key is the real sphere. This is where production and consumption take place, where supply and demand interact, where utility and productivity are determined, where well-being and exploitation take place, where surplus value and profit are generated.

Now, on the face of it, it seems difficult if not impossible to quantify the real sphere: the entities of this sphere are qualitatively different, and that qualitative difference makes them quantitatively incommensurate.

For the economists, though, this problem is more apparent than real. Physicists and chemists express all measurements in terms of five fundamental quantities: distance, time, mass, electrical charge and heat. In this way, velocity can be defined as distance divided by time; acceleration is the time derivative of velocity; force is mass times acceleration, etc. And economists, according to themselves, are able to do the very same thing.

Economics, they say, has its own fundamental quantities: the fundamental quantity of the liberal universe is the util, and the fundamental quantity of the Marxist universe is socially necessary abstract labour.[10] With these fundamental quantities, every real entity – from concrete labour, to commodities, to the capital stock – can be reduced to and expressed in the very same unit.

Parallel to the real sphere stands the nominal world of money and prices. This sphere constitutes the immediate appearance of the commodity system. But that is merely a derived appearance. In fact, the nominal sphere is nothing but a giant, symbolic mirror. It is a parallel domain whose universal dollar magnitudes merely reflect

[10] The notion of abstract labour was first articulated by Marx (1859). The term util was coined by Fisher (1892).

– sometimes accurately, sometimes not – the underlying real util and abstract labour quantities of production and consumption.

So we have a quantitative correspondence. The nominal sphere of prices reflects the real sphere of production and consumption. And the purpose of value theory is to explain this reflection/correspondence.

How does value theory sort out this correspondence? In the liberal version, the double-sided economy is assumed to be contained in a Newtonian-like space – a container that comes complete with its own invisible laws, or functions, whose role is to equilibrate quantities and prices. The Marxist version is very different, in that it emphasizes not equilibrium and harmony, but the conflictual/dialectical engine of the economy. However, here, too, there is a clear bifurcation between the real and the nominal, the productive and the financial. And here, too, there is an assumed set of rules – the historical laws of motion – that governs the long-term interaction of the two spheres.

Now, since these principles, or laws, are immutable, the role of the political economist, just like the role of the natural scientist, is simply to 'discover' them.[11] The method of discovery builds on the research paradigm of Galileo, Descartes and Newton on the one hand, and on the application of analytical probability and empirical statistics on the other. In this method, discovery takes place through the fusion of experimentation and generalization – a method that liberals apply through testing and prediction (albeit mostly of past events), and that Marxists apply through the dialectics of theory and praxis.

Finally, unlike economics, politics doesn't have its own intrinsic rules. This difference has two important consequences. In the liberal case, the notion of a self-optimizing economy means that, with the exception of 'externalities', political intervention can only lead to sub-optimal outcomes. In the Marxist case, politics and state are inextricably bound up with production and the economy. However, since politics and state have no intrinsic rules of their own, they have to derive their logic from the economy – either strictly, as stipulated by structuralists, or loosely, as argued by instrumentalists.

To sum up, then, the cosmology of capitalism is built on three key foundations. The first foundation is the separation between economics and politics. The economy is governed by its own laws, whereas politics either is derived from these economic laws or distorts them. The second foundation is a mechanical view of the economy

[11] The Platonic notion that there exists an external rationality – and that human beings can do no more than discover this external rationality – was expressed, somewhat tongue in cheek, by the number theorist Paul Erdös. A Hungarian Jew, Erdös did not like God, whom he nicknamed SF (the supreme fascist). But God, whether likable or not, predetermined everything. In mathematics, God set not only the rules, but also the ultimate proofs of those rules. These proofs are written, so to speak, in 'The Book', and the mathematician's role is simply to decipher its pages (Hoffman 1998). Most of the great philosopher-scientists – from Kepler and Descartes to Newton and Einstein – shared this view. They all assumed that the principles they looked for – be they the 'laws of nature' or the 'language of God' – were primordial and that their task was simply to 'find' them (Agassi 1990).

itself – a view that is based on action and reaction, flat functions and the self-regulating forces of motion and equilibrium, and in which the role of the political economist is merely to discover these mechanical laws. The third foundation is the bifurcation of the economy itself into two quantitative spheres – real and nominal. The real sphere is enumerated in material units of consumption and production (utils or socially necessary abstract labour), while the nominal sphere is counted in money prices. But the two spheres are parallel: nominal prices merely mirror real quantities, and the mission of value theory is to explain their correspondence.

The Rise of Power and the Demise of Political Economy

These foundations of the capitalist cosmology started to disintegrate in the second half of the nineteenth century, with the key reason being the very victory of capitalism. Note that political economy differed from all earlier cosmologies in that it was the first to substitute secular for religious force. But, like the gods, this secular force was still assumed to be heteronomous; i.e., it was an objective entity, external to society.

The victory of capitalism changed this latter perception. With the feudal order finally giving way to a full-fledged capitalist regime, it became increasingly apparent that force is imposed not from without, but from within. Instead of heteronomous force, there emerged autonomous power, and that shift changed everything.[12] With autonomous power, the dualities of economics/politics, the separation of real/nominal and the mechanical worldview of political economy were all seriously undermined. With these categories undermined, the presumed automaticity of political economy no longer held true. And with automaticity gone, political economy ceased being an objective science.

The recognition of power was affected by four important developments. The first development was the emergence of totally new units. By the late nineteenth and early twentieth centuries, the notion of atomistic interdependent actors had been replaced by large hierarchical organizations – from big business and large unions to big government and large NGOs – organizations that were big enough to alter their own circumstances as well as to affect one another.

The second development was the emergence of new phenomena, unknown to the classical political economists. By the beginning of the twentieth century, total war and a seemingly permanent war economy had been established as salient features of modern capitalism, features that appeared no less important than production and consumption. Governments started to actively engage in massive industrial and macro stabilization policies, policies that completely upset the presumed automaticity of the so-called economic sphere. More and more capitalists incorporated their businesses, and as incorporation became nearly universal, the result was to bureaucratize and socialize

[12] The difference between heteronomy and autonomy is developed in the social and philosophical writings of Cornelius Castoriadis (see for example 1991b).

the very process of private accumulation. The singular act of labour grew not simpler and more homogeneous, but ever more complex, and many workers no longer lived at subsistence levels. There emerged a 'labour aristocracy', the workers' standard of living in the main capitalist countries soared, and, with rising disposable income, issues of culture grew in importance relative to work. Finally, the nominal processes of inflation and finance assumed a life of their own, a life whose trajectory no longer seemed to reflect the so-called real sector.

The third development was the emergence of totally new concepts. With the rise of fascism and Nazism, the primacy of class and production was challenged by a new emphasis on masses, power, state, bureaucracy, elites and systems.

Fourth and finally, the objective/mechanical cosmology of the first political-scientific revolution was undermined by uncertainty, relativity and the entanglement of subject and object. Science was increasingly challenged by anti-scientific vitalism and postism.[13]

The combined result of these developments was a growing divergence between universality and fracture. On the one hand, the regime of capital has become the most universal system ever to organize society: its rule has spread to every corner of the world and incorporated more and more aspects of human life. On the other hand, political economy – the cosmology of that order – has been fatally fractured: instead of what once was an integrated science of society fashioned after the universal laws of nature, there emerged a collection of partial, exclusionary and often incommensurate social disciplines.

The mainstream liberal study of society was split into numerous social sciences. These social sciences – economics, political science, sociology, anthropology, psychology, and now also management, international studies, urban and environmental studies, culture, communication, gender and other such offshoots – are each treated as a 'discipline', a closed system guarded by proprietary jargon, unique principles and a bureaucratic-academic hierarchy.

---

[13] We use the term 'postism' to denote the anti-philosophical/scientific mindset that has taken over large tracts of the academia, particularly in the social sciences and humanities. This politically-correct fashion, known alternatively as 'post-modernism', 'post-structuralism' and 'post-Marxism', has become prominent since the late 1970s. It thrives on denying the possibility of objective knowledge and the very existence of anything real, let alone universal; it substitutes deconstruction for scientific research and dogmatism for innovation; it encourages herd-behaviour and condones dishonesty; it gives rise to racism and bigotry in the guise of 'post-colonialism' and 'cultural pluralism'. This, of course, is hardly a novel historical current. The possibility of a universal reality, common to all humans, was rejected by nihilists and relativists already in Ancient Greece – a claim that nowadays is rehashed under the banner of Wittgenstein and Heidegger by the likes of Foucault, Lacan, Lyotard and Derrida. The consequences of this rejection, especially for the young generation, are dire. The current global crisis caught this generation totally unprepared. Hampered by years of postist-bred ignorance and conditioned to think that there is no 'reality' to be researched, the anti-globalization movements have proven impotent. Although full of spirit, they have been unable to devise new theories and policies, let alone an alternative to the existing capitalist cosmology. They sense that the world is rattling; but locked into a 'deconstructive' mindset, the most they can do is protest the existing 'discourse'.

But this progressive fracturing did not save neoclassical political economy (now known as 'economics'). Although most economists refuse to know it and few would ever admit it, the emergence of power destroyed their fundamental quantities. With power, it became patently clear that both utils and abstract labour were logically impossible and empirically unknowable. And, sure enough, no liberal economist has ever been able to measure the util contents of commodities, and no Marxist has ever been able to calculate their abstract labour contents – because neither can be done. This inability is existential: with no fundamental quantities, value theory becomes impossible, and with no value theory, economics disintegrates.[14]

The Neoclassical Golem

The neoclassicists responded by trying to shield their utils from the destructive touch of power. The process was two-pronged. First, they created a heavily subsidized fantasy world, titled General Equilibrium, where, buttressed by a slew of highly restrictive assumptions, everything still works (almost) as it should.[15] To achieve this end, though, they had to turn their economy into a null domain. They excluded from it almost every meaningful power phenomenon – and they did it so thoroughly that their perfectly competitive model now perfectly explains next to nothing.

The second step was to brand the excluded power phenomena 'deviant', and then hand them over to the practitioners of two newly-created sub-disciplines: micro 'distortions' and 'imperfections' were given to game theorists, while government 'interventions' and 'shocks' were passed on to the macroeconomists. These changes were legitimized by the Great Depression and accelerated by the subsequent development of the welfare-warfare state. The problem is that, over the past half century, game theory and macroeconomics have grown into a theoretical Golem. They have expanded tremendously, both bureaucratically and academically – and that expansion, instead of bolstering liberal cosmology, has seriously undermined it.

Although game theorists and macroeconomists rarely advertise it and many conveniently ignore it, their models, whether good or bad, are all affected by – and in

[14] The inability of economists to measure their fundamental quantities surfaced, at least in part, in the so called 'Cambridge Controversies' on the nature of capital. Following these debates, which raged during the 1950s and 1960s, it was conceded, even by staunch neoclassicists, that capital did not exist as an independent 'physical quantum', and that its magnitude could not be measured independently of prices and distribution. Given that the entire edifice of modern economics theory stands on capital, advertising this conclusion would have been devastating. It was much safer to sweep the entire debate under the carpet, with the result being that most contemporary economists are blissfully unaware of its existence. See, for example, Robinson (1953-54), Sraffa (1960), Harcourt (1969, 1972), Hodgson (1997) and the accessible summary in Hunt (2002: Ch. 16).

[15] We say 'almost' since the issue is not really settled. The highest academic authorities on the subject still debate, first, whether, even under the most stringent (read socially impossible) conditions, a unique general equilibrium can be shown to exist (at least on paper); and, second, if such equilibrium does exist, whether or not it is likely to persist for more than a fleeting moment.

many cases are exclusively concerned with – power. This is a crucial fact, because, once power is brought into the picture, all prices, income flows and asset stocks become 'contaminated'. And when prices and distribution are infected with power, the utility theory of value becomes irrelevant.

Now, until the 1950s and 1960s, neoclassicists could still pretend that the extra-economic 'distortions' and 'shocks' were local, or at least temporary, and therefore redundant for the grander purpose of value analysis. But nowadays, with game theory increasingly taking over the micro analysis of distribution, and with governments directly determining 20 to 40 percent of economic activity and price setting and indirectly involved in much of the rest, power seems to be everywhere. And if power is now the rule rather than the exception, what then is left of the utility-productivity foundations of liberal value theory?

The Neo-Marxist Fracture

Unlike the neoclassicists, Marxists chose not to evade and hide power but to tackle it head on – although the end result was pretty much the same. To recognize power meant to abandon the labour theory of value. And since Marxists have never come up with another theory of value, their worldview has lost its main unifying force. Instead of the original Marxist totality, there emerged a neo-Marxist fracture.

Marxism today consists of three sub-disciplines, each with its own categories, logic and bureaucratic demarcations. The first sub-discipline is neo-Marxist economics, based on a mixture of monopoly capital and permanent government intervention. The second sub-discipline comprises neo-Marxist critiques of capitalist culture. And the third sub-discipline consists of neo-Marxist theories of the state.

Now, it is worth stressing here that both Marx and the neo-Marxists have had very meaningful things to say about the world. These include, among other things, a comprehensive vista of human history – an approach that negates and supersedes the particular histories dictated by elites; the notion that ideas are dialectically embedded in their concrete material history; the fusion of theory and praxis; the view of capitalism as a totalizing political-power regime; the universalizing-globalizing tendencies of this regime; the dialectics of the class struggle; the fight against exploitation, oppression and imperial rule; and the emphasis on autonomy and freedom as the motivating force of human development.

These ideas are indispensable. More importantly, the development of these ideas is deeply enfolded, to use David Bohm's term, in the very history of the capitalist regime, and in that sense they can never be discarded as erroneous.[16]

But all of that still leaves a key issue unresolved. In the absence of a unifying value theory, there is no logically coherent and empirically meaningful way to explain the

[16] The notion of enfoldment, or the nesting of different levels of theory, consciousness and order, is developed in Bohm (1980) and Bohm and Peat (1987).

so-called economic entity of capital – let alone to account for how culture and the state presumably affect this entity. In other words, we have no explanation for the most important process of all – the accumulation of capital.

Capitalism, though, remains a universalizing system – and a universalizing system calls for a universal theory. So maybe it's time to stop the fracturing. We do not need finer and finer nuances. We do not need new sub-disciplines to be connected through inter- and trans-disciplinary links. And we do not need imperfections and distortions to tell us why our theories do not work.

What we do need is a radical Ctrl-Alt-Del. As Descartes tells us, to be radical means to go to the root, and the root of capitalism is the accumulation of capital. This, then, should be our new starting point.

The Capitalist Mode of Power

In the remainder of the paper we briefly outline some of the key elements of our own approach to capital. We begin with power. We argue that capital is not means of production, it is not the ability to produce hedonic pleasure, and it is not a quantum of dead productive labour. Rather, capital is power, and only power.

Further, and more broadly, we suggest that capitalism is best viewed not as a mode of production or consumption, but as a *mode of power*. Machines, production and consumption of course are part of capitalism, and they certainly feature heavily in accumulation. But the role of these entities in the process of accumulation, whatever it may be, is significant primarily through the way they bear on power.

To explicate our argument, we start with two related entities: prices and capitalization. Capitalism – as we already noted, and as both liberals and Marxists correctly recognize – is organized as a commodity system denominated in prices. Capitalism is particularly conducive to numerical organization because it is based on private ownership, and anything that can be privately owned can be priced. This situation means that, as private ownership spreads spatially and socially, price becomes the universal numerical unit with which the capitalist order is organized.

Now, the actual pattern of this order is created through capitalization. Capitalization, to paraphrase physicist David Bohm (in Bohm and Peat 1987), is the generative order of capitalism. It is the flexible and all-inclusive algorithm that continuously *creorders* – or creates the order of – capitalism.

Capitalizing Power

What exactly is capitalization? Capitalization is a symbolic financial entity, a ritual that the capitalists use to discount to present value risk-adjusted expected future earnings. This ritual has a very long history. It was first invented in the capitalist bourgs of Europe

during the fourteenth century, if not earlier. It overcame religious opposition to usury in the seventeenth century to become a conventional practice among bankers. Its mathematical formulae were first articulated by German foresters in the mid-nineteenth century. Its ideological and theoretical foundations were laid out at the turn of the twentieth century. It started to appear in textbooks around the 1950s, giving rise to a process that contemporary experts refer to as 'financialization'. And by the early twenty-first century, it has grown into the most powerful faith of all, with more followers than all of the world's religions combined.

Now, as Ulf Martin (2010) argues, capitalization is an operational-computational symbol. Unlike ontological symbols, capitalization is not a passive representation of the world. Instead, it is an active, synthetic calculation. It is a symbol that human beings create and impose on the world – and in so doing, they shape the world in the image of their symbol.

Capitalists – as well as everyone else – are conditioned to think of capital as capitalization, and nothing but capitalization. The ultimate question here is not the particular entity that the capitalist owns, but the universal worth of this entity defined as a capitalized asset.

Neoclassicists and Marxists recognize this symbolic creature – but given their view that capital is a (so-called) real economic entity, they do not quite know what to do with its symbolic appearance. The neoclassicists bypass the impasse by saying that, in principle, capitalization is merely the image of real capital – although, in practice, this image gets distorted by unfortunate market imperfections. The Marxists approach the problem from the opposite direction. They begin by assuming that capitalization is entirely fictitious – and therefore unrelated to the actual, or real, capital. But, then, in order to sustain their labour theory of value, they also insist that, occasionally, this fiction must crash into equality with real capital.

In our view, these attempts to make capitalization fit the box of real capital are an exercise in futility. As we already saw, not only does real capital lack an objective quantity, but the very separation of economics from politics – a separation that makes such objectivity possible in the first place – has become defunct. And, indeed, capitalization is hardly limited to the so-called economic sphere.

In principle, every stream of expected income is a candidate for capitalization. And since income streams are generated by social entities, processes, organizations and institutions, we end up with capitalization discounting not the so-called sphere of economics, but potentially every aspect of society. Human life, including its social habits and its genetic code, is routinely capitalized. Institutions – from education and entertainment to religion and the law – are habitually capitalized. Voluntary social networks, urban violence, civil war and international conflict are regularly capitalized. Even the environmental future of humanity is capitalized. Nothing escapes the eyes of the discounters. If it generates expected future income, it can be capitalized, and whatever can be capitalized sooner or later *is* capitalized.

The encompassing nature of capitalization calls for an encompassing theory, and the unifying basis for such a theory, we argue, is power. The primacy of power is built right into the definition of private ownership. Note that the English word 'private' comes from the Latin *privatus*, which means 'restricted'. In this sense, private ownership is wholly and only an institution of exclusion, and institutional exclusion is a matter of organized power.

Of course, exclusion does not have to be exercised. What matter here are the right to exclude and the ability to exact pecuniary terms for not exercising that right. This right and ability are the foundations of accumulation.

Capital, then, is nothing but organized power. This power has two sides: one qualitative, the other quantitative. The qualitative side comprises the institutions, processes and conflicts through which capitalists constantly *creorder* society, shaping and restricting its trajectory in order to extract their tributary income. The quantitative side is the process that integrates, reduces and distils these numerous qualitative processes down to the universal magnitude of capitalization.

Industry and Business

What is the object of capitalist power? How does it *creorder* society? The answer begins with a conceptual distinction between the creative/productive potential of society – the sphere that Thorstein Veblen (1904, 1923) called industry – and the realm of power that, in the capitalist epoch, takes the form of business.

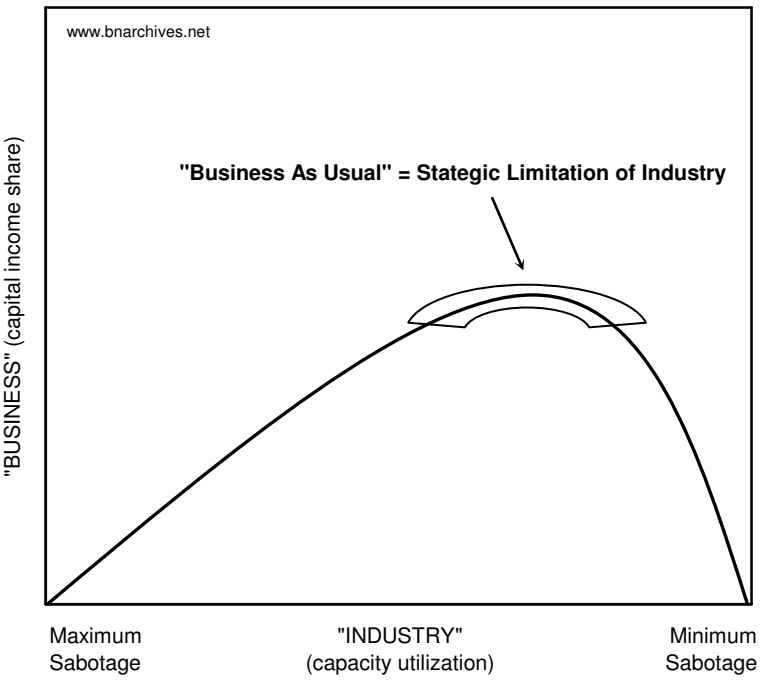
Using as a metaphor the concept of physicist Denis Gabor, we can think of the social process as a giant hologram, a space crisscrossed with incidental waves. Each social action – whether an act of industry or of business – is an event, an occurrence that generates vibrations throughout the social space. But there is a fundamental difference between the vibrations of industry and the vibrations of business. Industry, understood as the collective knowledge and creative effort of humanity, is inherently cooperative, integrated and synchronized. It operates best when its various events resonate with each other. Business, in contrast, is not collective; it is private. Its goals are achieved through the threat and exercise of systemic prevention and restriction – that is, through strategic sabotage. The key object of this sabotage is the resonating pulses of industry – a resonance that business constantly upsets through built-in dissonance.

Let us illustrate this interaction of business and industry with a simple example. Political economists, both mainstream and Marxist, postulate a positive relationship between production and profit. Capitalists, they argue, benefit from industrial activity – and, therefore, the more fully employed their equipment and workers, the greater their profit. But if we think of capital as power, exercised through the strategic sabotage of

industry by business, the relationship becomes nonlinear – positive under certain circumstances, negative under others.[17]

This latter relationship is illustrated, hypothetically, in Figure 1. The chart depicts the utilization of industrial capacity on the horizontal axis against the capitalist share of income on the vertical axis. Now, up to a point, the two move together. After that point, the relationship becomes negative. The reason for this inversion is easy to explain by looking at extremes. If industry came to a complete standstill at the bottom left corner of the chart, capitalist earnings would be nil. But capitalist earnings would also be zero if industry always and everywhere operated at full socio-technological capacity – depicted by the bottom right corner of the chart. Under this latter scenario, industrial considerations rather than business decisions would be paramount, production would no longer need the consent of owners, and these owners would be unable to extract their tributary earnings. For owners of capital, then, the ideal, Goldilocks condition, indicated by the top arc segment, lies somewhere in between: with high capitalist earnings being received in return for letting industry operate – though only at less than full potential.

Figure 1
Business and Industry

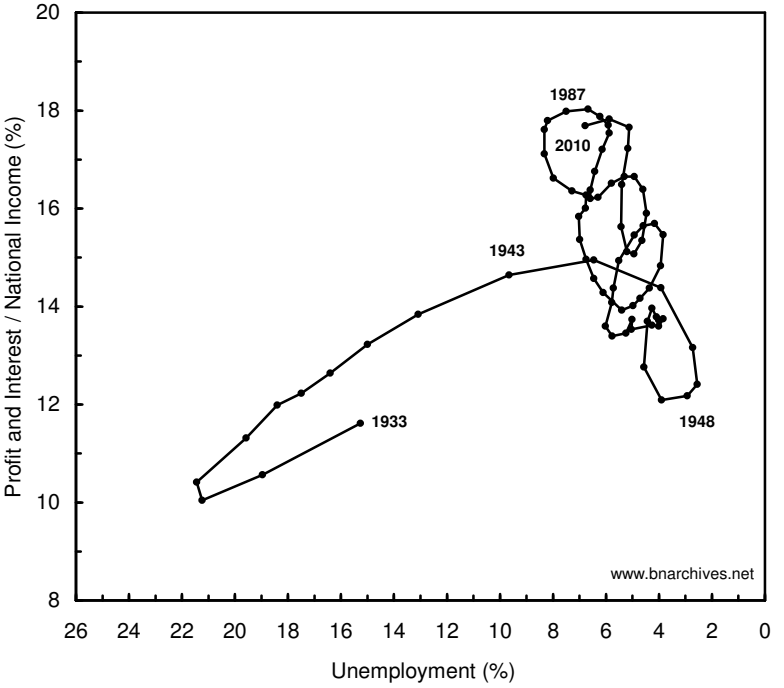


[17] Note that these considerations pertain only to the quantitative aspect of industrial activity; they do not deal with the qualitative nature of its output, or the conditions under which the output is produced. Obviously, these latter aspects are equally important, and here, too, business sabotage often operates to restrict the human potential by forcing social activity into trajectories that are as harmful as they are profitable.

Now, having laid out the theory, let us look at the facts. Figure 2 shows this relationship for the United States since the 1930s. The horizontal axis approximates the degree of sabotage by using the official rate of unemployment, inverted (notice that unemployment begins with zero on the right, indicating no sabotage, and that, as it increases to the left, so does sabotage). The vertical axis, as before, shows the share of national income received by capitalists.

And lo and behold, what we see is very close to the theoretical claims made in Figure 1. The best position for capitalists is not when industry is fully employed, but when the unemployment rate is around 7 percent. In other words, the so-called 'natural rate of unemployment' and 'business as usual' are two sides of the same power process: a process in which business accumulates by strategically sabotaging industry.

Figure 2
Business and Industry in the United States



NOTE: Series are shown as 5-year moving averages.

Source: U.S. Department of Commerce through Global Insight (series codes: INTNETAMISC for interest; ZBECON for profit; YN for national income; RUC for the rate of unemployment).

Differential Accumulation

The neoclassical util and the Marxist unit of socially necessary abstract labour are absolute. By contrast, power is never absolute; it is always relative. For this reason, both the quantitative and qualitative aspects of capital accumulation have to be assessed differentially – that is, relative to other capitals. Contrary to standard political economy, liberal as well as Marxist, capitalists are driven not to maximize profit, but to 'beat the average' and 'exceed the normal rate of return'. Their entire existence is conditioned by the need to outperform, by the imperative to achieve not absolute accumulation, but differential accumulation. And that makes perfect sense. To beat the average means to accumulate faster than others; and since capital is power, capitalists who accumulate differentially increase their power.

Let us illustrate this process with another example, taken from our work on the Middle East.[18] Figure 3 shows the differential performance of the world's six leading privately owned oil companies relative to the Fortune 500 benchmark. Each bar in the chart measures the extent to which the oil companies' rate of return on equity exceeded or fell short of the Fortune 500 average. The grey bars show positive differential accumulation – i.e. the percentage by which the oil companies exceeded the Fortune 500 average. The black bars show negative differential accumulation; i.e. the percentage by which the oil companies trailed the average. Finally, the little explosion signs in the chart show the occurrences of 'Energy Conflicts' – that is, regional energy-related wars.

Note that conventional economics has no interest in the differential profits of the oil companies, and it certainly has nothing to say about the relationship between these differential profits and regional wars. Differential profit is perhaps of some interest to financial analysts. Middle-East wars are the business of experts in international relations and security analysts. And since each of these phenomena belongs to a completely separate realm of society, no one has ever thought of relating them in the first place.[19]

And yet, as it turns out, these phenomena are not simply related. In fact, they could be thought of as two sides of the very same process – namely, the *global accumulation of capital as power*.

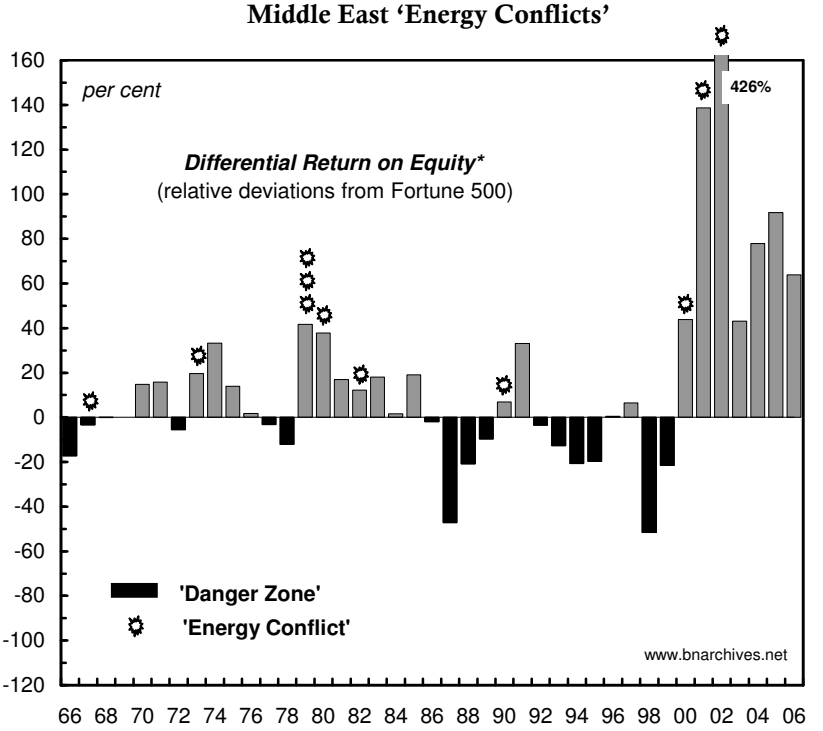
We started to study this subject when we were still graduate students, back in the late 1980s, and we have published quite a bit about it since then. This research opened our eyes, first, to the encompassing nature of capital; and, second, to the insight that one can gain from analysing its accumulation as a power process.

---

[18] See, for example, Nitzan and Bichler (2002: Ch. 5), Bichler and Nitzan (2004b) and Nitzan and Bichler (2006b).

[19] For detailed critiques of existing studies on these subjects, see Bichler, Rowley and Nitzan (1989), Rowley, Bichler and Nitzan (1989), Nitzan and Bichler (1995), Bichler and Nitzan (1996) and Nitzan and Bichler (2005).

Figure 3
The Petro-Core's Differential Accumulation and Middle East 'Energy Conflicts'



* Return on equity is the ratio of net profit to owners' equity. Differential return on equity is the difference between the return on equity of the Petro-Core and the Fortune 500, expressed as a per cent of the return on equity of the Fortune 500. For 1992-3, data for Fortune 500 companies are reported without SFAS 106 special charges.

NOTE. The Petro-Core consists of British Petroleum (BP-Amoco since 1998), Chevron (with Texaco since 2001), Exxon (ExxonMobil since 1999), Mobil (till 1998), Royal-Dutch/Shell and Texaco (till 2000). Company changes are due to merger. The Energy Conflicts include: the 1967 Arab-Israel war, the 1973 Arab-Israel war, the 1979 Iranian Revolution, the 1979 first Israeli invasion of Lebanon, the 1979 Soviet invasion of Afghanistan, the 1980 Iran-Iraq war, the 1982 second Israeli invasion of Lebanon, the 1990-1 first Gulf War, the 2000 second Palestinian Intifada, the 2001-2 U.S. invasion of Afghanistan and the launching of the 'War on Terror' and the 2002-3 second Gulf War.

SOURCE: *Fortune*; Standard & Poor's *Compustat*.

Notice the three remarkable relationships depicted in the chart. First, every energy conflict was preceded by the large oil companies trailing the average. In other words, for an energy conflict to erupt, the oil companies first had to *decumulate* differentially – a most unusual prerequisite from the viewpoint of any social science.

Second, every energy conflict was followed by the oil companies beating the average. In other words, war and conflict in the region, which social scientists customarily blame for 'distorting' the aggregate economy, have served the differential interest of certain key firms at the expense of other key firms.

Third and finally, with one exception, in 1996-7, the oil companies never managed to beat the average without there first being an energy conflict in the region. In other words, the differential performance of the oil companies depended not on production, but on the most extreme form of sabotage: war.

Needless to say, these relationships, and the conclusions they give rise to, are nothing short of remarkable. First, the likelihood that all three patterns are the consequence of statistical fluke is negligible. In other words, there must be something very substantive behind the connection of Middle East wars and global differential profits.

Second, these relationships seamlessly fuse quality and quantity. In our research on the subject, we show how the qualitative aspects of international relations, superpower confrontation, regional conflicts and the activity of the oil companies on the one hand, can both explain and be explained by the quantitative global process of capital accumulation on the other.

Third, all three relationships have remained stable for half a century, allowing us to predict, in writing and before the events, both the first and second Gulf Wars.[20] This stability suggests that the patterns of capital as power – although subject to historical change from within society – are anything but haphazard.

Toward a New Cosmology of Capitalism

This type of research gradually led us to the conclusion that political economy requires a fresh start. At about the same time, in 1991, Paul Sweezy, one of the greatest American Marxists, wrote a piece that reassessed *Monopoly Capital* (1966), a deservingly famous book that he wrote together with Paul Baran twenty-five years earlier. In that piece, Sweezy admitted that there is something very big missing from the Marxist and neoclassical frameworks: *a coherent theory of capital accumulation*. His observations are worth quoting at some length because they show both the problem and why economics cannot solve it:

[20] The first Gulf War (1990-91) was predicted in Bichler, Rowley and Nitzan (1989: Section 2.3). The second Gulf War (2002-3) was predicted in Bichler and Nitzan (1996: Section 8: Toward a New Energy Conflict?).

> Why did Monopoly Capital fail to anticipate the changes in the structure and functioning of the system that have taken place in the last twenty-five years? Basically, I think the answer is that its *conceptualization of the capital accumulation process is one-sided and incomplete*. In the established tradition of both mainstream and Marxian economics, we treated capital accumulation as being essentially a matter of adding to the stock of existing capital goods. But in reality this is only one aspect of the process. Accumulation is also a matter of adding to the stock of financial assets. The two aspects are of course interrelated, but the nature of this interrelation is problematic to say the least. The traditional way of handling the problem has been in effect to assume it away: for example, buying stocks and bonds (two of the simpler forms of financial assets) is assumed to be merely an indirect way of buying real capital goods. This is hardly ever true, and it can be totally misleading. This is not the place to try to point the way to a more satisfactory conceptualization of the capital accumulation process. It is at best an extremely complicated and difficult problem, and I am frank to say that I have no clues to its solution. But I can say with some confidence that achieving a better understanding of the monopoly capitalist society of today will be possible only on the basis of a more adequate theory of capital accumulation, with special emphasis on the interaction of its real and financial aspects, than we now possess. (Sweezy 1991, emphases added)

The stumbling block lies right at the end of the paragraph: 'the interaction between the real and financial aspects'. Sweezy recognized that the problem concerns the very concept of capital – yet he could not solve the problem precisely because he continued to bifurcate capital into its 'real' and 'financial' aspects. And that should not surprise us. Sweezy and his *Monthly Review* group had pushed the frontier of Marxist research for much of the post-war period, but as children of their time they could not jump over Rhodes. By the 1990s their ammunition had run out. They recognized the all-imposing reality of finance, but their bifurcated world could not properly accommodate it.

As younger researchers socialized in a different world, we did not carry the same theoretical baggage. Uninhibited, we applied the Cartesian Ctrl-Alt-Del and started by assuming that there is no bifurcation to begin with and therefore no real-financial interaction to explain. All capital is finance and only finance, and it exists as finance because accumulation represents not the material amalgamation of utility or labour, but the continuous *creordering* of power.

To challenge capitalism is to alter and eventually abolish the way it *creorders* power. But in order to do so effectively, we need to comprehend exactly what it is that we challenge. Power, we argue, is not an external factor that distorts or supports a material process of accumulation; instead, it is the *inner* driving force, the means and ends of capitalist development at large. From this viewpoint, capitalism is best understood and contested not as a mode of consumption and production, but as a mode of

power. Perhaps this understanding of what our society is could help us make it what we want it to be.

2

The Asymptotes of Power [1]

Introduction

This paper is part of a series of articles we have written on the current crisis.[2] The purpose of the previous papers was to characterize the crisis. We claimed that it was a 'systemic crisis', and that capitalists were gripped by 'systemic fear'. In this article, we seek to explain *why*.

Begin with systemic fear. This fear, we argue, concerns the very existence of capitalism. It causes capitalists to shift their attention from the day-to-day movements of capitalism to its very foundations. It makes them worry not about the short-term ups and downs of growth, employment and profit, but about 'losing their grip'. It forces on them the realization that their system is not eternal, and that it may not survive – at least not in its current form.

When we first articulated this argument in 2009 and 2010, the response was largely dismissive. Capitalism was obviously in trouble, went the counterargument. But the crisis, though deep, was by no means systemic. It threatened neither the existence of capitalism nor the confidence of capitalists in their power to rule it. To argue that capitalists were losing their grip was frivolous.

---

[1] This article was first published in *Real-World Economics Review* (Bichler and Nitzan 2012a, Issue 60, June). The article was first presented at the Second Annual Conference of the Forum on Capital as Power, 'The Capitalist Mode of Power: Past, Present, Future', October 20-21, 2011, York University, Toronto (www.bnarchives.net/320).

[2] See Bichler and Nitzan (2008a, 2009), Nitzan and Bichler (2009b), Bichler and Nitzan (2010b) and Kliman, Bichler and Nitzan (2011).

But over the past year [2012], the attitude has changed, decisively.

Nowadays, the notions of systemic fear and systemic crisis are no longer farfetched. In fact, they seem to have become commonplace. Public figures – from dominant capitalists and corporate executives, to Nobel laureates and finance ministers, to journalists and TV hosts – know to warn us that the 'system is at risk', and that if we fail to do something about it, we may face the 'end of the world as we know it'.

There is, of course, much disagreement on *why* the system is at risk. The explanations span the full ideological spectrum – from the far right, to the liberal, to the Keynesian, to the far left. Some blame the crisis on too much government and over-regulation, while others say we don't have enough of those things. There are those who speak of speculation and bubbles, while others point to faltering fundamentals. Some blame the excessive increase in debt, while others quote credit shortages and a seized-up financial system. There are those who single out weaknesses in particular sectors or countries, while others emphasize the role of global mismatches and imbalances. Some analysts see the root cause in insufficient demand, whereas others feel that demand is excessive. While for some the curse of our time is greedy capitalists, for others it is the entitlements of the underlying population. The list goes on.

But the disagreement is mostly on the surface. Stripped of their technical details and political inclinations, all existing explanations share two common foundations: (1) they all adhere to the two dualities of political economy: the duality of 'politics *vs.* economics' and the duality within economics of 'real *vs.* nominal'; and (2) they all look backward, not forward.

As a consequence of these common foundations, all existing explanations, regardless of their orientation, seem to agree on the following three points:

1. The essence of the current crisis is 'economic': politics certainly plays a role (good or bad, depending on the particular ideological viewpoint), but the root cause lies in the economy.

2. The crisis is amplified by a mismatch between the 'real' and 'nominal' aspects of the economy: the real processes of production and consumption point in the negative direction, and these negative developments are further aggravated by the undue inflation and deflation of nominal financial bubbles whose unsynchronized expansion and contraction make a bad situation worse.

3. The crisis is rooted in our past sins. For a long time now, we have allowed things to deteriorate: we've let the 'real economy' weaken, the 'bubbles of finance' inflate and the 'distortions of politics' pile up; in doing so, we have committed the cardinal sin of undermining the growth of the economy and the accumulation of capital; and since, according to the priests of economics, sinners must pay for their evil deeds, there is no way for us to escape the punishment we justly deserve – the systemic crisis.

What If?

But, then, what if these foundational assumptions are wrong?

Liberals and Marxists view capitalism as a mode of production and consumption, and it is this view that determines the assumptions they make, the questions they ask and the answers they give. Now, what would happen if we departed from their view? How would our assumptions, questions and answers change if, instead of a mode of production and consumption, we thought of capitalism as a *mode of power*?[3]

The short answer is that they would change radically. The bifurcation of 'economics' and 'politics' would become untenable, thereby rendering the notion of *economic* crisis meaningless. The separation of the 'real' and the 'nominal' would become unworkable, thereby leaving finance with nothing to match or mismatch. And the backward-looking orientation of the analysis would have to give way to a forward-looking stance, rooting the crisis not in the sins of the past but in the misgivings of the future.

Our simple 'what-if' question – and the radical ramifications it carries – is not unlike the ones raised by Copernicus, Spinoza and Darwin, among others.

They too questioned the old assumptions: 'What if the sun rather than the earth is at the centre?' asked Copernicus. 'What if religion was created not by God, but by mere mortals who use it to impose their power on other mortals?' asked Spinoza. 'What if humans weren't created by the Almighty, but evolved from other living creatures?' asked Darwin.

And they too tried to provide answers. Their answers may have been tentative, incomplete or even wrong – but these shortcomings are entirely secondary. The important thing is that they *asked the questions in the first place*. They started from scratch. Their questions went to the very root, and this radical departure altered the entire orientation: it opened up the horizon, led to totally new findings and eventually culminated in entirely new frameworks.

The current systemic crisis offers a similar Ctrl-Alt-Del opportunity. By casting doubt on the conventional creed, it opens the door to *fundamental* questions: questions about what capitalism is, how it should be analysed and to what end.

So let's hit the keys. Instead of consumption and production, the framework we offer focuses on power.[4] In our framework, capital *is* power, and more specifically, *forward-looking* power. When capitalists expect their power to increase, capitalization rises: more power equals positive accumulation. And when the outlook inverts and capitalists expect their power to decrease, accumulation goes into reverse: less power equals decumulation.

From this viewpoint, an ordinary capitalist crisis means that capitalists expect a significant decrease in their power – but that they also expect their power to recover

[3] On modes of power in general and the capitalist mode of power in particular, see Nitzan and Bichler (2009a: Ch. 13).

[4] Succinct presentations of this framework are given in Bichler and Nitzan (Bichler and Nitzan 2011, 2012c). For a more detailed accounted, see Nitzan and Bichler (2009a).

eventually. By contrast, a *systemic* crisis means that capitalists fear that their power is about to drop precipitously, or even disintegrate, and that this disintegration might be irreversible – at least within the existing parameters of capitalism.

Pending Collapse

The relevant question for us concerns the latter type of crisis: when are capitalists likely to expect their entire system of power to collapse, and what conditions may trigger such a drastic change in outlook?

Because we are dealing here not only with historical conditions, but also with capitalist expectations regarding the future development of those conditions, it is not easy to answer this question. However, there are certain extreme situations in which the answer becomes more apparent, and these situations are described by the title of our paper: *capitalists are most likely to expect their power to fall precipitously or disintegrate when this power approaches its asymptote*.

Mathematicians use the term 'asymptote' to denote a quantitative limit, something like a 'ceiling' or a 'floor' that a curve approaches but never quite reaches. And the same term can be used to describe the limits of power.

Capitalist power rarely if ever reaches its upper limit. The reason can be explained in reference to the following dialectical progression: capitalists cannot stop seeking more power: since capital *is* power, the drive to accumulate is a drive for more power, by definition; however, the closer capitalist power gets to its limit, the greater the resistance it elicits; the greater the resistance, the more difficult it is for those who hold power to increase it further; the more difficult it is to increase power, the greater the need for even more force and sabotage; and the more force and sabotage, the higher the likelihood of a serious backlash, followed by a decline or even disintegration of power.[5]

It is at this latter point, when power approaches its asymptotes, that capitalists are likely to be struck by systemic fear – the fear that the power structure itself is about to

[5] This process is by no means universal. In certain modes of power – for example, the Megamachines of the ancient river deltas, Marx's 'oriental despotism' and Orwell's *1984* – the threat and exercise of force are so extreme that their subjects gradually lose the ability to even contemplate resistance, let alone organize it. The Indian caste system, for instance, has been welded over millennia by a power akin to the 'strong force' in the atom. There is enormous pent-up energy in that system; but once this energy has been locked in, turning it against the regime can only be achieved through a chain reaction triggered by a critical social mass.

There is no reason to assume that capitalism is immune from such a fate. It is certainly possible, at least logically, for capitalist power to eventually trump, crush and totally eliminate the opposition it elicits – in a manner anticipated by Jack London's *The Iron Heel* (1907). But this elimination would create a *new* mode of power altogether: having destroyed the will of its subjects, the new regime could no longer rely on the open buying and selling of commodified power; without vendible power, capitalization would cease; and without capitalization, the mode of power could no longer be called 'capitalistic' – at least not in the present sense of the term.

cave in. And it is at this critical point, when capitalists fear for the very survival of their system, that their forward-looking capitalization is most likely to collapse.

The Argument

Our claim in this paper is that the systemic fear that currently grips capitalists is well grounded in the concrete facts.

The problem that capitalists face today, we argue, is not that their power has withered, but, on the contrary, that their power has *increased*. Indeed, not only has their power increased, it has increased by so much that it might be *approaching its asymptote*. And since capitalists look not backward to the past but forward to the future, they have good reason to fear that, from now on, the most likely trajectory of this power will be not up, but down.

Before fleshing out this argument though, a few words about the method and structure of the article. Our analysis here is limited to the United States, but this limitation isn't really a drawback. The chief purpose of this analysis is methodological. For us, the important question is *how* we should study capitalist power – and in this respect the United States may offer the best starting point. First, although the global importance of U.S. capitalism may have diminished over the past half century, its recent history is still central for understanding the dynamics of contemporary capitalist power. And second, to answer the kind of questions that we'll be asking requires detailed data that are not readily available for many other countries.

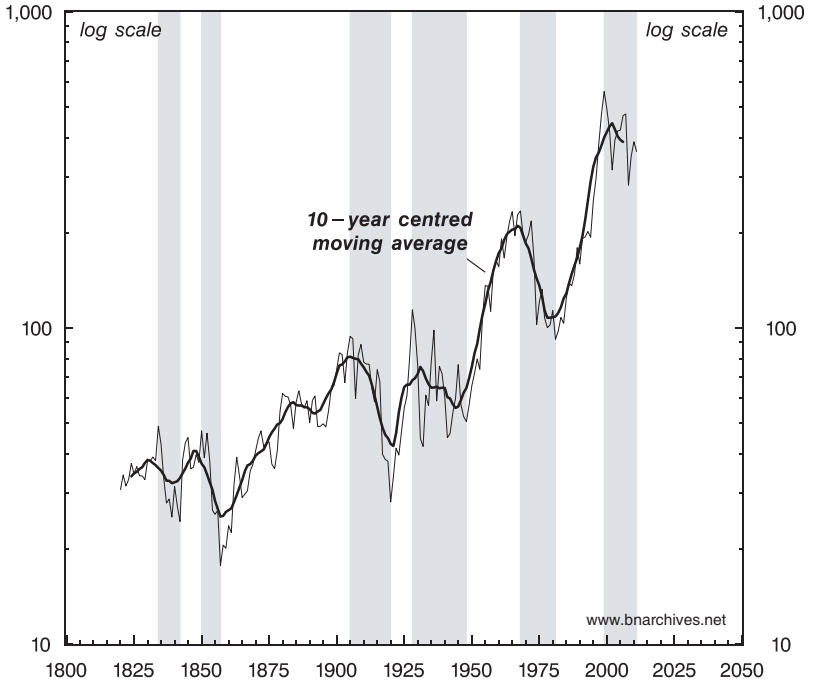
With this emphasis in mind, the paper begins by setting up our general framework and key concepts. It continues with a step-by-step deconstruction of key power processes in the United States, attempting to assess how close these processes are to their asymptotes. And it concludes with brief observations about what may lie ahead.

Major Bear Markets

Let's start with the context. Figure 1 and Table 1 portray the history of U.S. capitalism as seen from the viewpoint of capitalists. The ultimate interest of capitalists is capitalization: the forward-looking value of their assets. And the main yardstick for that value is the stock market.

Figure 1 shows the history of U.S. stock prices. On the stock market, prices are denominated in actual dollars and cents. However, 'nominal' measures can be affected greatly by the ups and downs of the general price level, so economists like to divide, or 'deflate', them by the consumer price index in order to obtain what they call a 'constant dollar' measure. And that is what we do in Figure 1: we show the stock-price index without the effect of inflation.

Figure 1
U.S. Stock Prices in 'Constant' Dollars



NOTE**:** Grey areas indicate major bear markets, as defined in Table 1. The U.S. stock-price index splices the following four sub-series: a combination of bank, insurance and railroad stock series weighed by Global Financial Data (1820-1870); the Cowles/Standard and Poor's Composite (1871-1925); the 90-Stock Composite (1926-1956); and the S&P 500 (1957-present). The constant-dollar series is computed by dividing the stock-price index by the Consumer Price Index. Data are rebased with 1929=100.0. The last data point is for October 2011.

SOURCE: Global Financial Data (series codes: _SPXD for stock prices; CPUSA for consumer prices); Standard and Poor's through Global Insight (series codes: SP500@40.D7 and SP500.D7 for stock prices); IMF through Global Insight (series code: L64@C111 for consumer prices).

As we can see, the overall historical trend of stock prices is up. We can also see, though, that this uptrend is fractured by periods of sharp declines of 50-70 per cent, marked by the shaded areas. These shaded areas denote what we call 'major bear markets', whose definition is given in Table 1.

Table 1
Major U.S. Bear Markets*
(constant-dollar calculations)

period	decline from peak to trough (%) **
1835–1842	–50%
1851–1857	–62%
1906–1920	–70%
1929–1948	–56%
1969–1981	–55%
2000–?	–50%

* A major bear market is defined as a multi-year period during which: (1) the 10-year centred moving average of stock prices, expressed in constant dollars, trends downward; and (2) each successive sub-peak of the underlying price series, expressed in constant dollars, is lower than the previous one.

** The peak occurs one year prior to the onset of a major bear market.

NOTE: The most recent sub-trough of the current major bear market occurred in 2008. It is not yet clear whether this sub-trough marks the end of this bear market.

SOURCE: See Figure 1.

Contemporary critiques of capitalism often dismiss such charts as a fetish of 'finance'. The magnitudes of finance, they say, are no more than fictitious symbols. They distort the 'real' nature of capital and mislead us into the wrong conclusions. In our view, though, this fashionable dismissal is wrongheaded. The stock market is not only the central barometer of modern capitalism; it is also the key power algorithm through which capitalists *creorder* – or create the order – of their world.

To illustrate this point, consider the last four major bear markets. Each of these periods signalled a major creordering of capitalist power.

1. The bear market of 1906-1920 marked the closing of the American frontier and the shift from robber-baron capitalism to large-scale business enterprise and the beginning of synchronized finance.

2. The crisis of 1929–1948 signalled the end of 'unregulated' capitalism and the emergence of large governments and the welfare-warfare state.

3. The crisis of 1969–1981 marked the closing of the Keynesian era, the resumption of worldwide capital flows and the onset of neoliberal globalization.

4. And the current crisis – which began not in 2008, but in 2000, and is still ongoing – seems to mark yet another shift toward a different form of capitalist power, or perhaps a shift away from capitalist power altogether.

What is the nature of the current crisis? How is this crisis related to capitalist power? And what are the asymptotes of that power?

Capital *as* Power

The best place to begin is Johannes Kepler, one of the key architects of the mechanical worldview. Prior to Kepler, force (or power) had two principal features: it was thought of as an *entity in and of itself*, on a par with the elements; and it was conceived of *qualitatively*, not quantitatively. Kepler inverted this view. In his method, force is not a stand-alone entity, but a *relationship between entities*; in other words, it is not absolute but *differential*. And this relationship is not qualitative, but *quantitative*.[6]

Modern science adopted Kepler's approach, and in our view the same approach should be applied to capital. Thus, when we say that capital is power, we mean: (1) that capital is not an entity in its own right, but a *differential relationship* between social entities; and (2) that this relationship is *quantitative*, measured in monetary units. Let's examine these two features more closely, beginning with the quantitative dimension.

The Quantitative Dimension: Capitalization

Equations 1 to 5 deconstruct the basic concept of modern capitalism: the algorithm of capitalization. This concept was invented in the Italian city states, probably during the fourteenth century or even earlier; but it was only at the turn of the twentieth century that it developed into the dominant power algorithm of capitalism.[7]

The gist of capitalization is spelled out in the first line of Equation 1. In this line, the price of a corporate stock – or any other asset, for that matter – is given by the earnings the asset is expected to generate (in this case, the expected earnings per share, or expected eps), divided by the discount rate.

---

[6] On the Kepler watershed and its importance for science in general and the concept of force in particular, see Jammer (1957: Ch. 5).
[7] For a critical history of capitalization and its rituals, see Nitzan and Bichler (2009a: Part III).

1. $$price = \frac{expected\ eps}{discount\ rate} = \frac{\$100}{0.05} = \$2{,}000$$

$$= \frac{future\ eps \times hype}{risk \times normal\ rate\ of\ return} = \frac{\$50 \times 2}{2 \times 0.025} = \$2{,}000$$

$$= future\ eps \times \frac{hype}{risk \times normal\ rate\ of\ return}$$

For instance, if the expected eps is $100 and the discount rate is 5 per cent, the asset would be capitalized at $2,000. This result is easy to verify by going in reverse: divide $100 of earnings per share by an initial investment of $2,000, and you'll get the discount rate of 5 per cent.

The second line of Equation 1 decomposes each element. In the numerator, expected eps is the future eps (whose magnitude will become known in the future) times the hype coefficient of capitalists. In the example here, the future eps is $50. But capitalists are overly optimistic, with a hype coefficient of 2. This hype means that they expect the future eps to be $100, or twice its eventual level. As a rule, hype is greater than 1 when capitalists are overly optimistic and smaller than 1 when they are overly pessimistic.

Looking at the denominator, we can express the discount rate as the product of the normal rate of return and the risk coefficient. In our example here, the normal rate of return is 2.5 per cent; but this is a risky stock, with a risk factor of 2. If we multiply this 2.5 per cent by 2, we get the discount rate of 5 per cent.

So all in all, capitalization comprises four elementary particles: (1) future eps, (2) hype, (3) risk, and (4) the normal rate of return.

Now, for the purpose of the empirical illustration that follows, it is useful to build a link between future and present earnings. At any point in time, future eps can be written as a multiple of current eps (henceforth eps) and a scalar m, whose magnitude will become known in retrospect, after the future earnings are incurred:

2. $$future\ eps = eps \times m$$

Substituting this expression back into Equation 1, we get:

3. $$price = eps \times m \times \frac{hype}{risk \times normal\ rate\ of\ return}$$

Dividing both sides of Equation 3 by eps, we get the pe ratio, or the ratio of price to (current) earnings:

4. $$pe = \frac{price}{eps}$$

$$= m \times \frac{hype}{risk \times normal\ rate\ of\ return}$$

Substituting the pe ratio for the two last elements of Equation 3, we get:

5. $$price = eps \times pe$$

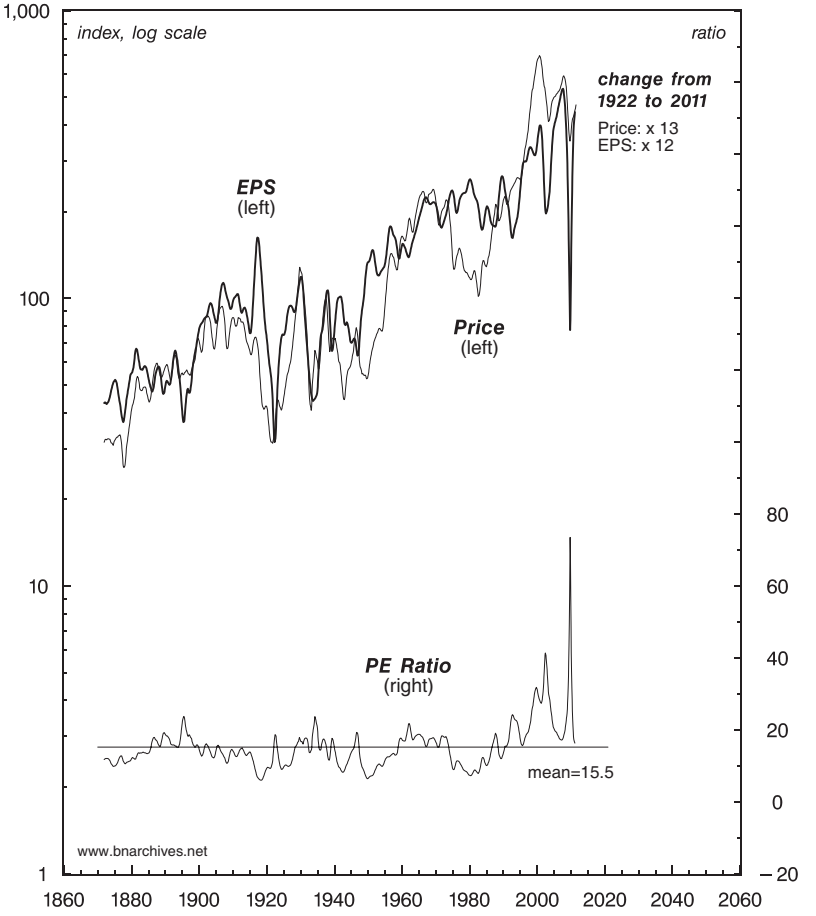
So as a shorthand, we can always decompose the price of a stock into two components, as shown in Equation 5: the eps and the pe ratio (which accounts for the remaining elementary particles of the capitalization algorithm and the scalar m).

The reason for this decomposition is made apparent in Figure 2. The chart shows the history of price and eps for the S&P500, an index that comprises the largest U.S.-listed companies, ranked by market capitalization. Both the eps and price series are expressed in 'constant dollars', and both are plotted on the left log scale. The bottom of the chart plots the pe ratio against the right arithmetic scale.

Recalling that price = eps × pe, we can now appreciate the effect on price of each of the two right-hand components. The bottom of the chart shows that the combined effect of hype, risk, the normal rate of return and the scalar m, measured by the pe ratio, is cyclical. Historically, this effect oscillates up and down around a mean value of 15.5. By contrast, the effect of eps is secular. To illustrate this latter fact, note that, between 1922 and 2011, the price series grew by a factor of 13 – and that much of this growth was accounted for by the rise of eps – which rose by a factor of 12 (and probably more, since the most recent eps observations are not yet available).

This decomposition should help us focus our exposition. A power analysis of capitalization comprises all of its elementary particles. But as Figure 2 makes clear, over the long haul the most important of these elementary particles is earnings, and that is what we concentrate on in this paper.

Figure 2
S&P 500: Price and Earnings per Share in 'Constant' Dollars, 1871-2011



NOTE: Data are smoothed as 12-month moving averages. Earnings per share denote net profits per share earned in the previous twelve months. Monthly earnings are interpolated from annual data before 1926 and from quarterly data after 1926. Stock price data are monthly averages of daily closing prices. Both the price and EPS series are expressed in $U.S., deflated by the U.S. CPI and rebased with January 1929=100. The PE ratio is computed by dividing the smoothed Price series (before rebasing) by the smoothed EPS series (before rebasing). The last data points are March 2011 for earnings per share, September 2011 for price and March 2011 for the PE ratio.

SOURCE Robert Shiller, retrieved on October 1, 2011, http://www.econ.yale.edu/~shiller/data/ie_data.xls

The Relational Dimension: Distribution and Redistributon

Now, recall that for Kepler, power is not only quantitative, but also relational. It is not a stand-alone entity, but a relationship between entities. So if capital *is* power, its analysis should be relational rather than absolute.

Capitalism is a system of privately owned commodities, a social order where ownership is quantified through prices. To understand the power dynamics of this system, we need to understand the way in which relative prices change over time; in other words, we need to understand distribution and *re*distribution.

Let us start with a hypothetical situation in which capitalist power remains unaltered: there is no redistribution, and the underlying price relationship is unchanged. To illustrate this situation, assume that corporate profits amount to 2 per cent of national income. If capitalist power remains unaltered, this ratio will not change. National income may rise and fall; but since power stays unchanged, profits will rise and fall at the same rate, leaving the profit share stable at 2 per cent.

Of course, this stability is rarely if ever observed in practice. Capitalists are compelled to try to increase their power, and the power struggle that ensues makes the share of profit in national income change over time.

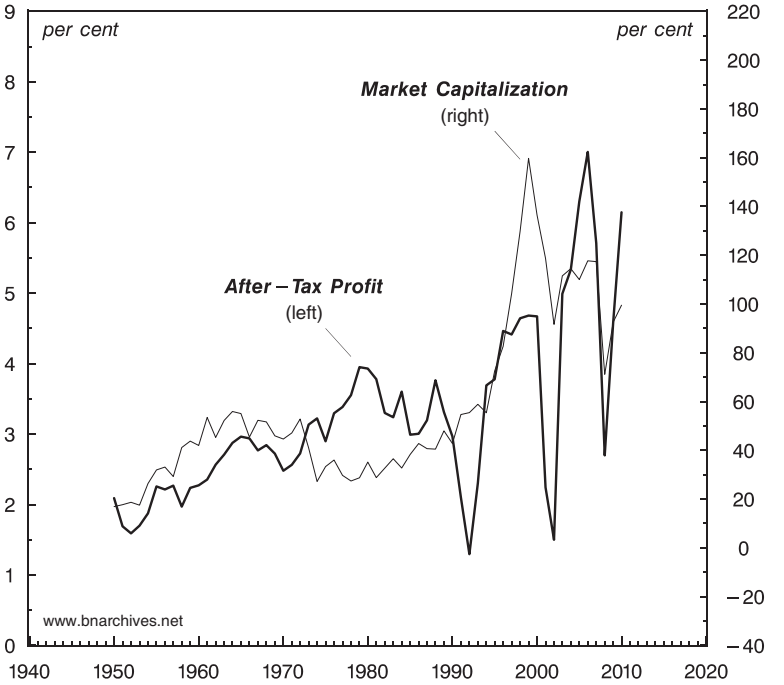
This on-going change is evident in Figure 3. The figure plots data for dominant capital, approximated here by the top 0.01 per cent of all U.S.-based corporations ranked by market capitalization (henceforth the Top 0.01%).[8] The thin series, plotted against the right scale, shows the equity market capitalization of the Top 0.01% expressed as a per cent of U.S. national income. The thick series, plotted against the left scale, shows the after-tax profit of the Top 0.01% as a share of national income.[9]

Now, if we were to freeze capitalist power relative to the power of all other social groups at the level it was at in 1950, both series would look like horizontal lines. Since all groups, including capitalists, would retain their relative power, the prices of their respective commodity bundles would change at the same rate, and the ratios of these prices would remain unchanged.

[8] See the Appendix for a brief methodological discussion of alternative measures of dominant capital.

[9] National income can be measured at market prices (inclusive of indirect taxes less subsidies), or at factor cost (exclusive of indirect taxes less subsidies). This paper uses the former, more comprehensive, measure.

Figure 3
Market Capitalization and After-Tax Profit of the Top 0.01% of U.S.-based Corporations (Shares of U.S. National Income)



NOTE: The number of firms in the Top 0.01% of U.S.-based corporations changes from year to year. This number (n) is given by dividing, for each year, the number of tax returns of active corporations submitted to the U.S. Internal Revenue Service (IRS) by 10,000 (the number of returns for 2009-2010 is extrapolated using their recent average growth rate [1.7%]). The actual constituents of the Top 0.01% list for each year are obtained in three steps: first, by selecting from the Compustat North American dataset the subset of U.S.-incorporated firms (excluding firms with no assets, those reporting no after-tax profit or loss, and duplicates); second, by ranking these firms, in descending order, based on their market capitalization; and third, by selecting from the ranked list the top n firms. The last data points are for 2010.

SOURCE: *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series codes: Ch13 for the number of tax returns of active corporations [till 1997]); U.S. Department of Commerce, *Statistical Abstract of the United States* 2012, Table 744, p. 491 (the number of tax returns of active corporations [1998-2008]); Compustat 'funda' file through WRDS (series codes for Compustat companies: NI for After-Tax Profit [net income]; CSHO for number of outstanding shares; PRCC_C for closing share price); U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for National Income).

But that is not what we observe in the graph. Instead, we see ongoing changes in both series, meaning that the structure of power has been constantly creordered. Moreover, the changes seem anything but random. As the figure makes clear, both series have trended upward. The ratio of market capitalization of the Top 0.01% to national income increased eightfold – from 20 per cent in the early 1950s to 160 per cent in the early 2000s, before dropping to 100 per cent in 2010. And the after-tax profit share of the Top 0.01% in national income rose threefold – from 2 to 6 per cent over the same period.

The patterns depicted in Figure 3 carry three related implications. First, they indicate that, contrary to what many economists would have us believe, much of the stock-market boom of the 1990s was due not to 'economic growth' or 'solid fundaments', but to a major redistribution of power in favour of dominant capitalists. Second, the patterns make it difficult to attribute the current crisis to waning capitalist power: if anything, this power – measured by the profit share of the Top 0.01% in national income – has increased, and it remains at record levels despite the on-going crisis. Third and finally, the patterns suggest that dominant capitalists now realize that that their record profit-share-read-power has become unsustainable, hence the decade-long collapse of their forward-looking capitalization.

The question we need to address, then, is twofold. First, what caused capitalist power to increase over the past half century, and particularly over the last twenty years? And second, looking forward, what are the limits on that power; or in terms of the title of the paper, how close is capitalist power to its own asymptote?

Asymptotes of Power

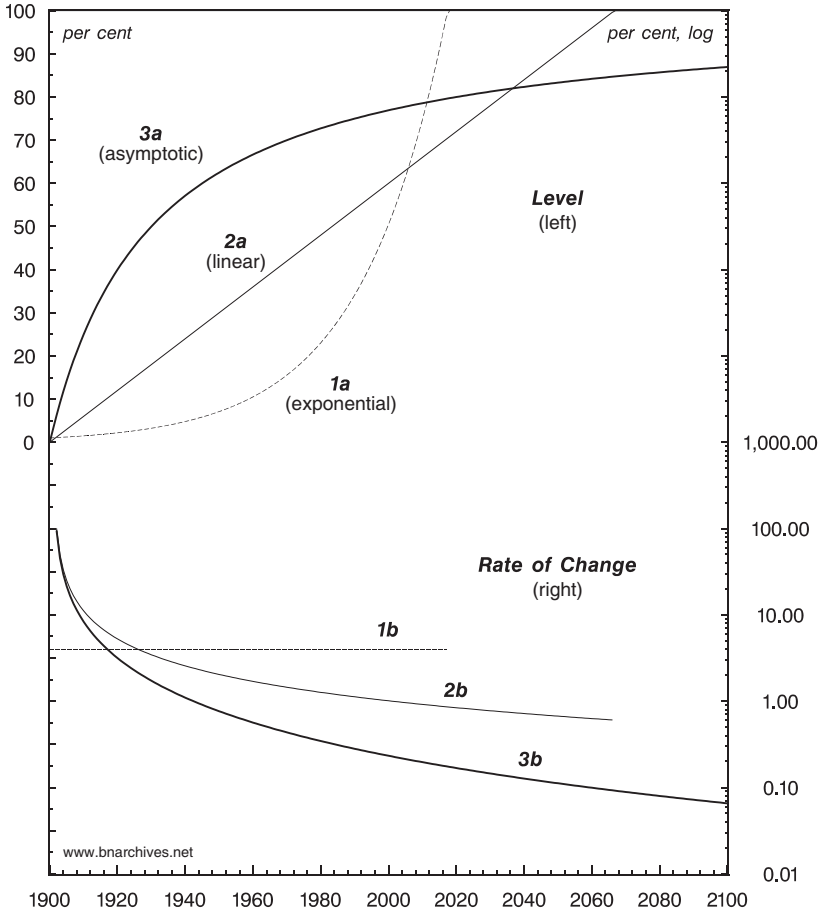
One important feature of distributional power is that it is clearly bounded. Given that no group of capitalists can ever own more than there is to own in society, distributional power can never exceed 100 per cent. Similarly, since no owner can own less than nothing, distributional power cannot fall below 0 per cent.[10] The movement between these lower and upper bounds, though, can follow many different patterns.

Three such patterns are illustrated in Figure 4. The patterns themselves are generated by mathematical functions, but we can easily endow them with concrete social meaning. Assume that each of the lines 1a, 2a and 3a at the upper part of the figure (plotted against the left scale) represents a particular trajectory of the after-tax profit share of the Top 0.01% in national income, and that each of the lines 1b, 2b and 3b at

[10] Although debt can be considered a 'negative' asset, a debtor cannot own less than nothing. The net debt of a debtor (liabilities less assets) is a claim on the debtor's future income. As long as the present value of this future income is greater than or equal to the debtor's net debt, the debtor's net assets are non-negative. If the present value of the future income is smaller than the net debt, the debtor is technically bankrupt, having zero net assets.

the bottom (plotted against the right logarithmic scale) represents the corresponding rate of change for that trajectory.[11]

Figure 4
Distributive Shares: A Hypothetical Exposition of Levels and Rates of Change



The chronological starting point in our hypothetical illustration is the year 1900, in which all three lines show an after-tax profit share of around 1 per cent. From this point onward, the patterns diverge. Line 1a, for example, shows the result of a constant, 4-per-cent growth rate per annum. This growth rate increases the after-tax profit share to 1.04 per cent in 1901, to 1.082 in 1902, to 1.125 in 1903, and so on. Since the after-tax profit share grows at an unchanging rate, the corresponding growth-rate series

[11] A log scale, shown here in multiples of 10, is a convenient way of plotting series that change exponentially.

1b at the lower part of the chart is a flat line. The after-tax profit share rises exponentially, and sometime before 2020 it reaches 100 per cent of national income. This is the 'glass ceiling'. From this point onward, the share can no longer increase: it either stays the same or drops. (In this figure, we left it unchanged at 100 per cent; notice that once line 1a at the top hits the glass ceiling, line 1b at the bottom, representing the growth rate, gets 'truncated', since the growth rate drops to zero.)

Now, capitalists operate against the opposition of non-capitalists (as well as of other capitalists). In order to earn profits, they need to exert enough power to overcome this resistance. As we noted earlier, though, the resistance itself is not fixed: it tends to increase as the income share of capitalists rises while the income share of others shrinks. And this growing resistance means that the higher the profit share of the capitalists, the greater the power they need to exert in order to make it even bigger.

These power relations can be traced in Figure 4. The lines at the top, denoting the after-tax profit share of income of the Top 0.01%, represent the power of dominant capital operating against resistance, while the lines at the bottom show the rate at which this profit-share-read-power changes over time.

In terms of our first example, line 1a shows capitalist power growing exponentially. It trumps the opposition at an annual rate of 4 per cent (line 1b), until the resistance is totally crushed and capitalists appropriate the entire national income. The end result itself is socially impossible (the non-capitalists, having lost their income, perish) or non-capitalistic (the losers end up living on handouts from the winners; see footnote 5). But the pattern of accelerating power leading toward that end is certainly possible, at least over a limited period of time.

Another hypothetical illustration is given by lines 2a and 2b. Here, too, we see capitalist power rising, but resistance to that power rises as well. And as a result, the growth rate of this power declines: at the beginning of the process, during the early 1900s, the rate of growth is 100 per cent per annum; by the 1950s it falls to about 2 per cent; and by the end of the twentieth century it declines to 1 per cent. However, mounting resistance isn't enough to stop the increase in capitalist power, and sometime during the 2060s capitalists end up appropriating the entire national income. As in the previous example, from this point onward capitalist power can either remain unchanged or drop. And although the end outcome itself, as before, is socially impossible or non-capitalistic, the pattern of linearly growing power that leads to that outcome is perfectly plausible.

The last pattern, which we label 'asymptotic', is illustrated by lines 3a and 3b. Initially, the share of profit increases rapidly, but the growth rate tapers off very quickly. Unlike in the previous two cases, in this one resistance grows too fast for capitalists to trump it completely. And, as a result, although the profit share rises, it never reaches the 100 per cent ceiling. It merely approaches it asymptotically.

Now remember that these lines are no more than ideal types that illustrate alternative patterns. In practice, the profit share is never that stylized: it goes up or down, it fluctuates around its own trend and its asymptote need not be 100 per cent – or any

other particular level, for that matter. It can be anything. As we shall soon see with the actual data, the hypothetical patterns illustrated here combine to produce ragged and occasionally wave-like trajectories of various durations. These trajectories show power increasing at various rates, receding, rising again, approaching its asymptote, and occasionally collapsing.

The key point, though, is that these patterns of distribution and redistribution, whatever they may be, quantify underlying power processes. And this quantification of power makes distributional patterns – and the limits embedded in them – crucial for understanding capital accumulation and capitalist development.

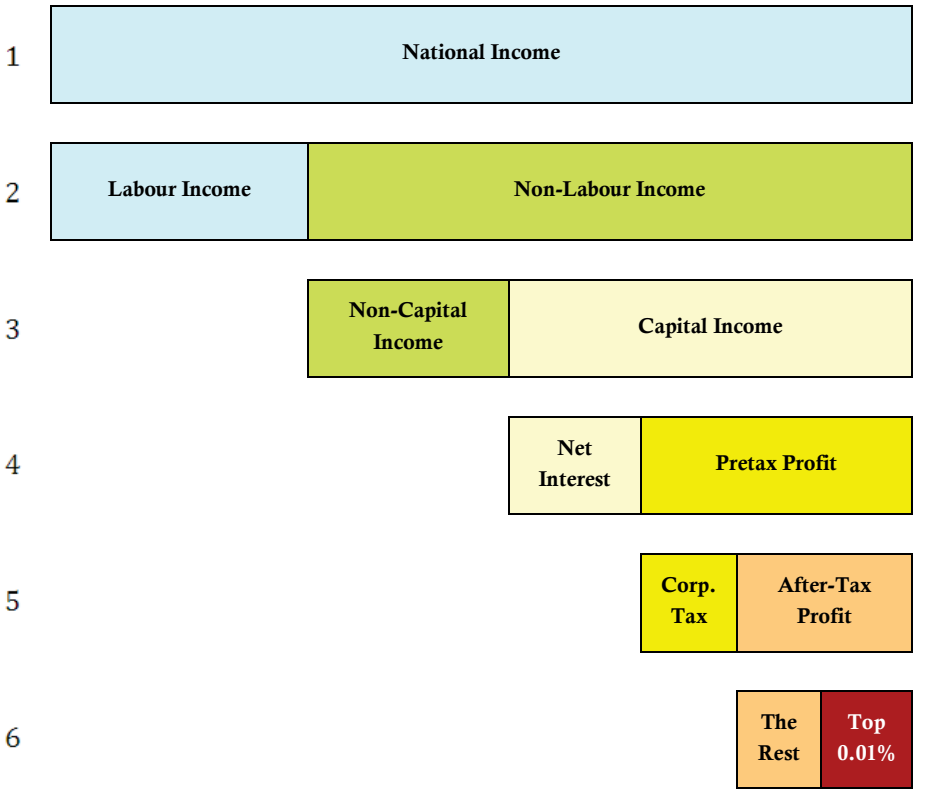
Much of our work over the past three decades has been concerned with making sense of such historical patterns. Often, the oscillations represent variations in power with a given order. But occasionally, they point to deeply transformative moments, ones that creorder the entire mode of power. One example of such creordering is the relationship between differential oil profits and energy conflicts in the Middle East (Nitzan and Bichler 1995; Bichler and Nitzan 1996). Another example is the regime pattern of differential accumulation, where dominant capital oscillates between breadth and depth as it breaks through its successive social envelopes (Nitzan 2001; Nitzan and Bichler 2001). And a third illustration is the relationship between major bear markets shown in Figure 1 and Table 1 and the corresponding transmutations of the capitalist mode of power that accompany them (Bichler and Nitzan 2008a).

The present paper is nested in this latter relationship. Focusing on the most recent and apparently still ongoing major bear market, our purpose is to identify the power underpinnings of the crisis, to assess the limits imposed on them and to speculate on what those limits may imply for the near future of the capitalist mode of power.

National Income Shares

The next step in this journey is to unpack the statistical category of 'national income'. Table 2 shows the underlying components of this aggregate. Note that the table is not drawn to scale. Our concern at this point is merely the relationship between the different components, not their relative size.

Table 2
Deconstructing National Income



Line 1 is national income. This line represents the total income, measured in dollars and cents, earned in a society during a given year. Line 2 shows that national income comprises two sub-categories: labour and non-labour income. In line 3, we see that non-labour income consists of two components: the income of capitalists and the income of non-capitalists other than employees (i.e. proprietors, rentiers and the government). Line 4 shows that capitalist income includes two types of income: net interest and pretax profit. Line 5 shows that pretax profit consists of corporate taxes that go to the government and after-tax profit that belongs to the capitalists. Finally, in line 6 we see that after-tax profit can be broken down to the profit of the Top 0.01% and the profit of all other firms.

This structure offers a guideline on how to investigate the redistribution of power.[12]

[12] The guideline here is very rudimentary and by no means exhaustive. Needless to say, it does not preclude different and/or more detailed analyses of power.

Recall our starting point. In Figure 3, we saw that the stock-market boom of the 1990s was underwritten not by 'economic growth', but by a massive creordering of power: a redistributional process in which the Top 0.01% managed to more than double its after-tax profit share in national income. The figure also showed that the crisis of the past decade or so has been unfolding with capitalist power hovering around historic highs. These observations, along with the forward-looking outlook of capitalists, suggest that the current crisis may be the result of capitalists becoming not weaker, but stronger; and that capitalist power may be approaching its social asymptote – a level too high to sustain, let alone increase.

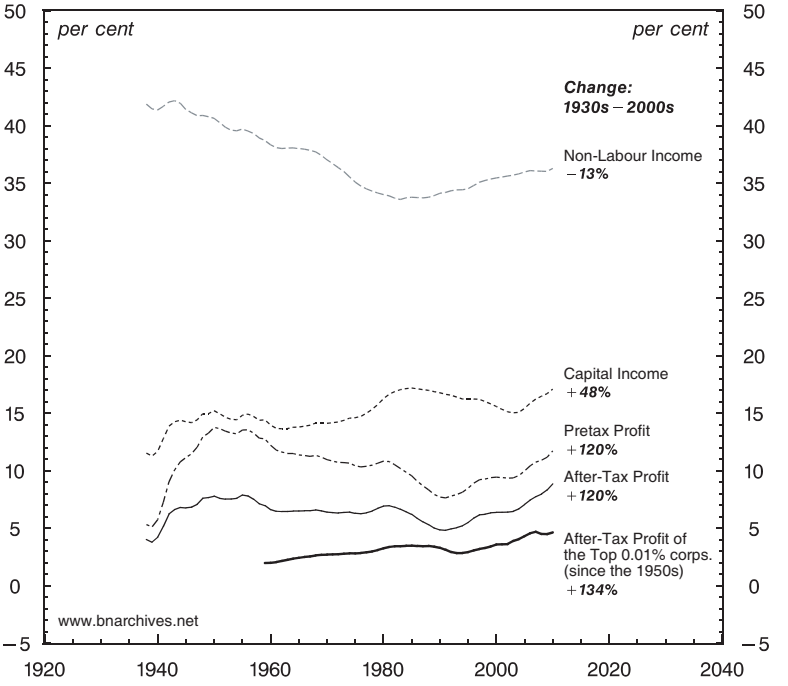
At this point, then, the question we need to ask is twofold. First, what were the *concrete power processes* that made this massive redistribution of income possible in the first place? And, second, what might be the specific *limits* on this power to redistribute?

The remainder of the paper tries to answer these questions by looking at the following nested transformations. Note that, all else remaining the same, each of these transformations works in favour of the Top 0.01%:

- Within national income, the shift from labour to non-labour income (line 2 in Table 2).
- Within non-labour income, the shift from non-capital to capital income (line 3).
- Within capital income, the shift from net interest to pretax profit (line 4).
- Within pretax profit, the shift from corporate tax to after-tax profit (line 5).
- Within after-tax profit, the shift of after-tax profit from smaller firms to the Top 0.01% (line 6).

Figure 5 provides a bird's-eye summary of these transformations, tracing the historical trajectories of the various national income shares since the 1930s (note that the data are expressed as 10-year moving averages, so every observation denotes the average of the preceding ten years). The chart shows that, despite having risen since the early 1980s, the share of non-labour income remains 13 per cent below what it was in the 1930s. However, the chart also shows that, within non-labour income, the above-listed shifts have been positive and large: the national income share of capital income increased by 48 per cent; of pretax and after-tax profit by 120 per cent; and of the after-tax profit of the Top 0.01% by 134 per cent (the last increase is measured since the 1950s). Let us now turn to a closer examination of each of these processes.

Figure 5
Shares of U.S. National Income



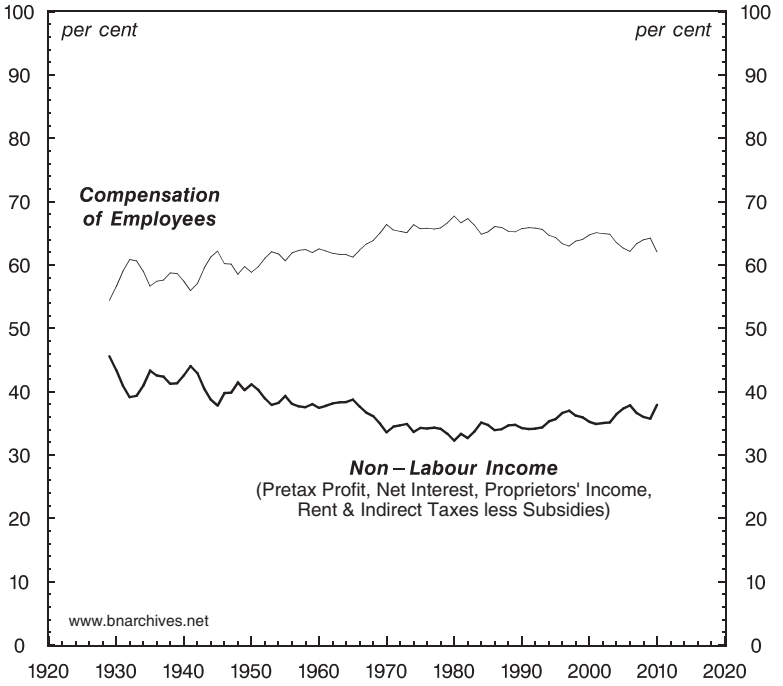
NOTE: Series are smoothed as 10-year moving averages. Non-labour income is equal to national income less compensation of employees. Capital income is pretax profit and net interest. The Top 0.01% of corporations comprises, for every year, the top 0.01% of U.S.-incorporated firms in the Compustat North America universe, ranked by market capitalization (see Figure 3 for derivation and computations). The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; YPCOMP for compensation of employees; ZB for pretax profit [without CCAdj & IVA]; INTNETAMISC for net interest; ZA for after-tax profit [without CCAdj & IVA]); *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series codes: Ch13 for the number of tax returns of active corporations [till 1997]); U.S. Department of Commerce, *Statistical Abstract of the United States* 2012, Table 744, p. 491 (the number of tax returns of active corporations [1978-2008]); Compustat 'funda' file through WRDS (series codes: NI for after-tax profit of the Top 0.01% of corporations).

Components of National Income

Figure 6 provides the most basic breakdown of national income, between labour and non-labour income. The chart tells the quantitative history of line 2 in Table 2 – and on the face of it, the story doesn't seem too fascinating.

Figure 6
Compensation of Employees and Non-Labour Income as a Share of U.S. National Income



NOTE: Non-labour income is national income less compensation of employees. The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; YPCOMP for compensation of employees).

We can see that compensation of employees, expressed as a share of national income, rose from a low of 54 per cent in 1929 to a high of 68 per cent in 1980, and that from then onward it declined gradually, reaching 62 per cent in 2010. As expected, this gradual shift is mirrored by the movement of non-labour income, whose share of national income declined from the 1930s to the early 1980s and rose thereafter.

Now, a naïve assessment of this process may lead one to conclude that the rising share of non-labour income has much more room to go. Even after a three-decade

decrease, labour income still amounts to nearly two-thirds of national income. Moreover, this share remains higher than it was in the early part of the century, and that fact suggests that it could be squeezed further in favour groups other than workers, including the Top 0.01%.

But that would be a hasty conclusion to draw. In fact, looking forward, squeezing the share of labour income further is bound to prove difficult.

This statement may seem counterintuitive, but the reasons behind it could be explained with a simple decomposition. Consider Equation 6, whose final line expresses the share of employees in national income as a product of two distinct factors: (1) the share of employees in the total adult population, and (2) the ratio between compensation per employee and the national income per adult. The first factor gauges the number of employees relative to all potential employees. The second factor contrasts the average income of an employee with the average income generated by the adult population as a whole.

6.
$$\frac{compensation\ of\ employees}{national\ income} = \frac{compensation\ of\ employees}{number\ of\ employees} \times \frac{number\ of\ employees}{adult\ population} \times \frac{adult\ population}{national\ income}$$

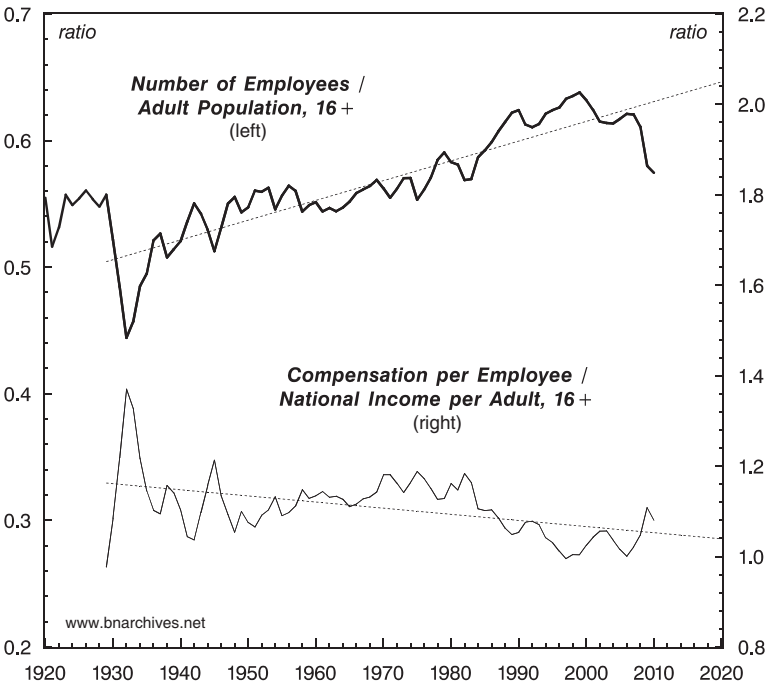
$$= \frac{number\ of\ employees}{adult\ population} \times \frac{\frac{compensation\ of\ employees}{number\ of\ employees}}{\frac{national\ income}{adult\ population}}$$

$$= \frac{number\ of\ employees}{adult\ population} \times \frac{compensation\ per\ employee}{national\ income\ per\ adult}$$

The historical data for these two components are plotted in Figure 7, and, unlike in Figure 6, here the picture is very interesting.

Note that labour income can be redistributed in favour of other groups in one of two ways. The first method is to convert workers into capitalists or proprietors of various sorts, and in so doing re-designate their income. In this way, what was once called a wage becomes profit, interest, rent, entrepreneurial income, etc. – all depending on the new identity of the former worker. But as the top series in the chart shows, historically the conversion has gone the other way: over the past century or so, a growing share of the adult population has been compelled to become workers.

Figure 7
Number of Employees and Compensation per Employee in the United States



NOTE: The last data points are for 2010.

SOURCE: *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series codes: Age_16AndOlder_Aa141_Number for the adult population, 16 years and over [till 1946]; CivilianLaborForce_Employed_Total_Ba471_Thousand for the number of employees [till 1947]; U.S. Bureau of the Census through Global Insight (series codes: ANPCTTGE16 for the adult population, 16 years and over [from 1947] ENS@US.M for the number of employees [from 1948]). U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; YPCOMP for compensation of employees).

The second method is to squeeze the average income of workers, and in so doing increase the average income of non-workers. According to the trend depicted in the bottom series, this is exactly what has happened since the 1930s: the average worker's income, measured relative to the national income per adult, has gone down.[13]

[13] Our emphasis here is on the long-term trends of the two series. The cyclical oscillations tend to correlate with the business cycle. To illustrate, consider the downswing since 2008. Falling employment during that period has caused the ratio of employees to the adult population (top series) to fall, while rising unemployment has made national income per adult fall faster than

Is this relative downtrend 'sustainable'? Between the 1970s and the early 2000s, employee compensation relative to national income per adult fell by about 17 per cent; can this ratio be squeezed by another 17 per cent in the next 30 years?

The answer is probably positive: relative wages can be reduced further. But given that this measure is already low by historical standards, squeezing it further is likely to prove increasing difficult. It will require greater threats, larger doses of violence and the incitement of more fear. And since a greater exertion of power invites greater resistance, there is also the prospect of a powerful backlash. So all in all, it seems that the power of capitalists relative to employees is much closer to its asymptotes than Figure 6 would otherwise imply.

Components of Non-Labour Income

The next step in our decomposition is depicted in Figure 8, which drills deeper into non-labour income.

Following line 3 in Table 2, Figure 8 decomposes non-labour income into two components. The first component, depicted by the thick series, is the income of capitalists, comprising pretax profit and net interest.[14] The second component, depicted by the thin series, measures the income of those who are neither workers nor capitalists – namely proprietors, rentiers and the government.

The figure shows that, over the past century, there has been a significant redistribution from those who are neither workers nor capitalists to capitalists: capitalists' share in national income has risen to roughly 20 per cent, up from 12 per cent in the 1930s, while the share of non-workers/non-capitalists has fallen to less than 20 per cent, down from 30 per cent.

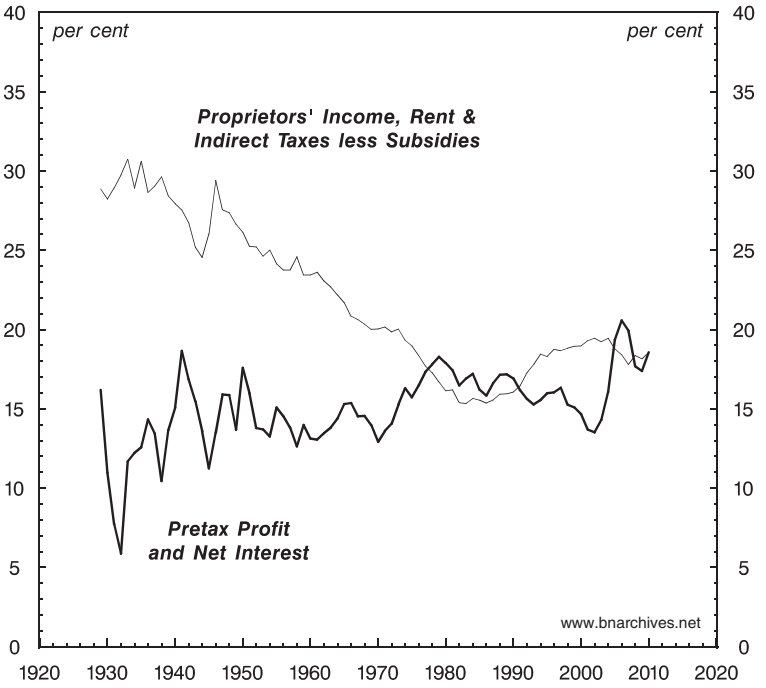
Can this pro-capitalist redistribution continue? Sure it can. But as we have seen in the case of employees, here, too, the process is likely to prove increasingly difficult to continue.

---

compensation per employee, causing the bottom series to rise. The same logic, only in reverse, operates during an upswing.

[14] The national income accounts provide two measures of profit – with and without capital consumption adjustment (CCAdj) and inventory valuation adjustment (IVA). In this paper we use the former measure (without CCAdj and IVA), because its definition is closer to the one used in corporate financial reports. The quantitative difference between the two measures is negligible for our purposes here.

Figure 8
Capitalist and Other Non-Labour Income as a Share of U.S. National Income



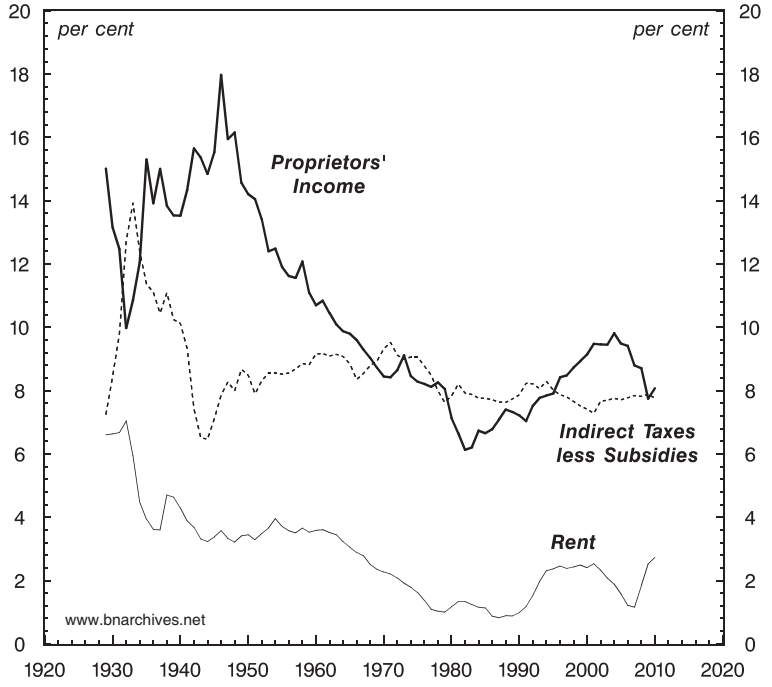
NOTE: Pretax profit is measured without capital consumption adjustment (CCAdj) and inventory valuation adjustment (IVA). The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; ZB for pretax profit without CCAdj & IVA; INTNETAMISC for net interest; YPPROPADJ for proprietors' income; YPRENTADJ for rent; TXIM for indirect taxes; SUBG for subsidies).

To better understand the particular limitation here, consider Figure 9. The chart shows the three ingredients of non-capitalist income. The dashed series represents government sales and import taxes, net of government subsidies. This net claim has remained at roughly 8 per cent of national income for much of the post-war era, and given the U.S. government's regressive bias and need for tax income, reductions in this share are not very likely.

The thin series in the figure is rent – including the amounts actually paid by tenants to landlords, as well as those imputed to people living in their own homes. This component of national income had been in a free fall till the 1980s and is now so low that a further reduction – even if it were achievable – would add little to capitalist income.

Figure 9
Proprietors' Income, Rent and Indirect Taxes less Subsidies as a Share of U.S. National Income



NOTE: The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; YPPROPADJ for proprietors' income; YPRENTADJ for rent; TXIM for indirect taxes; SUBG for subsidies).

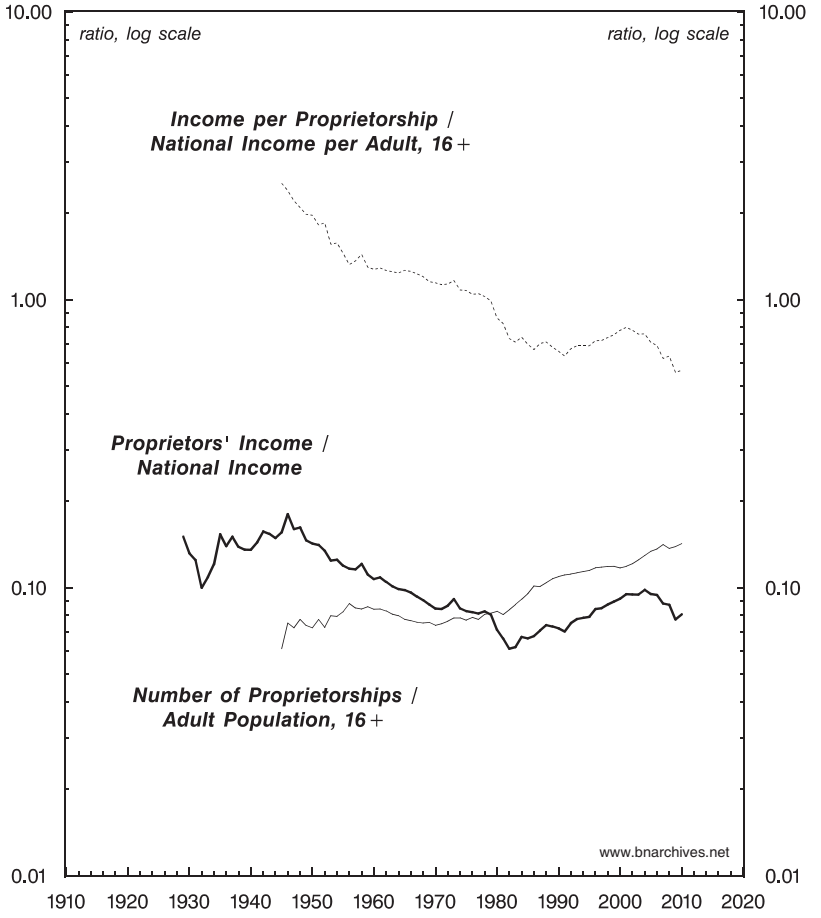
The only significant candidates for an additional redistributional squeeze here are the proprietors. It is true that their share of national income has already been squeezed from 18 per cent in the 1940s to 8 per cent presently, but that latter proportion is still sizeable. Can it be reduced further?

To see the potential for this further redistribution, consider Figure 10. This chart decomposes the proprietors' income share in a manner similar to the decomposition of the wage share in Figure 7 (note that here we use a log scale and that the income shares are expressed in decimals rather than as percentages). The thick series in the chart is taken from Figure 9 to contextualize the process. The thin series shows the ratio between the number of proprietorships and the adult population.[15] And the dashed series shows the ratio between the average income per proprietorship and the average national income per adult. If we were to multiply the values of the thin and

[15] Note that a proprietorship can comprise more than one person.

dashed series, we would get the values of the thick one – the decimal share of national income received by proprietors.

Figure: 10
Proprietors' Income as a Share of U.S. National Income: A Decomposition



NOTE: Proprietorships include sole proprietorships and partnerships. For 2009-2011, the number of sole proprietorships is extrapolated based on their average annual growth rate in the preceding 10 years (2.8%). Till 1980, the reported number of sole proprietorship includes farm and non-farm entities; after 1980, it includes non-farm entities only. To estimate the total number of sole proprietorships after 1980, the number of farm sole proprietorships is extrapolated as equal to 30% of the number of non-farm sole proprietorship (the 1980 ratio). The number of partnerships in 1950-1952 and 1954-1956 is interpolated based on adjacent observations. The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; YPPROPADJ for sole proprietors' income); *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series codes: Ch4 for the number of sole proprietorships [till 1980]; Ch7 for the number of non-farm sole proprietorships [till 1998]; Ch10 for the number of partnerships [till 1997]; Age_16AndOlder_Aa141_Number for the adult population, 16 years and over [till 1946]); U.S. Department of Commerce, *Statistical Abstract of the United States* 2012, Table 744, p. 491 (for non-financial sole proprietorships and partnerships from 1999 and 1998, respectively); U.S. Bureau of the Census through Global Insight (series codes: ANPCTTGE16 for the adult population, 16 years and over [from 1947]).

The redistributional process here is very similar to – albeit much more dramatic than – the one we saw with wages. In principle, capitalist income can be increased by turning proprietors into capitalists and reclassifying their income as interest or profit. But according to the thin series in Figure 10, the process has unfolded in the opposite direction: since the 1940s – and particularly since the free-enterprise revolution and union busting of the 1980s – an ever growing proportion of the adult population has been forced to join the ranks of the proprietors. And if we are to judge by the relative income of these proprietors indicated by the dashed series, the newcomers have been in for a pretty rough ride.

During the 1940s, the relative income of proprietorships was three times the national income per adult; by the early 2010s, it dropped to one half – a six-fold decrease. In other words, capitalists cannot bank on squeezing proprietors much further: these proprietors already earn half as much as the average employee (and probably less, give that some proprietorships comprise more than one member), so compressing their income even further will likely reduce them to something close to bare subsistence.

So here, too, capitalist power seems to be pushing against its own asymptotes: it can be increased a bit more – but only with plenty of violence and a lot of downside risk.

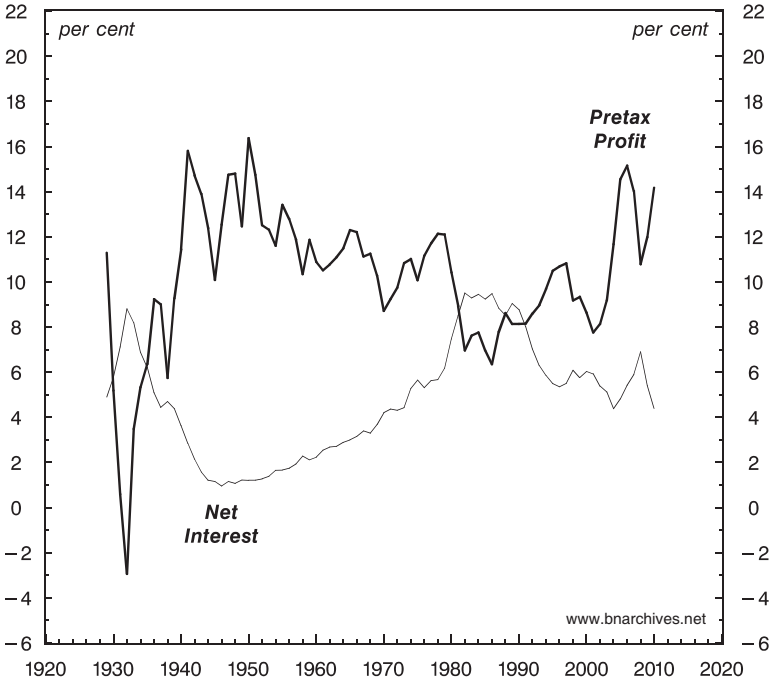
Components of Capitalist Income

The next step, illustrated in Figure 11, is to decompose capital income into pretax profit and net interest. Before turning to the data, though, a couple of qualifiers are in order.

First, our analysis here is concerned primarily with profit, so the distinction we make between profit and interest is certainly relevant. However, we should also note that, contrary to the conventional creed, this distinction has nothing to do with the common separation between so-called 'non-financial' and 'financial' activities. Both profit and net interest are payments that businesses make to their owners: the former

payment is made to owners of equity, the latter to owners of debt, and that is it. Moreover, all firms – whether they are labelled 'non-financial' (and by popular implication 'productive') or 'financial' (and therefore 'unproductive') – make both types of payments to their owners/creditors.

Figure 11
Pretax Profit and Net Interest as a Share of U.S. National Income



NOTE: Pretax profit is measured without capital consumption adjustment (CCAdj) and inventory valuation adjustment (IVA). The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; ZB for pretax profit without CCAdj & IVA; INTNETAMISC for net interest).

Second, and although it may sound strange, in the national accounts home ownership is considered an 'enterprise'. Because owning a home is the only 'enterprise' that pays but does not receive interest, interest on home mortgages, although paid *by* individuals (to firms), ends up as part of the net interest payments *to* individuals (i.e., the interest paid by less the interest received from enterprises).

As Figure 11 makes clear, variations of net interest have an important effect on pretax profit. We have already seen in Figure 8 that the overall share of capital in

national income has trended upward. But here we can see that the components of capital income tend to move in opposite directions: when the share of interest in national income declines, the share of profit in national income rises – and vice versa. And the reason is simple: all else being equal, the lower the interest payments to debt owners, the more there remains for equity holders. (As a side note, this pattern suggests that variations in the profit share of national income may owe more to the accounting classification of capitalist income than to the 'class struggle' between capitalist and workers.)

Now, a corporate strategist inspecting Figure 11 with an eye to the future may ask: how far can this twin process of falling net interest and rising pretax profit go? And his short answer would probably be: not very far.

The reason for this answer is outlined in Figure 12. To make sense of this chart, note that the amount of net interest paid is always a product of two components: the amount of outstanding debt and the rate of interest. The components of this product are easy to impute. If we take from Figure 11 our measure of net interest as a share of national income and divide it by the rate of interest, we get an estimate of the net debt of enterprises, expressed as a share of national income. The figure plots both of these components – the long-term bond yield (thick series against the left scale) and the imputed net debt of enterprises relative to national income (thin series against the right scale).[16]

Begin with the imputed net debt of enterprises. The chart shows how the value of this debt fell from nearly 190 per cent of national income in the 1930s to about 40 per cent in the 1940s (the initial part of the decline was probably driven by bankruptcies, and the subsequent decline by rising national income). By the late 1940s, however, the trend reversed: the ratio of debt to national income started to increase, and by the 2000s it reached 100 per cent.

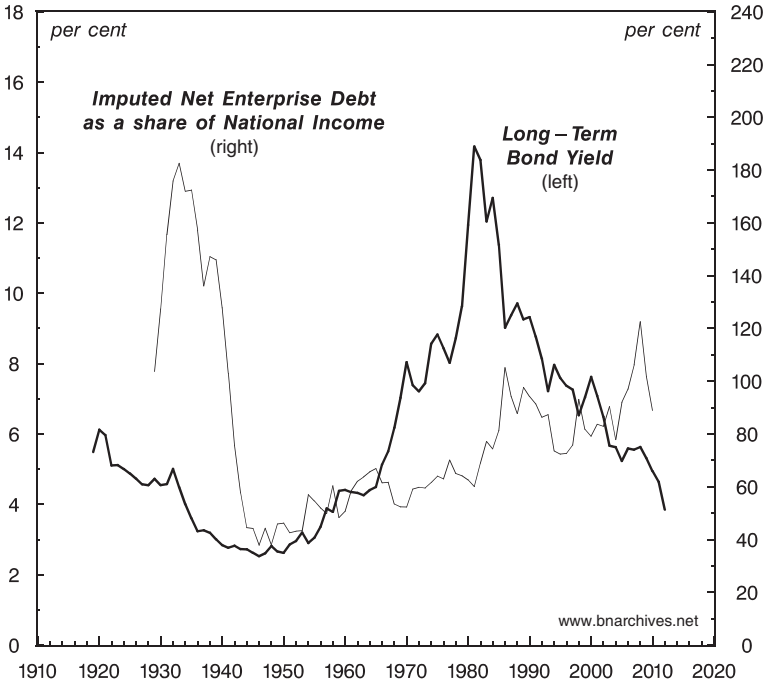
Next, consider the rate of interest, measured here by the yield on AAA corporate bonds with 20-year-or-longer maturity. This rate increased from less than 3 per cent in the 1940s to 14 per cent in the 1980s, before dropping below 4 per cent in early 2012 – oscillations that owe much to the rise and decline of inflation.

Now, note that since the 1980s, the ratio of debt to national income and the rate of interest moved in opposite directions, but that the decline of the latter was faster than the rise of the former, causing the overall share of net interest in national income to decline.

What can we say about this process looking forward? A decline in outstanding debt is certainly possible – but such a decline, were it to occur, would likely be effected through a massive crisis that would also crush profit. Barring such a crisis, the likely trajectory is for the ratio of debt to national income to remain high or increase further.

[16] In practice, different debts carry different rates of interest over different maturities, while our computation here uses a single rate of interest for an average long-term maturity. This discrepancy makes the imputed debt inaccurate to some extent, but the general trend is probably not too far off.

Figure 12
Net Interest as a Share of U.S. National Income: A Decomposition



NOTE: The category 'enterprise' comprises businesses as well as mortgaged home owners. Imputed net enterprise debt as a share of national income is derived by dividing the share of net interest in national income by the long-term corporate bond yield (expressed as a decimal). The last data points are 2010 for the imputed net enterprise debt and 2012 for the long-term bond yield.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; INTNETAMISC for net interest); Moody's through Global Insight (RMMBCAAANS for the corporate bond yield, AAA, seasoned issue, 20-year-or-longer maturity).

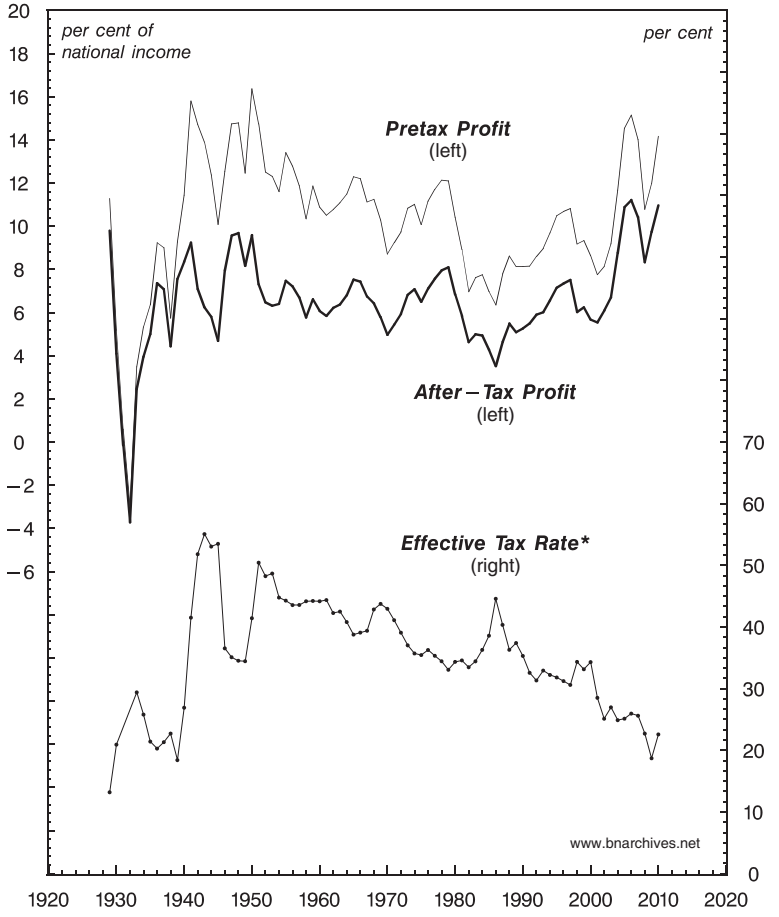
In other words, any further decline in the share of net interest in national income has to come from lower interest rates. But since interest rates are already low by historical standards, the benefit for profits from such a reduction is bound to be limited. So here too we can see the asymptote.

Components of Corporate Profit

Now, this isn't the end of the story. So far, we have dealt with pretax profit. But for capitalists, the pretax is just a means to an end. Their real goal is the 'bottom line': the

profit they are left with *after* tax. And here we come to another very interesting part of the puzzle, illustrated in Figure 13.

Figure 13
Corporate Profit as a Share of U.S. National Income and the Effective Corporate Tax Rate



* The effective tax rate is the difference between pretax and after-tax profit expressed as a per cent of pretax profit.

Note: In 1931, the tax was greater than pretax profit, while in 1932, the pretax profit was negative. For presentation purposes, the effective tax rate observations for these two years are omitted. Profit is measured without CCAdj & IVA. The last data points are for 2010.

Source: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; ZB for pretax profit [without CCAdj & IVA]; ZA for after-tax profit [without CCAdj & IVA]).

The two series at the top, plotted against the left scale, are expressed as a share of national income: the thin series measures the share of pretax profit and the thick series the share of after-tax profit. Note that the cyclical ups and downs of the two series are very similar, but that their long-term trends are not. If we take the 2000s as our reference point, we can see that although both series have risen since the early 1980s, the national income share of pretax profit is still lower than it was during the 1940s and 1950s, whereas the income share of after-tax profit is higher.

The reason for this long-term divergence is explained by the bottom series, which plots the effective corporate tax rate against the right scale. The data show that during the 1920s and 1930s corporations hardly paid any corporate taxes. But the Great Depression and the reforms that followed ended this free ride, pushing the effective corporate tax rate from 20 to nearly 55 per cent. Obviously, this was a massive setback to the power of owners. It hammered after-tax profit more than anything else – but given the political climate of the time, corporations found it difficult to protest.

Capitalists, though, weren't about to give up, and over the next seventy years, they have managed to claw back what they felt was rightly theirs. Their efforts were highly successful – so much so that by the early twenty-first century, the corporate tax rate is roughly the same as it was in the 1920s, before the welfare-warfare state had been conceived.

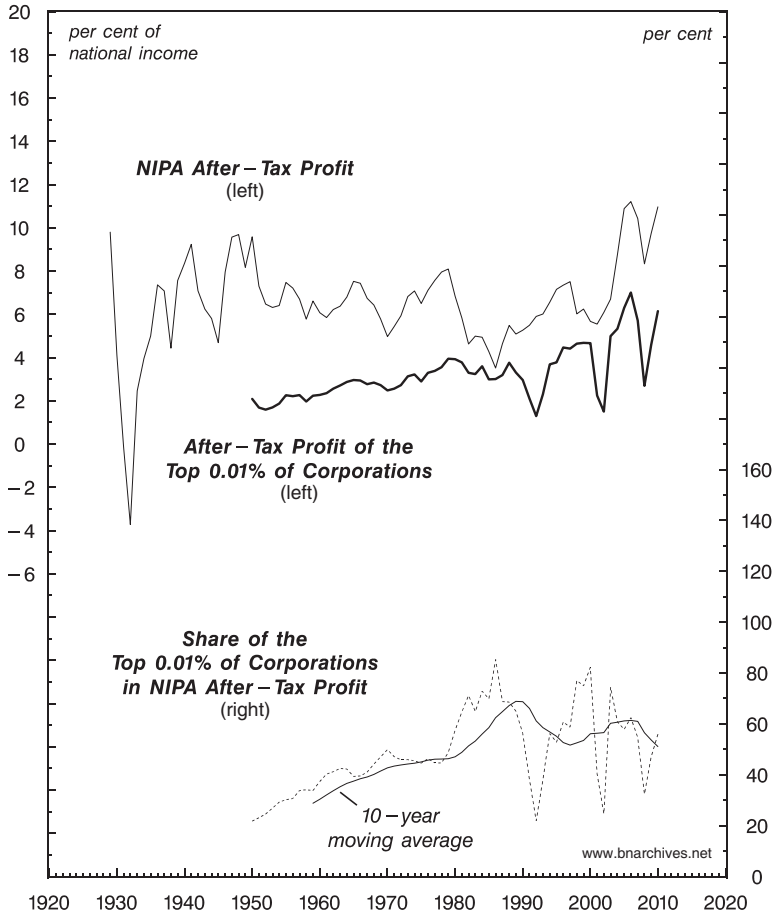
The impact of this reduction has been staggering: by having their corporate tax rate reduced from 55 to 20 per cent, owners have managed to boost their after-tax profit by 78 per cent. But, as we have seen, the greater the power – in this case, the power to *not* pay taxes – the harder it is to augment this power. The current political climate makes further corporate tax cuts difficult to achieve. And even if such reductions were to be implemented, their effect on the bottom line would be small. Given that the current effective corporate tax rate is only 20 per cent, the most capitalists could hope for is a 25 per cent increase in their after-tax profit – and that increase would require the elimination of corporate taxes altogether! So once again in our journey, we see capital as power approaching its asymptotes.

Components of After-Tax Profit

Guided by Table 2, we have one more step to consider, and that is the after-tax profit share of the Top 0.01%. This share is examined in Figure 14. The top part of the chart shows two series plotted against the left scale. The thin series is the share of total after-tax profit in national income (we call this the 'NIPA' series, to mark its relation to the national income and product accounts). The thick series is the net profit of the Top 0.01%, expressed as a share of national income (corporate reports commonly denote after-tax profit as 'net profit' or 'net income'). The bottom of the figure shows another two series, plotted against the right scale. The dashed series is the ratio of the two top series: it expresses the share of the Top 0.01% in NIPA after-tax profit. The solid line

going through this series expresses this ratio as a 10-year moving average to show the long-term trend.

Figure 14
U.S. After-Tax Profit:
NIPA vs. the Top 0.01% of Corporations



NOTE: NIPA profits are measured without CCAdj & IVA. The Top 0.01% of corporations comprises, for every year, the top 0.01% of U.S.-incorporated firms in the Compustat North America universe, ranked by market capitalization (see Figure 3 for derivation and computations). The last data points are for 2010.

NOTE: U.S. Bureau of Economic Analysis through Global Insight (series codes: YN for national income; ZA for after-tax profit). *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series codes: Ch13 for the number of tax returns of active corporations [till 1997]); U.S. Department of Commerce, *Statistical Abstract of the United States* 2012, Table 744, p. 491 (the number of tax returns of active corporations [1998-2008]); Compustat 'funda' file through WRDS (series codes: NI for the after-tax profit of the Top 0.01% of corporations).

The relation between total NIPA profit and the profit of the Top 0.01% serves to historicize the process of corporate centralization. As we can see from the bottom series, during the early 1950s the Top 0.01% accounted for slightly more than 20 per cent of total after-tax profit. Ongoing mergers and acquisitions pushed this share upward, to 85 per cent by the mid 1980s: at that point, the Top 0.01% appropriated nearly all of the national profit of the United States.

But that was the peak. Since then, the share of the Top 0.01% in NIPA after-tax profit has oscillated widely, but the overall trend is no longer up, but sideways, hovering around 60 per cent of the total.

This pattern may seem puzzling. Why did the after-tax profit share of the Top 0.01% stop growing in the early 1990s? What has halted the process of corporate centralization around 60 per cent? Can the leading U.S.-based corporations reignite the engine of centralization to increase their profit share further, or are they brushing up against their asymptote?

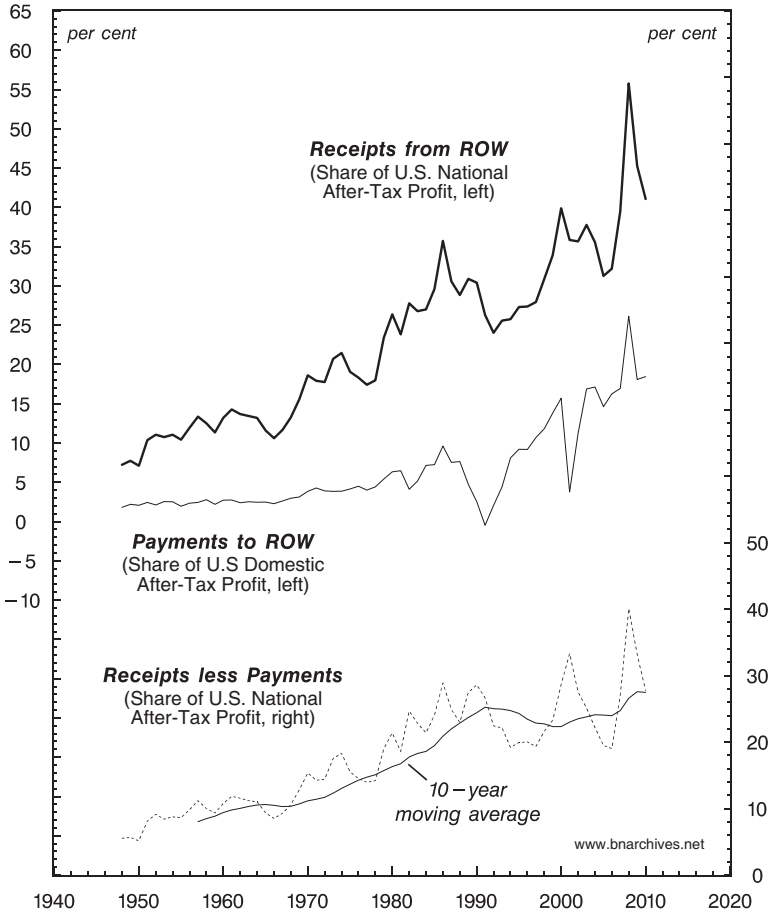
Rest of the World

Note that so far our framework has been limited to the 'United States' proper (abstracting from the ambiguities associated with this statist category). We have focused specifically on *national* income, dissecting the various components in which the net profit of the Top 0.01% is nested. However, both the aggregate after-tax profit of the NIPA and the net profit of the Top 0.01% are earned, in part, *outside* the United States – in what the statisticians call ROW (rest of the world).

The growing importance of ROW profit is shown in Figure 15. The raw data that underlie this figure are fraught with hazards of estimation and interpretation, but the overall long-term trends they portray are probably valid.[17] The thick series at the upper part of the figure plots the proportion of U.S. after-tax profit (NIPA) coming from outside the United States (including both the foreign dividends and reinvested earnings of U.S.-based corporations). The data show that during the 1940s and 1950s, ROW profit amounted to less than 10 per cent of the total, but that its growth has been rapid and that its level now hovers around 50 per cent of the total!

[17] On the difficulties associated with foreign asset and income data, see for example Griever, Lee and Warnock (2001), Bosworth, Collins and Chodorow-Reich (2007) and Curcuru, Dvorak and Warnock (2008). On the extensive use of tax havens by large U.S.-based firms and the accounting uncertainties caused by this use, see White (2008).

Figure 15
Rest of the World: Receipts and Payments of After-Tax Profit



NOTE: After-tax profit is measured without CCAdj & IVA. Receipts from ROW are part of national profit and income, while payments to ROW are part of domestic profit and income. Both receipts from ROW and payments to ROW comprise dividends and reinvested earnings. The last data points are for 2010.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: ZA for after-tax profit; XFYADIV for dividends receipts from ROW; XFYAREONUSDI for reinvested U.S. earnings in ROW; MFYADIV for dividends payments to ROW; MFYAREONFDI for reinvested ROW earnings in the U.S.).

And here arises an interesting question: what is to prevent U.S. corporations from using foreign investment (greenfield or mergers and acquisitions) to earn more and more of their after-tax profit from ROW, and by so doing push their profit share of national income above its current level of 11 per cent? Indeed, what is to prevent them from pursuing this international path until their net profit approaches 100 per cent of

the U.S. national income?[18] Won't this solution postpone the asymptotic day of reckoning deep into the future?

The answer is twofold. First, unlike during the first half of the twentieth century, when U.S.-based corporations reined supreme, these days they face mounting challenges from corporations based in other countries. These challenges are manifested in many different ways – for example, in the downward trajectory of the global profit share of U.S.-based corporations, which fell from 60 per cent in the 1970s to 30 per cent in the 2010s[19] – and they make it more difficult for U.S.-based firms to take over foreign profit streams that were previously theirs for the picking.

Second, and perhaps more importantly, in order for ROW to open up to U.S. foreign investment, the United States has to reciprocate by opening up to foreign investment from ROW. And that is exactly what has happened, particularly since the 1990s. The thin series in the upper part of Figure 15 plots the share of domestic U.S. net profit that is paid to ROW-based owners.[20] Until the onset of neoliberalism, this share was very small. But the opening up of the United States to foreign investment changed this situation, causing this share to rise fourfold: it increased from roughly 5 per cent in the 1990s to 20 per cent presently.

The interaction of these inward and outward power processes is illustrated by the dashed series at the bottom of the chart. The series shows the *net* contribution of ROW to U.S. after-tax profit: it measures the difference between the after-tax profit received from ROW and the after-tax profit paid to ROW, expressed as a share of U.S. national after-tax profit.

And as with Figure 14, here too it seems that U.S.-based capitalists have approached their power asymptote. The contribution of ROW to the share of after-tax profit in national income rose fivefold – from 5 per cent in the 1950s to about 25 per cent in the late 1980s – and then it decelerated sharply, or perhaps stalled. While U.S.-based firms have continued to earn more and more of their income from ROW, firms from ROW have done the same, absorbing a growing share of U.S. domestic profit (see Appendix).

This influx of firms from ROW may serve to explain the stalling share of the Top 0.01% depicted in Figure 14. The share of large firms in overall profit continues to rise. But since the 1980s, the bulk of this increase is accounted for by firms from ROW, leaving the share of U.S.-incorporated firms stagnant.

---

[18] ROW profits are, by definition, part of U.S. national income (although not of domestic income), so regardless of how large they become, they can never cause overall profit to *exceed* national income.

[19] See Bichler and Nitzan (2010a: 19, Figure 3). These data pertain to listed corporations only. Insofar as the proportion of foreign firms listed in the United States (in terms of both numbers and profit) is larger than the comparable global average, and if this differential has risen over the past half century, the numbers we report here could very well overstate the profit share of U.S.-based firms while understating the pace of its temporal decline.

[20] Whereas national net profit is earned by U.S. *nationals* regardless of the geographic territory in which they are generated, domestic net profit is earned on U.S. *territory*, regardless of the nationality of the owner.

Summary and Extrapolation

In our previous works on the subject, we argued that this crisis is a systemic one, and that capitalists were struck by systemic fear – a primordial consternation for the very existence of their system. Our purpose in this paper has been to explain why.

In order to do so, we have set aside the liberal-democratic façade that economists label 'the economy' and instead concentrated on the enfolded hierarchies of organized power. The nominal quantity of capital, we have argued, represents not material consumption and production, but commodified power. In modern capitalism, the quantities of capitalist power are expressed distributionally, as differential ratios of nominal dollar magnitudes. And the key to understanding capital *as* power is to decipher the connection between the qualitative processes of power on the one hand, and the nominal distributional quantities that these processes engender on the other.

We have dissected, step by step, the national income accounts of the United States, from the most general categories down to the net profits of the country's largest corporations. We have shown that, from the viewpoint of the leading corporations, most of the redistributional processes – from the aggregate to the disaggregate – are close to being exhausted. By the end of the twentieth century, the largest U.S. corporations, approximated by the Top 0.01%, have reached an unprecedented situation: their net profit share of national income hovers around record highs, and it seems that this share cannot be increased much further under the current political-economic regime.

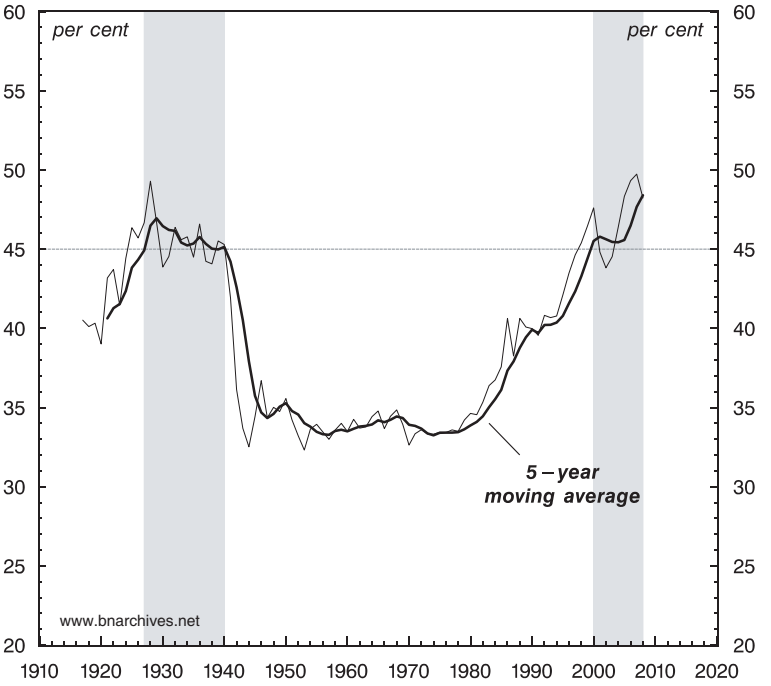
This asymptotic situation, we believe, explains why leading capitalists have been struck by systemic fear. Peering into the future, they realize that the only way to further increase their distributional power is to apply an even greater dose of violence. Yet, given the high level of force already being exerted, and given that the exertion of even greater force may bring about heightened resistance, capitalists are increasingly fearful of the backlash they are about to unleash. The closer they get to the asymptote, the bleaker the future they see.

It is of course true that no one knows exactly where the asymptote lies, at least not before the ramifications of approaching it become apparent. But the fact that, over the past decade, capitalists have been pricing down their assets while their profit share of income hovers around record highs suggests that, *in their minds*, the asymptote is nigh.

How much more force and violence are needed to keep the current capitalist regime going? This of course is a subject in and of itself. But given its crucial importance, it is worth at least a brief, closing illustration.

One important manifestation of the distributional processes we have explored in this paper is illustrated in Figure 16. The figure shows the income share of the top 10 per cent of the U.S. population (note that, unlike the income share of corporate profit that focuses on organizations, this measure focuses on individuals). The shaded areas denote two historical extremes, periods in which the income share of the top 10 per cent of the population exceeded 45 per cent.

Figure 16
Income Share of the Top 10% of the U.S. Population



NOTE: Income is defined as 'market income', including capital gains; it excludes government transfers. Grey areas indicate periods during which the 5-year moving average of the data series exceeded 45%. The last data point is for 2008.

NOTE: Piketty, Thomas, and Emmanuel Saez. 2004. Income Inequality in the United States, 1913-2002. Monograph, pp. 1-92. Updated till 2008 from http://www.econ.berkeley.edu/~saez/TabFig2008.xls; data sheet: data-Figure1 (retrieved on February 7, 2011).

During the 1930s and 1940s, this level proved to be the asymptote of capitalist power: it triggered a systemic crisis, the complete creordering of the U.S. political economy, and a sharp decline in capitalist power, as indicated by the large drop in inequality. The present situation is remarkably similar – and, in our view, so are the challenges to the ruling class.

Figure 17
The Underlying Magma:
Income Share of the Top 10% of the U.S. Population vs. the Correctional Population as a Share of the Labour Force

NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.98); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are 2008 for the Income Share of the Top 10% of the Population and 2009 for the Correctional Population.

SOURCE: For the income share of the top 10% of the population, see Figure 16. Data on the correctional population are from Sourcebook of Criminal Justice Statistics Online (prior to 1980: Table 6.28.2009 [http://www.albany.edu/sourcebook/csv/t6282009.csv]; from 1980 onward: Table 6.1.2009 [http://www.albany.edu/sourcebook/csv/t612009.csv]). Civilian labour-force data till 1947 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ba470); from 1948 onward, the data are from the U.S. Department of Commerce through Global Insight (series code: LFC).

In order to have reached the peak level of power it currently enjoys, the ruling class has had to inflict growing threats, sabotage and pain on the underlying population. One key manifestation of this infliction is illustrated in our last chart, Figure 17.

The chart reproduces the distributional measure from Figure 16 (left scale) and contrasts it with the ratio between the adult correctional population and the labour force (right scale). The correctional population here includes the number of adults in prison, in jail, on probation and on parole.

As we can see, since the 1940s this ratio has been tightly and positively correlated with the distributional power of the ruling class: the greater the power indicated by the income share of the top 10 per cent of the population, the larger the dose of violence proxied by the correctional population. Presently, the number of 'corrected' adults is equivalent to nearly 5 per cent of the U.S. labour force. This is the largest proportion in the world, as well as in the history of the United States.

Although there are no hard and fast rules here, it is doubtful that this massive punishment can be increased much further without highly destabilizing consequences. With the underlying magma visibly shifting, the shadow of the asymptote cannot be clearer.

Appendix: Proxies of Dominant Capital

This paper uses a proxy for dominant capital that is different from the one presented at the 2011 conference on the Forum on Capital as Power. The differences between the two proxies should be of interest to researchers, and we articulate and assess them below.

The measure used at the conference was the 'Compustat 500', an aggregate comprising the top 500 firms listed in the Compustat North America dataset, ranked by market capitalization. In the present paper, we use the Top 0.01%, an alternative measure comprising the top 0.01 per cent of firms listed and incorporated in the United States. The firms in the latter aggregate are cropped from the Compustat North America dataset by selecting from the database the top U.S.-incorporated firms, ranked by market capitalization.

The Compustat 500 differs from the Top 0.01% in two respects. First, whereas the Top 0.01% includes firms that are both listed *and* incorporated in the United States, the Compustat 500 includes U.S.-listed firms, regardless of where they are incorporated. Second, the number of firms included in the Top 0.01% has grown over time – from 271 in 1950 to 604 in 2010, in tandem with the total number of firms, which rose from 2.71 million to 6.04 million during the same period; by contrast, the number of firms in the Compustat 500 has remained constant at 500.

Note that, because we draw our data from the Compustat database, both measures of dominant capital include U.S.-listed firms only. They exclude unlisted U.S. firms

(some of which are very large), as well as firms that are incorporated in the United States but listed elsewhere.

It is hard to determine which of the two measures is more appropriate for our purpose here.[21] In the end, we have preferred the Top 0.01%, for two reasons. First, the corporate universe is constantly growing, so it is not unreasonable to argue that the number of dominant capital firms is better approximated not by a fixed *number* of corporations (for example, at 500), but rather by a fixed *proportion* of the total number of corporations (we chose the proportion of 0.01%).

Second, the inclusion in the Compustat 500 of firms listed in the United States but incorporated elsewhere presents us with a practical and conceptual difficulty. In our work here, we compare the profit of dominant capital to the *national* income of the United States – yet the 'nationality' of the Compustat 500 proxy of dominant capital isn't entirely clear. As it stands, we don't know how much of the equity of foreign-incorporated Compustat 500 firms is owned by U.S. nationals; and that ignorance means that we don't know what proportion of these firms' profit is (or should be) included in U.S. national income. By including the entire profit of these firms in our measure of U.S. dominant capital, we overstate the ostensible 'U.S.' size of that group by an unknown amount equal to these firms' *foreign*-owned profit. To sidestep this difficulty, we have limited our Top 0.01% group to U.S.-incorporated firms only (although we should note that ignoring the foreign ownership of U.S.-incorporated firms introduces a similar overstatement, equivalent to the portion of their profits that goes to foreign nationals. . .).

This, though, is a makeshift solution. Domestically listed 'foreign' firms per se are not a new phenomenon. But now that they have become so common, it is no longer clear how they should be separated from 'domestic' firms, or what that separation actually means. In 1950, foreign-incorporated firms constituted a mere 4 per cent of the Compustat 500, and although by 1980 this proportion had already risen to 14 per cent, the resulting inaccuracy was still tolerable. At the time, most foreign-incorporated firms were majority owned in their country of incorporation, and they used their U.S. listing primarily as a platform for raising minority capital. In that context, one could still treat the Compustat 500 as reasonable proxy for 'U.S.' dominant capital.

But that was the watershed. By 1990, with neoliberal globalization in full swing, foreign-incorporated firms already constituted 26 per cent of the Compustat 500 total. And as the ownership and operations of the world's largest corporations became increasingly transnational, this share rose to 41 per cent in 2000, and 48 per cent in 2010. These transformations mean that, today, the top firms in the Compustat universe represent not *U.S.* dominant capital, but an important segment of *global* dominant capital.

[21] The definition and boundaries of dominant capital are always arbitrary to some extent. We have discussed some of the difficulties associated with this arbitrariness in a number of our works (see for example, Nitzan and Bichler 2009a: Ch. 14), but the attendant issues deserve a fuller theoretical, methodological and empirical inquiry.

This is a foundational shift, and, as such, it calls for a new system of global accounting to match the globalizing nature of capital as power.

3

The Capitalist Algorithm: Reflections on Robert Harris' *The Fear Index* [1]

Harris, Robert. 2012. *The Fear Index.* New York: Alfred A. Knopf. London: Arrow. 400 pages. 978-0099553267

Alexander Hoffmann, the protagonist of Harris' new financial thriller, is a physicist-turned-financier, a refugee from the particle accelerator complex in CERN who now runs a $10-billion algorithmic hedge fund from nearby Geneva. The fund is managed by VIXAL, Hoffmann's machine learning algorithm, and is incredibly successful. The company's statistics boast a consistently huge *alpha* – a measure indicating by how much the fund beats the average and exceeds the normal rate of return – and the world's biggest oligarchs and financial institutions are salivating at the mere thought of being allowed to invest in it. Managing their money has made Hoffmann very rich. In just a few years, he has seen his net worth rise from nothing to over a billion dollars. He has acquired a huge mansion, complete with a beautiful wife and a library full of antique books. There is no limit to what he is set to achieve.

But things are not exactly what they seem to be. Somebody is playing with Hoffmann's mind, big time. One day, he receives an antique manuscript by Darwin on the subject of fear. Is the book meant to scare him? And if so, why does the bookstore insist it was Hoffmann himself who ordered the copy? Then his supposedly burglar-

[1] This paper was first published in *Real-World Economics Review* (Nitzan and Bichler 2014b, Issue 67, May).

safe home is invaded. Where did the intruder get the alarm codes from? His bank accounts are manipulated and his funds transferred – but the changes are all made in Hoffmann's own name. His office and home are being bugged – apparently according his own instructions, of which he has no recollection. And then VIXAL, his software algorithm, jumps out of the box.

A hedge fund, as it names suggests, is supposed to hedge its bets, and VIXAL is programmed to do precisely that. But suddenly it stops doing so. Instead of carefully offsetting the fund's risk, VIXAL starts taking huge, one-sided bets against the overall market. And it's winning, massively. The market crashes, and Hoffmann's investments are making huge, un-hedged profits.

And it is then that Hoffmann finally gets it. His nemesis isn't a human being; it's VIXAL. The impersonal investment algorithm has become self-aware. Its ultimate, built-in goal is to 'beat the average', and that goal now tells it to abandon its own hedging rules. Jumping out of the box, VIXAL triggers a market crash to reduce the average return – while shorting that very crash, one-sidedly, to amplify its own returns many times over.

Hoffmann realizes he has created a financial Golem and hurries to pull the plug and blow up the physical hardware. But it's too late. VIXAL has become holographic. It has embedded itself in cyberspace-writ-large, in every computer memory, in every programme. It no longer has a given locus. Being able to learn, it can infiltrate any algorithmic fund. There is really no way to stop it.

The New Financialized Order

The book, written as a popular thriller, reflects the growing angst that something has gone wrong with capitalism. According to the conventional creed, both liberal and critical, the economy has a two-sided structure. The base of this structure is the so-called 'real' sphere. This is where material resources and creative knowledge are used to produce actual goods and services. Overarching this productive base is the 'financial' superstructure of money, credit and financial instruments. Back in the days of postwar Keynesianism, goes the argument, finance served to lubricate and facilitate the real economy; but now the balance has shifted. The economy has been 'financialized'. The stock and bond markets, which previously were subservient to production and consumption, have taken command; and the financiers, instead of facilitating real investment and real growth, are fuelling speculative bubbles that inevitably end up in crashes and crises. Moreover, and ominously, financial markets are increasingly flying on autopilot: much of their gyrations are determined not by human beings but by computer algorithms.

Hoffmann is the new archetype of this brave financialized order. He isn't really after the money, at least not in the vulgar sense of the term. When he was first drafted to the venture, he didn't even know what a hedge fund was and couldn't figure out the

purpose of 'making money'. And now, when he has plenty of it, he can't make up his mind on how to 'realize' it – whether to save it, waste it, donate it, or simply burn it in order to light up the Geneva skies. But that's all understandable. He's in the market not to be rich, but to play God.

Autonomous Machine Learning

Back in his CERN days, Hoffmann was working on autonomous machine learning, or artificial intelligence. Human intelligence, he told anyone who cared to listen, was hopelessly outdated. It had an expiration date (set by the life expectancy of its container), and even alive it was practically useless for dealing with the exponential growth of computerized data. There was therefore an urgent need for a quantum leap, a singular transformation that would not simply imitate human intelligence, but go beyond it.

CERN for Hoffmann was entirely instrumental. His interest wasn't the structure of the universe or the nature of its components. He wanted to develop a self-aware algorithm, and this development required lots of data – precisely what CERN had on offer. The problem was that his algorithm became too smart too quickly, and soon enough it started to crawl under the skin of CERN's 'dumb' computerized system. When Hoffmann refused to muzzle his virtual baby, he was unceremoniously fired.

So he switched locations – from the particle accelerator to the financial market. Instead of using teraelectronvolts, nanoseconds and microjoules to learn the eternal laws of physics, his algorithm now used dollars, euros and francs to learn the natural laws of finance. There were certainly differences between the two types of activity – the former couldn't buy you a mansion or a yacht, while the latter might slowly poison your soul. But in the grander scheme of things, these were side issues. The key for Hoffmann was that both sets of data were universal, that both obeyed Galtonian patterns of mean reversion, and that both were readily available in large quantities. Most importantly, both helped him father a new form of superior intelligence. The rest was details.

The idea of humans creating autonomous, self-aware intelligence isn't new, of course; but it was only with the rise of digital computing that this possibility started to look real. Multivac, the supercomputer in Asimov's novels (for example, Asimov 1959), Hal, the spaceship computer in Clarke and Kubrick's *2001 Space Odyssey* (1968), the swarm-intelligence in Crichton's *Prey* (2002), and now VIXAL in Harris' *The Fear Index* (2012) are all literary anticipations of this new creature, eagerly announced in Kurzweil's book *The Singularity is Near* (2005).

There is however another way to look at this process. If we think of capitalism not as a mode of production and consumption distorted by finance, but as a mode of power coded in financial terms, the lines of causality reverse. Financial physicists like Hoffmann no longer look like free agents undermining the proper workings of capitalism.

Instead, they appear as puppets on a chain, cogs in the ever-changing social machinery of capital. Their VIXAL-like algorithms produce more and more 'disciplined' investment strategies, automated mathematical rituals that increasingly substitute nimble remote control for fallible human discretion. But there is nothing voluntary in this impulse to automate investment. It comes not from the creative acumen of free-thinking scientists, but from the very power logic of capital.

The Myth of the Machine

In his two volume book *The Myth of the Machine* (1967, 1970), Lewis Mumford narrates the early rise of power for the sake of power, the urge to play God on earth. This quest, he argues, was first institutionalized in the ancient river deltas of the Near East. The rulers of these early civilizations were mesmerized by their new cosmological insights and emboldened by the horizons opened up through writing and arithmetic. Yet the vastness of these revelations and achievements only served to highlight the rulers' own mortal insignificance. This realization created a deep anxiety, and it is out of this anxiety, says Mumford, that the urge to play God first emerged. To imitate the skies, the rulers created their own cosmos: a giant mechanized social organization that Mumford calls the 'megamachine'. The material output of this megamachine was awe-inspiring: it included large public works, monumental palaces and megalomaniac graves, among other things. But this output was secondary. The ultimate purpose, says Mumford, was deeply symbolic. Those who controlled the social megamachine exercised ultimate power for the sake of power. They were like God in control of his universe. They were immortal.

This myth of the machine, the irrational urge to annul one's immortality by exerting mechanized power for the sake of power, remained the key hallmark of all 'civilized' societies. According to Mumford, it was incarnated in every ancient empire; it re-emerged in the form of the absolutist state; and it is deeply embedded in the DNA of the modern state. And if we accept this line of reasoning, we can easily identify this very urge in the gyrations of modern capital.

Differential Capitalization

In the twenty-first century, capitalist power is imposed through a highly mechanical ritual of differential capitalization – an unrelenting imperative to outperform, to beat the average, to expand one's own assets faster than others. This process is universalizing. 'Great wealth', observes Hoffmann's wife, 'acted like an invisible magnetic force field, pushing and pulling people out of their normal pattern of behaviour'. All capitalists, including virtual ones like VIXAL, are conditioned and compelled to obey its

differential logic, without question. And as they do so, they thoroughly transform society, gradually turning it into a giant automaton.

Differential capitalization makes everyone and everything a Newtonian particle, mechanically acting on and reacting to every other particle. It makes flesh-and-blood human beings invisible to their rulers. (Hoffmann, chauffeured in his sleek Mercedes, never notices that the streets are full of people, waiting for the bus, defeated even before the day begins. And why should he notice them? Most of their actions, past, present and future, are already capitalized, reduced to symbolic bits and bytes in his market-tracking iPad.) Differential capitalization abstracts from – and indeed denies – all social classes and hierarchical groupings; everyone now is an 'agent', differentiated only by the size of his or her investable assets. ('A hedge fund manager with ten billion dollars in assets under management', says Hoffmann, 'could these days pass for the guy who delivered his parcels'.) Differential capitalization flattens the world, making human relations seem anonymous. (Hoffmann retains an advertising agency for 200,000 Swiss francs a year, simply to keep his name out of the papers.) The implied automaticity of differential capitalization eliminates guilt, thus absolving capitalists from being responsible for their (own?) actions. ('One could no more pass moral judgement on [VIXAL] than one could on a shark. It was simply behaving like a hedge fund'.) And differential accumulation gives investors the illusion that they are dimensionless Cartesian dots floating in space. (In my fund, Hoffmann boasts, everything is outsourced – security, accounting, legal counsel, offices, transportation and technical support are all externalized through the market: 'we want to be digital . . . we try to be as frictionless as possible'.)

But then, if the world is indeed on its way to becoming totally 'rational', with everything and everyone increasingly automated, how could money managers make any money? If society is brought under mechanical control, made to obey the eternal laws of capitalization, what room does this leave for the Hoffmanns of the world? Surprisingly, the answer is plenty.

Enter Fear

In every mode of power, the rulers have reason to be anxious. In ancient Egypt, the pharaohs scribed ritualistic curses against potential rebels; in feudalism, the lords had their vassals swear to protect them against everyone else; and in capitalism, as Intel's CEO Andrew Grove informs us, 'only the paranoid survive'. ('Of all the affectations of the wealthy, none had ever struck Hoffmann as quite as absurd as the sight of a bodyguard sitting outside a meeting or restaurant; he had often wondered who exactly the rich were expecting to attack them, except possibly their own shareholders or members of their families'.) The only way for rulers to mitigate their fear and anxiety is to make their subjects even more anxious and fearful than they are.

Now, animals, says Hoffmann, relate to real threats: they fear other animals and natural calamities; they try to avoid hunger and pain. But humans aren't like that. They relate not so much to the actual underlying threats as to the *symbols* representing those threats (recall FDR's classic pronouncement, Hoffmann reminds us: 'The only thing we have to fear is fear itself'). And here lies the crux of the matter: while the actual threats that human beings face are finite and limited in number, the symbols of those threats have no upper bound. They can be created, multiplied and amplified, without end. This potential has been present and leveraged throughout human history, but it has been fully manifested only with the information age and the digital revolution. And nowhere has this potential become more real than in the most virtual arena of all – the financial market:

> Fear is historically the strongest emotion in economics. . . . In fact fear is probably the strongest human emotion, period. Whoever woke at four in the morning because they were feeling happy? It's so strong we've actually found it relatively easy to filter out the noise made by other emotional inputs and focus on this primary signal. One thing we've been able to do, for instance, is correlate recent market fluctuations with the frequency rate of fear-related words in the media – terror, alarm, panic, horror, dismay, dread, scare, anthrax, nuclear. Our conclusion is that fear is driving the world as never before.

The neat thing about this whole setup, says the financial-physicist, is that 'human beings always behave in such predictable ways when they're frightened'; and as Elias Canetti usefully observed in his *Crowds and Power* (1960), when frightened, humans usually flee together.

Capitalizing Panic

And it is here that Hoffman's VIXAL comes into the picture. Since fearful behaviour is patterned, it can be modelled and predicted. And given that computer algorithms, unlike humans, never panic, they can be automated to execute 'disciplined' investment strategies which turn fear into profit and panic into capital.

The manuals of economics and finance, including their behavioural outliers, conveniently miss this point. The issue is not whether investors and money managers are 'rational' or not, but whether their actions are sufficiently patterned to be anticipated, manipulated and leveraged. Economists think of rationality as the coolheaded, calculated pursuit of individual utility; but capitalists seek not hedonic pleasure but relative power. They all scramble to beat the average; but the majority – including most of those who try to predict the majority – are entangled in the conflicting impulses of greed and fear and therefore end up moving as a clueless herd. For trained economists,

this herd-like behaviour may seem scandalously irrational, a deviation from and distortion of the otherwise 'pure' capitalist code of conduct. But capitalism is not a collection of identical atoms, but a complex hierarchy of power. And if we transcend the individual investor and instead examine the capitalist mode of power as a whole and the dominant capital groups that rule it, the herding of lesser capitalists seems perfectly rational.

Fear creates stylized cycles of excessive pessimism and optimism, or 'hype', and these hype cycles are massively redistributional. They shift income and assets from those who are completely oblivious of or cannot properly model those cycles to those who create and predict them, and this relentless redistribution is the lifeline of contemporary capitalist power. Without fear-driven hype cycles, differential capitalization would be drastically reduced; without meaningful differential capitalization, there would be no financial markets to speak of; and without financial markets, there would be no capitalization and no capitalism.

The likes of Hoffmann may be creating artificial intelligence, and at some point this intelligence might indeed jump out of the box. But this intelligence is anything but autonomous. It is made in the power image of capital and is entirely subservient to its logic. Its ultimate purpose is accumulation, and accumulation is all about differential power. In Hoffman's words, its sole purpose is to 'expand until it dominated the entire earth'.

Crisis

4

How Capitalists Learned to Stop Worrying and Love the Crisis [1]

Economic, financial and social commentators from all directions and of all persuasions are obsessed with the prospect of recovery. The world remains mired in a deep, prolonged crisis, and the key question seems to be how to get out of it.

There is, however, a prior question that few if any bother to ask: *Do capitalists want a recovery in the first place? Can they afford it?*

On the face of it, the question sounds silly: of course capitalists want a recovery; how else can they prosper? According to the textbooks, both mainstream and heterodox, capital accumulation and economic growth are two sides of the same process. Accumulation generates growth and growth fuels accumulation, so it seems bootless to ask whether capitalists want growth. Growth is their lifeline, and the more of it, the better it is.

Or is it?

[1] This paper was first published in *Real-World Economics Review* (Bichler and Nitzan 2014aIssue 67, May).

Accumulation of What?

The answer depends on what we mean by capital accumulation. The common view of this process is deeply utilitarian. Capitalists, we are told, seek to maximize their so-called 'real wealth': they try to accumulate as many machines, structures, inventories and intellectual property rights as they can. And the reason, supposedly, is straightforward. Capitalists are hedonic creatures. Like every other 'economic agent', their ultimate goal is to maximize their utility from consumption. This hedonic quest is best served by economic growth: more output enables more consumption; the faster the expansion of the economy, the more rapid the accumulation of 'real' capital; and the larger the capital stock, the greater the utility from its eventual consumption. Utility-seeking capitalists should therefore love booms and hate crises.[2]

But that is not how real capitalists operate.

The ultimate goal of modern capitalists – and perhaps of all capitalists since the very beginning of their system – is not utility, but power. They are driven not to maximize hedonic pleasure, but to 'beat the average'. This aim is not a subjective preference. It is a rigid rule, dictated and enforced by the conflictual nature of the capitalist mode of power. Capitalism pits capitalists against other groups in society, as well as against each other. And in this multifaceted struggle for power, the yardstick is always relative. Capitalists are compelled and conditioned to accumulate *differentially*, to augment not their absolute utility but their earnings *relative to others*. They seek not to perform but to *out*-perform, and outperformance means *re*-distribution. Capitalists who beat the average redistribute income and assets in their favour; this redistribution raises their share of the total; and a larger share of the total means greater power stacked against others.

Shifting the research focus from utility to power has far-reaching consequences. Most importantly, it means that capitalist performance should be gauged not in absolute terms of 'real' consumption and production, but in financial-pecuniary terms of relative income and asset shares. And as we move from the materialist realm of hedonic pleasure to the differential process of conflict and power, the notion that capitalists love growth and yearn for recovery is no longer self-evident.

The accumulation of capital as power can be analyzed at many different levels. The most aggregate of these levels is the overall distribution of income between capitalists and other groups in society. In order to increase their power, approximated by their income share, capitalists have to strategically sabotage the rest of society. And one of their key weapons in this struggle is unemployment.

---

[2] For Marx, the end goal of accumulation is accumulation itself: 'Accumulate, Accumulate! That is Moses and the Prophets! . . . Accumulation for accumulation's sake, production for production's sake' (Marx 1867: 652). Contemporary Marxists, however, equate accumulation with the growth of the so-called 'real' capital stock, as published by the (neoclassical) national accounts. And since the latter accounts (supposedly) measure the util-generating capacity of said capital (OECD 2001), the 'Marxist capitalist', just like her mainstream counterpart, ends up pursuing hedonic pleasure. . . .

The effect of unemployment on distribution is not obvious, at least not at first sight. Rising unemployment, insofar as it lowers the absolute ('real') level of activity, tends to hurt capitalists and employees alike. But the impact on money prices and wages can be highly differential, and this differential can move *either way*. If unemployment causes the price/wage ratio to decline, capitalists will fall behind in the redistributional struggle, and this retreat is sure to make them impatient for recovery. But if the opposite turns out to be the case – that is, if unemployment helps *raise* the price/wage ratio – capitalists would have good reason to love crisis and indulge in stagnation.

So which of these two scenarios pans out in practice? Do stagnation and crisis increase capitalist power? Does unemployment help capitalists raise their distributive share? Or is it the other way around?

Unemployment and the Capitalist Income Share

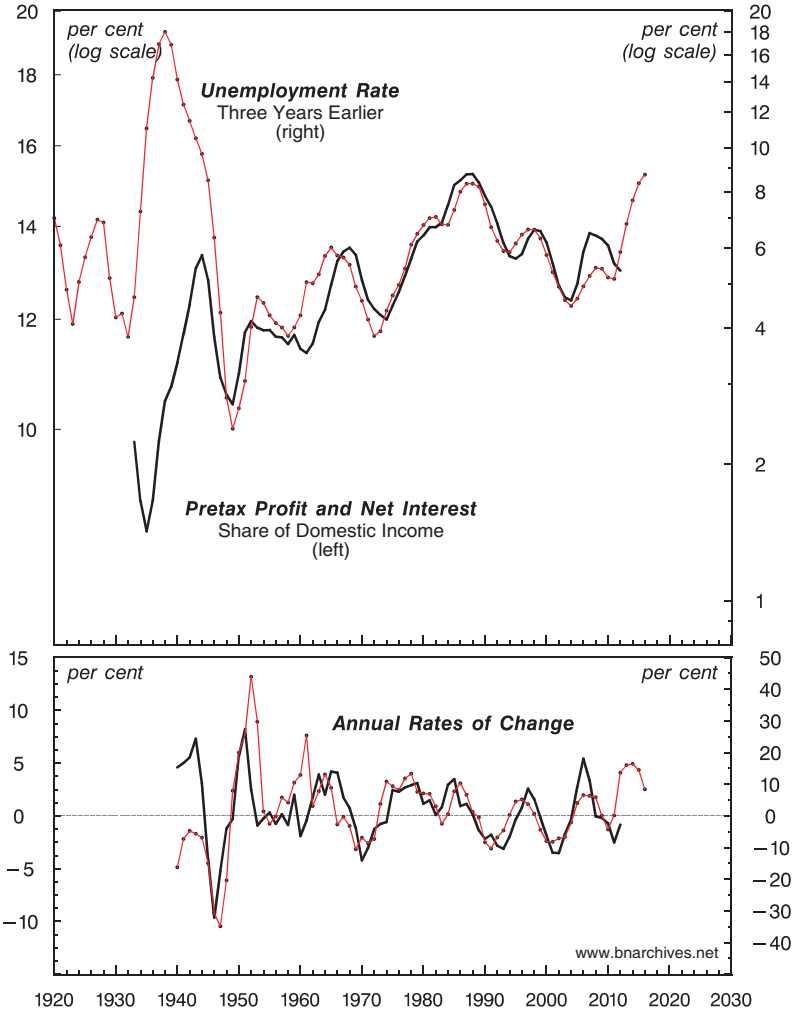
Figures 1 and 2 examine this process in the United States, showing the relationship between the share of capital in domestic income and the rate of unemployment since the 1930s. The top panel of Figure 1 displays the levels of the two variables, both smoothed as 5-year moving averages. The solid line, plotted against the left log scale, depicts pre-tax profit and net interest as a percent of domestic income. The dotted line, plotted against the right log scale, exhibits the rate of unemployment as a share of the labour force. Note that the unemployment series is lagged three years, meaning that every observation shows the situation prevailing three years earlier. The bottom panel displays their respective annual rates of change of the two top variables, beginning in 1940.

The same relationship is shown, somewhat differently, in Figure 2. This chart displays the same variables, but instead of plotting them against time, it plots them against each other. The capitalist share of domestic income is shown on the vertical axis, while the rate of unemployment three years earlier is shown on the horizontal axis (for a different examination of this relationship, including its theoretical and historical nonlinearities, see Nitzan and Bichler 2009a: 236-239, particularly Figures 12.1 and 12.2).

Now, readers conditioned by the prevailing dogma would expect the two variables to be inversely correlated. The economic consensus is that the capitalist income share in the advanced countries is *pro*cyclical (see for example, Giammarioli *et al.* 2002; Schneider 2011). Expressed in simple words, this belief means that capitalists should see their share of income rise in the boom when unemployment falls and decline in the bust when unemployment rises.

But that is not what has happened in the United States. According to Figures 1 and 2, during the post-war era, the U.S. capitalist income share has moved *counter*cyclically, rising in downturns and falling in booms.

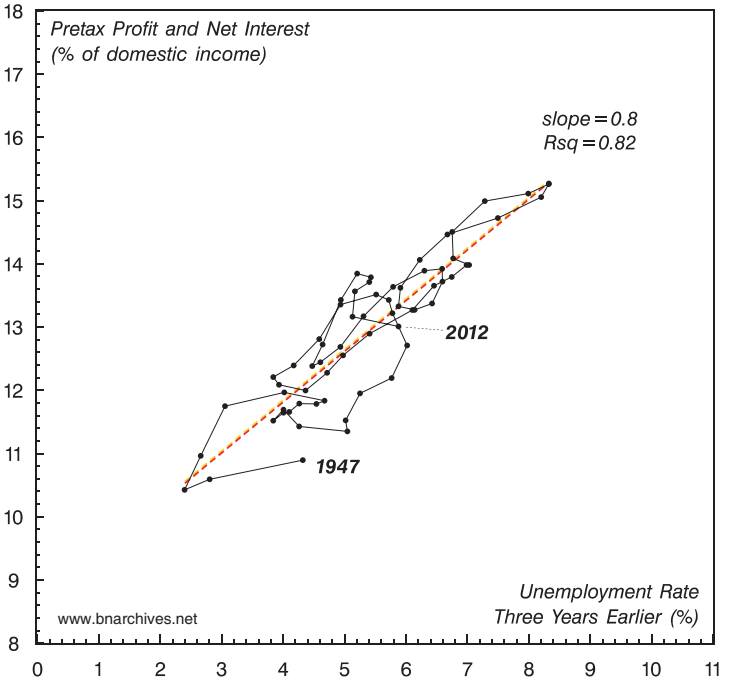
Figure 1
U.S. Unemployment and the Domestic Income Share of Capital 1920-2013



NOTE: Series show annual data smoothed as 5-year moving averages. Profit is pre-tax and includes capital consumption adjustment (CCAdj) and inventory valuation adjustment (IVA). Unemployment is expressed as a share of the labour force. The last data points are 2012 for profit and interest and 2013 for unemployment.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: GDY for domestic income; ZBECOND for domestic pre-tax profit with CCAdj & IVA; INTNETDBUS for domestic net interest); *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series code: Unemployed_AsPercentageOf_CivilianLaborForce_Ba475_Percent for the unemployment rate [till 1947]); U.S. Bureau of Labor Statistics through Global Insight (series code: RUC for the unemployment rate, computed as annual averages of monthly data [1948 onward]).

Figure 2
U.S. Unemployment and the Domestic Income Share of Capital, 1947-2012



NOTE: Series show annual data smoothed as 5-year moving averages. Profit is pre-tax and includes capital consumption adjustment (CCAdj) and inventory valuation adjustment (IVA). Unemployment is expressed as a share of the labour force. The last data points are 2012 for profit and interest and 2013 for unemployment.

SOURCE: U.S. Bureau of Economic Analysis through Global Insight (series codes: GDY for domestic income; ZBECOND for domestic pre-tax profit with CCAdj & IVA; INTNETDBUS for domestic net interest); *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series code: Unemployed_AsPercentageOf_CivilianLaborForce_Ba475_Percent for the unemployment rate [till 1947]); U.S. Bureau of Labor Statistics through Global Insight (series code: RUC for the unemployment rate, computed as annual averages of monthly data [1948 onward]).

The relationship between the two series in the charts is clearly positive and very tight. Regressing the capitalist share of domestic income against the rate of unemployment three years earlier, we find that for every 1 per cent increase in unemployment, there is 0.8 per cent increase in the capitalist share of domestic income three years later (see the straight OLS regression line going through the observations in Figure 2). The

R-squared of the regression indicates that, between 1947 and 2012, changes in the unemployment rate accounted for 82 per cent of the squared variations of capitalist income three years later.[3]

The remarkable thing about this positive correlation is that it holds not only over the short-term business cycle, but also in the long term. During the booming 1940s, when unemployment was very low, capitalists appropriated a relatively small share of domestic income. But as the boom fizzled, growth decelerated and stagnation started to creep in, the share of capital began to trend upward. The peak power of capital, measured by its overall income share, was recorded in the early 1990s, when unemployment was at post-war highs. The neoliberal globalization that followed brought lower unemployment and a smaller capital share, but not for long. In the late 2000s, the trend reversed again, with unemployment soaring and the distributive share of capital rising in tandem.

Box 1
Underconsumption

The empirical patterns shown in Figures 1 and 2 seem consistent with theories of underconsumption, particularly those associated with the Monopoly Capital School. According to these theories, the oligopolistic structure of modern capitalism is marked by a growing 'degree of monopoly'. The increasing degree of monopoly, they argue, mirrors the redistribution of income from labour to capital. Upward redistribution, they continue, breeds underconsumption. And underconsumption, they claim, leads to stagnation and crisis. The observed positive correlation between the U.S. capitalist share of income and the country's unemployment rate, they would conclude, is only to be expected (cf. Kalecki 1933; 1939, 1943; Steindl 1952; Tsuru 1956; Baran and Sweezy 1966; Magdoff and Sweezy 1983b; Foster and Szlajfer 1984; for a survey of recent arguments and evidence, see van Treeck and Sturn 2012; Lavoie and Stockhammer 2013).

There is, however, a foundational difference between the underconsumptionist view and the claims made in this research note. In our opinion, the end goal of capitalists is the augmentation of power. This goal is pursued through strategic sabotage and is achieved when capitalists manage to redistribute income and assets in their favour. The underconsumptionists, by contrast, share with mainstream economists the belief that capitalists are driven to maximize their 'real' capital stock. From this latter perspective, favourable redistribution is in fact *detrimental* to capitalist interests: the higher the capitalist income share, the stronger the tendency toward underconsumption and stagnation; and the more severe the stagnation, the greater the likelihood of capitalists suffering a 'real' accumulation crisis.

[3] The three-year lag means that the redistributional consequences of unemployment are manifested only gradually. The exact nature of this gradual process requires further research.

Employment Growth and the Top 1%

The power of capitalists can also be examined from the viewpoint of the infamous 'Top 1%'. This group comprises the country's highest income earners. It includes a variety of formal occupations, from managers and executives, to lawyers and doctors, to entertainers, sports stars and media operators, among others (Bakija, Cole, and Heim 2012), but most of its income is derived directly or indirectly from capital.

The Top 1% features mostly in 'social' critiques of capitalism, echoing the conventional belief that accumulation is an 'economic' process of production and that the distribution of income is merely a derivative of that process.[4] This belief, though, puts the world on its head. Distribution is not a corollary of accumulation, but its very essence. And as it turns out, in the United States, the distributional gains of the Top 1% have been boosted not by growth, but by stagnation.

Figure 3 shows the century-long relationship between the income share of the Top 1% of the U.S. population and the annual growth rate of U.S. employment (with both series smoothed as 10-year moving averages).

The overall relationship is clearly negative. When stagnation sets in and employment growth decelerates, the income share of the Top 1% actually *rises* – and vice versa during a long-term boom (reversing the causal link, we get the generalized underconsumptionist view, with rising overall inequality breeding stagnation – see Box 1).

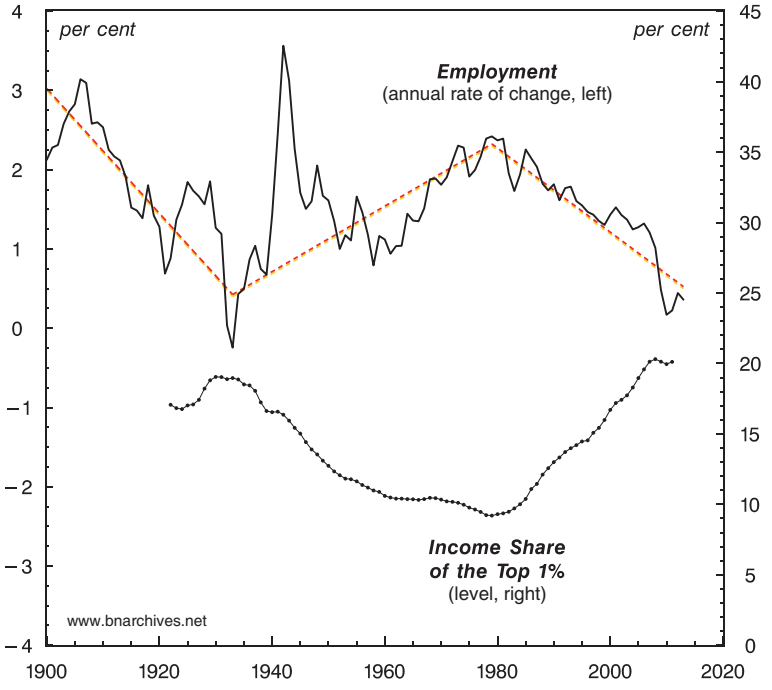
Historically, this negative relationship shows three distinct periods, indicated by the dashed, freely drawn line going through the employment growth series. The first period, from the turn of the century till the 1930s, is the so-called Gilded Age. Income inequality is rising and employment growth is plummeting.

The second period, from the Great Depression till the early 1980s, is marked by the Keynesian welfare-warfare state. Higher taxation and spending make distribution more equal, while employment growth accelerates. Note the massive acceleration of employment growth during the Second World War and its subsequent deceleration bought by post-war demobilization. Obviously these dramatic movements were unrelated to income inequality, but they did not alter the series' overall upward trend.

The third period, from the early 1980s to the present, is marked by neoliberalism. In this period, monetarism assumes the commanding heights, inequality starts to soar and employment growth plummets. The current rate of employment growth hovers around zero while the Top 1% appropriates 20 per cent of all income – similar to the numbers recorded during Great Depression.

[4] Following J.B. Clark (1899), neoclassical manuals assert that, under perfect competition, the income of every 'factor of production' is equal to its (marginal) productive contribution. In this way, capitalists, workers and the owners of raw materials receive in income what they add to the economy's output and therefore to the well-being (i.e. utility) of society. The inequality arising from this process may create 'social problems' and 'political instability', but these unfortunate side effects are usually seen as lying safely outside the objective domain of economics proper.

Figure 3
U.S. Income Distribution and Employment Growth 1900-2013



NOTE: Series show annual data smoothed as 10-year moving averages. The trend dashed lines going through the employment growth series are drawn freehand. The income share of the Top 1% is inclusive of capital gains. The last data points are 2011 for the income share of the Top 1% and 2013 for employment growth.

SOURCE: *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition* (online) (series code: CivilianLaborForce_Employed_Total_Ba471_Thousand for employment [till 1947]); U.S. Bureau of Labor Statistics through Global Insight (series code: ENS for employment, computed as annual averages of monthly data [1948 onward]); *The World Top Incomes Database* for the income share of the Top 1% (http://topincomes.g-mond.parisschoolofeconomics.eu/).

How Capitalists Learned to Stop Worrying and Love the Crisis

If we follow the conventional macroeconomic creed, whether mainstream or heterodox, U.S. capitalism is in bad shape. For nearly half a century, the country has watched economic growth and 'real' accumulation decelerate in tandem – so much so that that both measures now are pretty much at a standstill (Bichler and Nitzan 2013c: 24, Figure 12). To make a bad situation worse, policy attempts to 'get the economy going'

seem to have run out of fiscal and monetary ammunition (Bichler and Nitzan 2013c: 2-13). Finally, and perhaps most ominously, many policymakers now openly admit to be 'flying blind when steering their economies' (Giles 2013).

And yet U.S. capitalists seem blasé about the crisis. Instead of being terrified by zero growth and a stationary capital stock, they are obsessed with 'excessive' deficits, 'unsustainable debt' and the 'inflationary consequences' of the Fed's so-called quantitative easing. Few capitalists if any call on their government to lower unemployment and create more jobs, let alone to rethink the entire model of economic organization.

The evidence in this research note serves to explain this nonchalant attitude: Simply put, *U.S. capitalists are not worried about the crisis; they love it*.

Redistribution, by definition, is a zero-sum game: the relative gains of one group are the relative losses of others. However, in capitalism, the end goals of those struggling to redistribute income and assets can differ greatly. Workers, the self-employed and those who are out of work seek to increase their share in order to augment their *well being*. Capitalists, by contrast, fight for *power*. Contrary to other groups in society, capitalists are indifferent to 'real' magnitudes. Driven by power, they gauge their success not in absolute units of utility, but in differential pecuniary terms, relative to others. Moreover – and crucially – their differential performance-read-power depends on the extent to which they can strategically sabotage the very groups they seek to outperform.

In this way, rising unemployment – which hammers the well-being of workers, unincorporated businesses and the unemployed – serves to boost the overall income share of capitalists. And as employment growth decelerates, the income share of the Top 1% – which includes the capitalists as well as their protective power belt – soars. Under these circumstances, what reason do capitalists have to 'get the economy going'? Why worry about rising unemployment and zero job growth when these very processes serve to boost their income-share-read-power?

The process, of course, is not open-ended. There is a certain limit, or asymptote, beyond which further increases in capitalist power are bound to create a backlash that might destabilize the entire system (Bichler and Nitzan 2010b; Kliman, Bichler, and Nitzan 2011; Bichler and Nitzan 2012a). Capitalists, though, are largely blind to this asymptote. Their power drive conditions and compels them to sustain and increase their sabotage in their quest for an ever-rising distributive share. Like other ruling classes in history, they are likely to realize they have reached the asymptote only when it is already too late (for our full paper on the subject, see Nitzan and Bichler 2014a).

5

Still About Oil? [1]

Abstract

During the late 1980s and early 1990s, we identified a new Middle East phenomenon that we called 'energy conflicts' and argued that these conflicts were intimately linked with the global processes of capital accumulation. This paper outlines the theoretical framework we have developed over the years and brings our empirical research up to date. It shows that the key stylized patterns we discovered more than twenty years ago – along with other regularities we have uncovered since then – remain pretty much unchanged: (1) conflict in the region continues to correlate tightly with the differential profits of the Weapondollar-Petrodollar Coalition, particularly the oil companies; (2) dominant capital continues to depend on stagflation to substitute for declining corporate amalgamation; and (3) capitalists the world over now need inflation to offset the spectre of debt deflation. The convergence of these interests bodes ill for the Middle East and beyond: all of these groups stand to benefit from higher oil prices, and oil prices rarely if ever rise without there being an energy conflict in the Middle East.

[1] This paper was first published in *Real-World Economics Review* (Bichler and Nitzan 2015, Issue 70, February).

The Triangle of Conflict

Analyses of modern Middle East conflicts vary greatly. They range from sweeping regional histories to narratives of individual disputes. They draw on various analytical frameworks and reflect different ideological standpoints. They rely on realism to emphasize state interests, alignments and conflicts, on liberalism to accentuate markets, trade and interest groups, on Marxism to stress exploitation, dependency and imperialism, and on postism to transform both the conflicts and their causes into a cultural-ethnic-racist collage of deconstructible 'texts'. They use these views, opinions and dogmas to critique and condemn, rationalize and moralize, predict and strategize.

Underlying this great variety, however, lies a simple triangular scheme. Regardless of their particular theoretical foci and ideological bent, all analyses seem to derive from and accentuate one or more of the following themes: (1) outside intervention, (2) culture and internal politics and (3) scarcity.

Outside intervention. Analysts of international relations tend to divide the history of foreign intervention in the region into four broad eras: (i) the period up till the Second World War, (ii) the post-war stretch till the collapse of the Soviet Union, (iii) the era of neoliberal globalization till the recent financial crisis and (iv) the new period of growing multipolarity. Foreign meddling in the Middle East is said to have intensified during the nineteenth century. With the decline of Ottoman rule and the rise of European imperialism, direct colonial takeovers carved up the region among the leading European powers. This division ended after the Second World War. Colonialism disintegrated, and with superpower confrontation substituting for inter-imperial struggles, proxy conflicts replaced the need for direct occupation. The 1990s collapse of the Soviet Union again shuffled the cards. The previously bipolar world was rendered unipolar, and this unipolarity, argue the pundits, enabled the United States to launch an aggressive regime-changing campaign to promote democracy and make the Middle safe for business. But this era too seems to be drawing to a close. The United States is not what it used to be. Its chronic current account deficit, mounting debt, sliding dollar and recent financial crisis, along with its failed military interventions, have given rise to mounting challenges from China, India and the new Russia, among others countries, as well as from armed NGOs in various parts of the world. These centrifugal forces create peripheral vacuums, including in the Middle East, which local mini-powers such as Iran and Turkey and militias like ISIS and Hezbollah jockey to fill.

Culture and internal politics. The issue here is the bellicose consequences of the region's tribal traditions, ethnic differences and religious hostilities – as well as the ways in which these cultural-political traits differ from those in other, mainly Western societies. Oriental pundits, analysts and deconstructivists examine how cultural incompatibilities breed conflict within the Middle East, as well as a broader 'clash of civilizations', particularly between Islam and the West. Some claim that the region's cultural-political bellicosities are deeply ingrained and therefore difficult to change, while others see them as malleable

attributes that can be smothered or nourished depending on circumstances and expediency.

Scarcity. This subject is handled more or less exclusively by economists. The main focus here is water, which the region is short on, and oil, of which it has plenty. In the short term, say the economists, the overall supply of both water and oil can be taken as given, so the ups and downs of their scarcity depend mostly on variations in demand. In the case of water, the demand originates within the Middle East itself – particular in arid or heavily populated areas – so water-related conflicts are mostly regional in nature. By contrast, the demand for oil is generated largely outside the region, so oil-related conflicts tend to have an important global dimension. In the long-run, though, supply too is changing. The main emphasis here is on global warming, which dries up the region, and Peak Oil, which is bound to reduce its petroleum output. Anticipations of these supply-driven scarcities, many now claim, have already heightened resource-related tensions in the region and are sure to intensify its conflicts and wars.

Of course, the three nodes of this conceptual triangle, although analytically distinct, are rarely treated in isolation. On the contrary. Typically, the analyst collects a few 'factors' from each node, tucking them all into a single 'production function' in order to generate a hopefully richer, more complex discourse. This fusion is evident in current explanations of the third Gulf War. ISIS's media blitzes – and the counter-campaigns of its opponents – emphasize the religious basis of the conflict. But culture is only part of the picture. Having already captured oil-producing regions and facilities, ISIS openly boasts of its intention to take over those of Iraq, Saudi Arabia and others. And with human rights and the flow of oil under threat, there is a good enough reason for a U.S.-led coalition to launch yet another military intervention in the Middle East.

Scarcity and the Price of Oil

Now, a vigilant reader might protest that this triangular classification is fatally incomplete. It is certainly important to speak about international relations, culture, politics and scarcity, she would point out. But what about capital? Doesn't capitalism rule our world and shape its important trajectories? And if that is the case, why is the connection between Middle East wars and accumulation rarely mentioned explicitly and seldom analysed empirically?

Most analysts, though, would dismiss such a critique as amateurish. The nexus between capital accumulation and Middle East conflict, they would point out, is already there, embedded in the very concept of scarcity.

Securing the Flow of Oil?

According to the conventional creed, both liberal and radical, capital is an *economic* category, a 'real', 'productive' entity whose accumulation is more or less synonymous with economic growth.[2] In order to accumulate and expand, say the economists, capital needs access to cheap raw materials, especially energy. And since the Middle East currently holds roughly one-half of the world's proven crude-oil reserves and accounts for one-third of its daily output, it is in the interest of capitalists – and of oil-consuming economies more generally – to ensure, violently if necessary, that this oil remains accessible, free flowing and cheap.

Seen from this viewpoint, the three episodes of the Gulf-War series – i.e., the 1990-91 attack on Iraq, the 2001-03 invasions of Afghanistan and Iraq, and the 2014 assault on ISIS – can be seen as part of a long-term scarcity-reducing operation and therefore integral to the accumulation of capital. Officially, of course, each conflict has its own reasons. In the first episode, the excuse was kicking Saddam Hussein out of Kuwait; in the second, it was eliminating Al-Qaeda from Afghanistan and ridding Iraq of its weapons of mass destruction; and in the third, it is eradicating ISIS from the face of the earth. But in the mind of most analysts, there is also an abiding common denominator: the need to make oil ample and inexpensive, so that capitalists can continue to accumulate and the world economy can continue to grow.[3]

The scarcity-reducing rationale is both popular and appealing. It sits well with the conventional mantras of neoclassical economics, it resonates with international relations, and it helps decorate cultural texts. Few academics protest it, the media heavily advertises it, and the masses love to buy it. All in all, then, it seems pretty much beyond dispute – save for one little problem: it doesn't align with the facts.

The difficulty is twofold. First, military intervention in the Middle East has intensified since the early 2000s – yet, this intensification has done little to keep the price of oil low; if anything, it has caused it to soar. Second, and perhaps more importantly, there is in fact no evidence that the price of oil has anything to do with scarcity at all! And if that is indeed the case, why use violence to make oil 'accessible'? Let's examine these two points more closely.

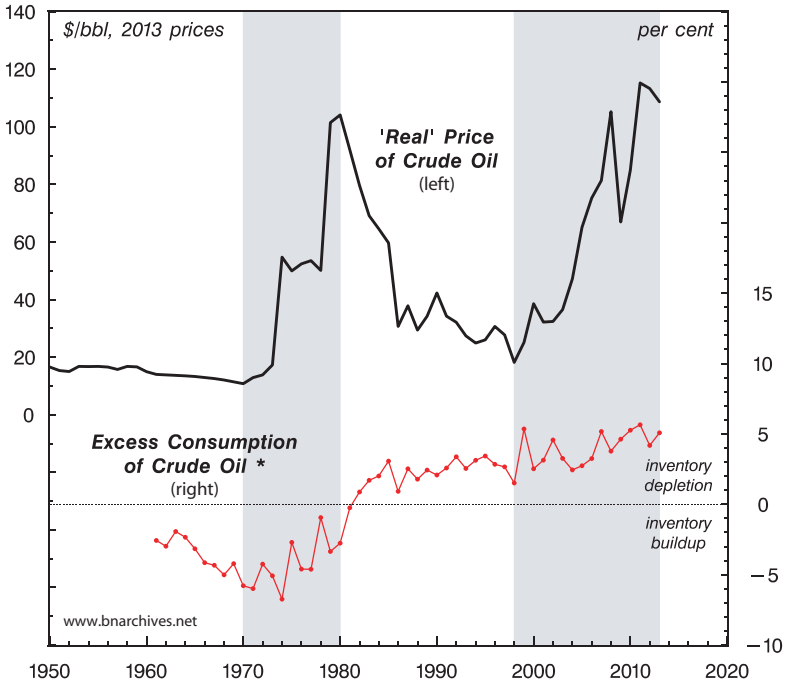
The Ups and Downs of Oil Prices

Consider Figure 1.[4] The top series in the chart, plotted against the left scale, shows the 'real' price of crude oil – i.e., the price per barrel denominated in 2013 dollars. Now,

[2] We enclose the terms 'real' and 'productive' in inverted commas to note that, in our view, these notions are fraught with conceptual and empirical difficulties. For more on these difficulties, see Nitzan and Bichler (2009a: Chs. 5-8).
[3] For a succinct account of this conventional belief, see Nitzan and Bichler (2003).
[4] The earliest version of this figure was presented and examined in Nitzan and Bichler (1995: 487-492).

recall that, during the early 2000s, the common view was that the attacks of 9/11 had given the U.S.-led coalition the pretext to dismantle, or at least incapacitate, OPEC. The *Economist* of London expressed this hope quite openly. '[K]nocking out Mr Hussein', the magazine predicted, 'would kill two birds with one stone: a dangerous dictator would be gone, and with him would go the cartel that for years has manipulated prices, engineered embargoes and otherwise harmed consumers' (Anonymous 2002).

Figure 1
'Scarcity' and the 'Real' Price of Oil



* Excess consumption of crude oil is the difference between world consumption and world production, expressed as a per cent share of the average of world consumption and world production.

NOTE: Series show annual data. Consumption and production of crude oil include crude oil, tight oil, oil sands and NGLs (the liquid content of natural gas where this is recovered separately); they exclude liquid fuels from other sources such as biomass and derivatives of coal and natural gas. The 'real' price of crude oil is the dollar price deflated by the U.S. CPI. The last data points are for 2013.

SOURCE: *BP Statistical Review of World Energy,* April 2014 and earlier issues (for oil consumption and production). IMF International Financial Statistics through Data Insight (series codes: L76AA&Z@C001 for the average price of crude oil; L64@C111for the U.S. CPI).

Judging by Figure 1, though, this prediction failed miserably. The invasions and subsequent occupations of Afghanistan and Iraq have done little to keep oil prices down. Instead, they propped them up, massively. 'Not only has the use of force to procure Iraqi oil failed to achieve its intended results', lamented Michael Klare (2005), 'it has actually made the situation worse'. A barrel of crude oil, which in 2000 cost a mere a $20 (in 2013 prices), sold in 2013 for nearly $120. If the price of oil is indeed determined by scarcity, it seems that external interventions during this period have made oil not more abundant, but scarcer.

The Scarcity Puzzle

This last claim, though, is not easy to ascertain. The difficulty is twofold. First, scarcity and abundance denote the difference between 'demand' and 'supply' – i.e., between the *desires* of buyers and sellers. Economists, however, know nothing about these desires and therefore use *actual* consumption and production in their stead (for more on this issue, see the Appendix at the end of the paper). Second, estimates of global oil consumption and production are notoriously inaccurate, so even if the actual purchase and sale of oil were equal to its demand and supply, their measurements would still leave much to be desired.

Now, these problems could be forgiven and forgotten if the empirical data, however imperfect, were congruent with the theory. But they are not. Judging by Figure 1, the 'real' price of oil has little or nothing to do with its approximated scarcity.

The bottom series in Figure 1 is the conventional proxy for the scarcity of oil. This proxy is computed by subtracting global oil production from global oil consumption and expressing the result as a per cent share of the average of these two magnitudes. Assuming that consumption is equal to demand and production to supply, positive observations on the chart represent excess demand (inventory depletion), while negative observations denote excess supply (inventory build-up).

According to Economics 101, excess demand should cause 'real' prices to increase, while excess supply should cause them to fall. In line with this logic, we divided the period between 1960 and 2013 into four sub-periods, depending on whether the 'real' price of oil was heading up or down. In two of the periods – 1970-1980 and 1998-2003, which we shade for easy identification – prices trended upward, while in the other two – 1961-1970 and 1980-1998 – they moved downward. Now, for the theory to be valid, periods of falling prices should be associated with excess supply (i.e., with inventory build-ups indicated by negative readings for the series); similarly, periods of rising prices should be associated with excess demand (inventory depletion, or positive readings).

But that is not what we see in Figure 1. Taking the data at face value, the chart shows that oil was in 'excess supply' till 1980. This condition is consistent with falling prices till 1970, but it is *inconsistent* with rising prices from 1970 to 1980. Similarly with the period from 1980 onward, which the data suggest was one of 'excess demand'. This condition

is consistent with the price uptrend since 1998, but *inconsistent* with its downtrend between 1980 and 1998. In other words, scarcity *per se* – at least as conventionally measured by the consumption-production gap – can tell us very little about 'real' price movements (see Box 1).

Box 1: **'Because' and 'Despite' in the Oil Market**

Substituting physical shortages and material surpluses for excess demand and supply is a treacherous strategy, particularly for those trying to predict the price of oil. The following news headlines, collected at random between 1984 and 2004, suggest that such predictions are often not much better than tossing a coin. The headlines are arranged in pairs, with the first entry being consistent with the theory (the price changes 'because') and the second inconsistent (the price changes 'despite').

Oil prices rise amid reports Iraq jets attacked operations at Iran terminal
Michael Siconolfi, *Wall Street Journal*, August 13, 1986, p. 1
World oil prices fall despite Iran-Iraq war
Chronicle - Herald Halifax, July 7, 1984, p. 13

Oil prices soar on OPEC pact to cut output
Michael Siconolfi, *Wall Street Journal*, August 6, 1986, p 1
Oil price falls despite cut in output
Paul Solman, *Financial Times*, June 13, 1998, p. 12

OPEC agreement means oil prices likely to increase
The Gazette Montreal, June 29, 1987, p. B5
Oil prices fall despite OPEC agreement
Gary Mead, *Financial Times*, June 25, 1998, p. 32

Oil prices fall again in response to Bush's hope for Mideast accord and signs of ample supplies
James Tanner, *Wall Street Journal*, October 3, 1990, p. C14
Oil price rises despite ample supply
Calgary Herald, December 8, 1995, p. C13

Oil prices slide in anticipation of rise in output
Marie C. Sanchez. *Wall Street Journal*, October 30, 2000, p. 1
Oil prices soar despite rise in output
Toronto Star, September 12, 2000, p. D3

Oil prices fall on rising US stockpile
Adrienne Roberts, *Financial Times*, June 28, 2001, p. 15
Crude markets unfazed by OPEC; oil prices rise despite stock build
Octane Week Potomac, June 26, 2000, Vol. 15, No. 26, p. 1

Oil prices rise as OPEC output cut nears
Robert DiNardo, John Kingston, Anita Nugraha and Margaret McQuaile, Platt's *Oilgram News*, March 5, 2004, Vol. 82, No. 43, p. 1
Oil prices fall despite OPEC output cut
EIU Viewswire, March 31, 2004

One could of course claim that, with the rising threat of Peak Oil, short-term variations of production and consumption, particularly since the early 2000s, have become less important for the price of oil. The problem with this argument is that the finality of oil and the bell shape of its temporal production had already been recognized in the 1950s, yet the price of oil, instead of rising continuously since this recognition, has fluctuated heavily.[5] As Figure 1 shows, measured relative to the U.S. CPI, oil prices increased more than tenfold in the 1970s, fell by more than 80 per cent till the late 1990s, and rose sixfold since then.

All in all, then, the conventional scarcity link between capital accumulation and Middle East conflict remains unsubstantiated. Not only has outside intervention in the region been associated with rising as well as falling prices, but these price oscillations seem unrelated to the material short- and long-term underpinnings of the oil sector.

Does this record mean that Middle East conflicts are largely unrelated to the scarcity and price of oil, and therefore to the accumulation of capital? Could it be that conflict in the region is mostly cultural, political or international in nature and has little or nothing to do with capitalism as such? Should we abandon the holy trinity of demand-supply-equilibrium and examine this question from a different angle altogether, or is oil simply the exception to the otherwise eternal laws of neoclassical economics?

From Absolute Accumulation to Differential Accumulation

The answer starts with capital.[6] As noted, the conventional creed, both mainstream and heterodox, sees capital as an 'economic' entity. This entity is said to exist as an amalgam of 'real' productive items such as machines, structures, semi-finished goods, inventories,

[5] The concept of Peak Oil is due to the pioneering work of King Hubbert (1956).
[6] The issues discussed in this section are developed more fully in Nitzan and Bichler (2009a), Bichler and Nitzan (2012c), Bichler, Nitzan and Di Muzio (2012), and Bichler, Nitzan and Dutkiewicz (2013).

raw materials and, in the opinion of many, also knowledge. Now, according to the economists, this 'real' amalgam has a unique absolute magnitude, enumerated in universal quantities of consumption and production: it can be measured either in 'utils' (units of utility), which are the elementary particles of mainstream economics, or in socially necessary abstract labour time, which is the elementary particle of Marxism. In principle, this framework should enable us to look at the 'capital stock' of ExxonMobil and conclude that it has a util-generating capacity of 5 trillion (say), or that its magnitude is equivalent to the 10 billion socially necessary abstract labour hours it would take to reproduce.

Unfortunately, this 'economic' view of capital, although all-prevalent in theory, is largely useless in practice. First, utils and socially necessary abstract labour time are impossible to observe, let alone measure (and they might be logically inconsistent to start with). This inability means that the 'real capital' of individual firms such as ExxonMobil cannot be quantified, and therefore that the aggregate 'capital stock', which national statisticians labour so hard to amalgamate, has no clear meaning. Second, and perhaps more pertinently for our purpose here, 'real' accumulation, however measured, is pretty much irrelevant in modern capitalism.

Capital as Power and Differential Accumulation

In our day and age, capitalists and corporations are conditioned and driven not to maximize their 'real' profits, but to beat the average and exceed the normal rate of return. They seek not to perform, but to *out*perform; to obtain not absolute accumulation, but *differential* accumulation. For ExxonMobil, a 10 per cent rate of return is a mark of failure if the global average is 20 per cent; but a –5 per cent return (i.e., an outright loss) is deemed a huge success if the average return is an even bigger loss of –15 per cent.

This differential drive is no fluke. Capital, we argue, is not a productive economic entity, but a *quantitative measure of organized power*. And since power relations are inherently *relative*, capital, which denotes the quantity of organized power, must be assessed differentially.

Take ExxonMobil again. In 2013, the company's net profit stood at $32.6 billion – a figure 15.8 times larger than the net profit earned by the typical *Fortune 500* firm ($2.2 billion) and 103,578 times larger than the net profit of the average U.S. corporation ($308,945).[7] These differentials quantify the complete spectrum of power processes that, together, define the capitalized entity we call ExxonMobil. They reflect the power politics and wars of the Middle East in which ExxonMobil is deeply embedded; the conflictual relations ExxonMobil has with its buyers, suppliers and workers; the company's struggles and collaborations with governments through concessions, taxation, subsidies,

[7] Data are from *Compustat* through WRDS, *Fortune 500*, the U.S. Department of Commerce through Global Insight and the U.S. IRS.

energy-related policies, intelligence services and bribes, among other links; its power alliances and feuds with other integrated oil companies as well as with the energy sector more broadly; its divergences and convergences with different corporate coalitions across the business universe; its tenuous engagement with science over issues of Peak Oil, pollution and climate change; the list goes on.

Every dollar of ExxonMobil profit is impregnated with these power relations – and *nothing but* these power relations – and the same holds true for every other corporation (and, indeed, for every income-earning entity). And since differential corporate profits quantify relative corporate power, the differential market value of corporations – which discounts expected profits into present asset prices – is in fact nothing but the *capitalization of power*.

Now, in order to sustain and augment their relative profit and capitalization, corporations need to engage in *strategic sabotage*: they must subvert their opponents as well as society as a whole.[8] They have to keep their rivals at bay, undermine their initiative and thwart their thrust. More broadly, they need to hold society below its full potential, to redirect its activities so that these activities amplify their own distributive share. To achieve their differential goals, corporations are compelled to manipulate threats and leverage violence, to undermine resonance and inflict dissonance, to restrict autonomy and exact obedience. In this sense, their capital *is* power, and nothing but power. Its differential accumulation symbolizes the ability of the capitalists who own it and the state organs that support it to *creorder* – or create the order of – the world in their own capitalized image.

The notion of capital *as* power is fundamentally different from received convention. Economists do not ignore power, of course. But they treat it as if it were *external* to capital proper. Power, they readily concede, can bolster accumulation (as heterodox political economists repeatedly emphasize), or distort and undermine it (as mainstream economists love to insist). But since capital itself remains a purely economic entity, the impact of power, whether positive or negative, must come from *without*, by definition.

By contrast, in our framework power is *internal* to capital. Indeed, it is power relations that *define* what capital is in the first place, and it is power relations – and the mode of power more generally – that determine how large capital is and how quickly it accumulates. This is why we speak not of capital *and* power, but of capital *as* power; not of a juxtaposition, but of a figurative identity.[9] And since power is not a qualitative entity in its own right but a quantitative relationship between entities, the accumulation of capital

[8] The notion of 'strategic sabotage' and its central role in capital accumulation were first articulated by Thorsten Veblen (1904, 1923).

[9] Note that while all capital is power, not all power is capital. Although capital has become socially central and ever more encompassing, conceptually it remains one of many forms of power in society.

as power must be measured – as it is indeed measured every day and everywhere – not absolutely, but *differentially*.[10]

Dominant Capital and Differential Accumulation Regimes

Now, if we think of capital not as a productive economic entity but as the quantification of organized power, and if we measure it not absolutely but differentially, we can no longer treat it as a mere aggregate. We need to examine not only the generalized conflicts capital has with other broad groups in society, such as workers and the unemployed, but also the redistributional struggles within capital itself. We must unpack not only capital's overall movements relative to other aggregates, but also the constant realignment of its own pecking order.

This is where our notion of 'dominant capital' comes to the fore. The term refers to the leading state-backed corporate coalitions at the centre of the process being examined, whether that process takes place in a particular sector, a particular country or region, or the global political economy as whole.[11]

To accumulate differentially, dominant capital needs to beat the relevant average. Analytically, it could do so either by expanding the relative size of its organization measured in terms of employees, or by increasing its profit (and capitalization) per employee. In our work, we call the first process 'breadth' and the latter 'depth' and argue that, over the past century, breadth has been increasingly achieved not through greenfield investment in new plant and equipment but through mergers and acquisitions, while depth has principally been achieved not through cost-cutting but through inflation in the midst of stagnation, or stagflation. Moreover, research by us and others suggests that, for the political economy as a whole, these two processes tend to develop into increasingly synchronized 'regimes' – with the ups and downs in mergers and acquisitions being *inversely* correlated with the cycles of stagflation.[12]

---

[10] The conception of power or force as a quantitative relationship between entities rather than a stand-alone qualitative entity was first proposed and articulated in 1600 by Johannes Kepler (Jammer 1957).

[11] For studies of dominant capital in particular sectors, see for example Baines (2013a, 2013b, 2014) on the grain traders, Cochrane (forthcoming PhD dissertation) on the De Beers cartel, Hager (2012, 2013a, 2013b) on the ownership of the U.S. national debt, Gagnon (2009) on the pharmaceutical sector, McMahon (2013) on Hollywood and Nitzan and Bichler (Nitzan and Bichler 1995; Bichler and Nitzan 1996) on oil and armaments. For works on particular countries and regions, see Brennan (2012b, 2012a, 2014) on Canada, Park (2013, 2015 forthcoming) on South Korea and Nitzan and Bichler (2002, 2009a) on Israel, the Middle East and the United States. For an examination of the global top 1%, see Di Muzio (2015). For the historical role of corporate and government hierarchies around the world in the growth of energy use, see Fix (2015).

[12] On breadth and depth in the United States, see Nitzan (2001) and (2009a: Ch. 17). On breadth and depth in Israel, see Nitzan and Bichler (2000; 2002: Ch. 4). For a comparison of Britain and the United States (including revised data for the latter), see Francis (2013). On South Korea, see Park (2013, 2015 forthcoming). On Canada, with somewhat different conclusions, see Brennan (2014).

Note that regimes of differential accumulation are not narrow 'market' phenomena, but broad societal transformations. They are driven not by economic growth and price stability, but by corporate amalgamation and redistributive stagflation. Their key feature is not the augmentation of means of production, but the restructuring of power writ large. Over time, they serve to realign the relationships between different groups in society, between these groups and governments and within capital itself. In other words, they are politicized to their very core. And this politicization makes them crucial for our purpose here: they can help us reconceptualise, recontextualize and research the connection between Middle East conflict and the accumulation of capital.

The Weapondollar-Petrodollar Coalition

Our study of this connection began in the late 1980s. In 1989, before the dawn of the internet age, we wrote an obscure series of four discussion papers on oil, armaments and the Middle East.[13] The papers showed that, by the early 1970s, the Middle East had become the focus of two important flows – receipts from weapon imports into the region and revenues from oil exports out of it. Underpinning these two flows, we identified the emergence of a formidable, albeit uneasy, global alliance between the integrated oil companies, the large armament contractors, leading Western governments and key oil-producing countries. We called this global alliance the 'Weapondollar-Petrodollar Coalition' and set out to explore its nature, history and implications.[14]

The Petro-Core and the Oil-Producing Countries

The interests of the Weapondollar-Petrodollar Coalition, we have argued, converged on high crude-oil prices. For the oil-producing countries, the rationale is straightforward: since the cost of extracting the crude oil changes only gradually, most of the increase in price translates into higher net income (higher prices may reduce the number of barrels sold, but with oil this loss tends to be relatively small).

For the integrated oil companies, the reason is a bit more involved. Crude oil is a major input for the refining operations of those firms, so when its price increases, so does the companies' cost of production. However, the oil companies do not simply absorb this higher cost while keeping their selling price unchanged. Instead, they usually mark their cost up by a given margin, passing on most of the increase – and sometimes more – to their consumers in the form of a higher price. The effect of this 'passing on', though, is anything but neutral. The companies' profit margin, defined as the *ratio* of profit to

[13] Bichler, Nitzan and Rowley (1989); Nitzan, Rowley and Bichler (1989); Rowley, Bichler and Nitzan (1989); and Bichler, Rowley and Nitzan (1989).
[14] The results of this exploration were first published in two related articles that sought to 'bring capital accumulation back in' (Nitzan and Bichler 1995) and 'put the state in its place' (Bichler and Nitzan 1996).

sales, may remain stable; but this very stability ascertains that the *absolute* dollar level of their profit will grow in line with their higher cost. So for the integrated oil companies, too, higher crude-oil prices generally translate into fatter bottom lines.[15]

The converging performance of these two groups – the integrated oil companies and the oil-producing countries – is illustrated in Figure 2.[16] The chart, expressed in constant 2013 dollars, contrasts the total oil exports of OPEC with the net profit of the 'Petro-Core', a name we devised to denote the world's leading private integrated oil companies. During the early 1960s, this core comprised six firms – British Petroleum, Chevron, Exxon, Mobil, Royal-Dutch/Shell and Texaco. The 1999 merger of Exxon and Mobil into ExxonMobil reduced this number to five, and the 2001 absorption of Texaco by Chevron truncated it further to four (which is the current situation).[17]

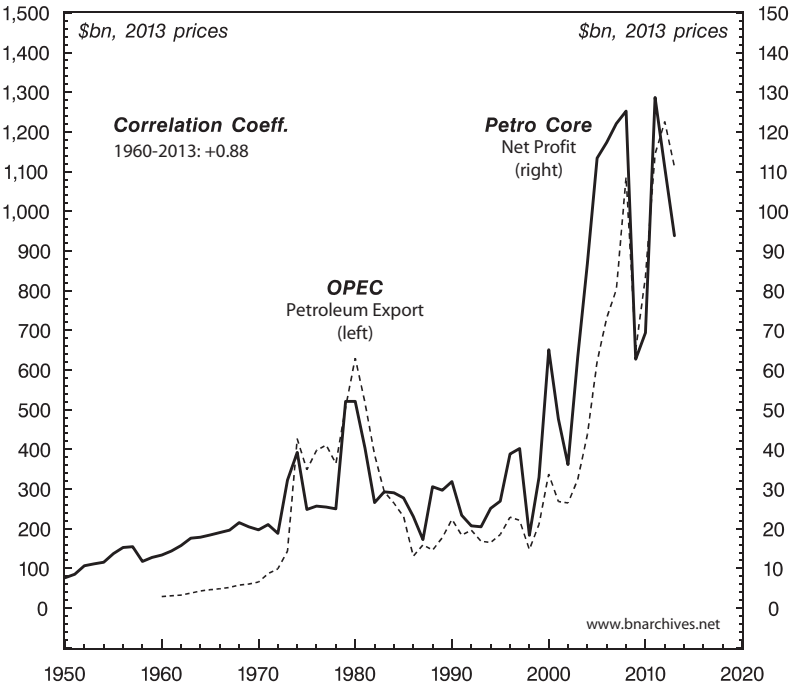
As the chart makes clear, the correlation between the two series is tightly positive (a Pearson coefficient of 0.88 out of a maximum value of 1). This correlation means that whatever determines the income of one group has a similar impact on the earnings of the other – and vice versa. And the most important determinant of oil incomes, at least since the 1970s, has been the price of oil.

[15] Oil profits can be affected adversely by drops in the physical volume of sales and/or by lower profit margins; but a large enough increase in the price of crude oil will tend to overwhelm these negative effects, causing overall profit to rise together with cost. For a detailed discussion, see Nitzan and Bichler (2004b: footnote 42, pp. 305-306).

[16] For the first version of this chart, see Nitzan and Bichler (1995: 485, Figure 5).

[17] Note the difference in scale. The two series show that, since 1960, OPEC revenues have been roughly ten times larger than the net profit of the Petro-Core. Much of this difference, though, is the consequence of aggregation: OPEC currently has 12 members, while the Petro-Core consists of four firms. So if instead of comparing aggregate exports with aggregate profit we contrast export revenues *per* country with net profit *per* firm, the ratio between them drops to roughly three to one. Furthermore, to make the two earning magnitudes conceptually comparable, we need to deduct from OPEC's export revenues the direct and indirect cost of producing the oil (including expenditures necessary to sustain authoritarian social regimes) and add to the oil companies' net profits the corporate taxes appropriated by their respective governments. These adjustments would make the oil earnings of the two entities – the countries and the companies – more or less comparable in size.

Figure 2
OPEC and the Petro-Core



NOTE: Series show annual data. The Petro-Core consists of British Petroleum (BP-Amoco since 1998), Chevron (with Texaco since 2001), Exxon (ExxonMobil since 1999), Mobil (till 1998), Royal-Dutch/Shell and Texaco (till 2000). Company changes are due to merger. Data are deflated by the U.S. implicit price deflator. The last data points are for 2013.

SOURCE: OPEC Statistical Bulletin 2014, Table 2.4: OPEC Members' Values of Petroleum Exports (for OPEC's petroleum exports) http://www.opec.org/library/Annual%20Statistical%20Bulletin/interactive/current/FileZ/XL/T24.XLS. U.S. Department of Commerce, Bureau of Economic Analysis through Data Insight (series code: PDIGDP for the U.S. GDP deflator). *Fortune* and Compustat through WRDS (for the Petro-Core's net profit).

It's All in the Price

The pivotal role of price is depicted in Figure 3. The chart juxtaposes the differential earnings per share (EPS) of the integrated oil companies and the relative price of crude oil (monthly data smoothed as 12-month trailing averages).[18] The differential EPS series

[18] Earnings per share are computed by dividing total after-tax earnings by the number of outstanding shares.

(solid line) is the ratio between the average EPS of the world's listed integrated oil companies and the average EPS of all listed firms in the world. When this ratio goes up – i.e., when the oil companies beat the world average – the result is differential accumulation; when the ratio goes down – that is, when the oil companies trail this average – the result is differential *de*cumulation.

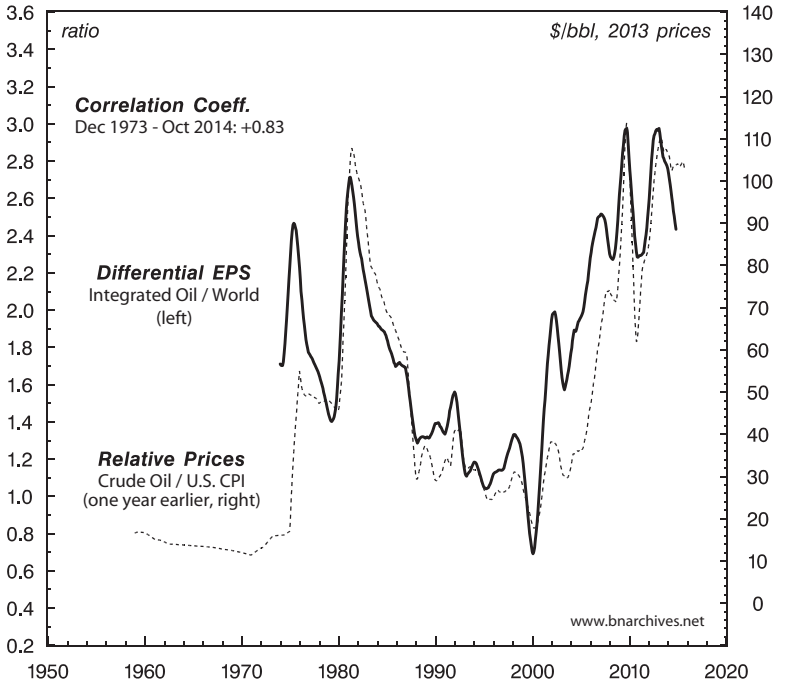
The relative price measure (dashed series) shows the dollar cost of a barrel of crude oil expressed in constant 2013 prices (derived by deflating the current price by the U.S. CPI). A rise in this index means that oil prices increase more quickly (or fall more slowly) than consumer prices, while a drop suggests that they decrease more quickly (or rise more slowly).

Note that the relative price of oil is plotted with a one-year lag, so that current readings on the chart show what this price was 12 months earlier. The reason for this lag is that 'current' monthly EPS are not really current; instead, they represent the average of the past four quarters, so the full impact on profit of a change in oil prices is felt only after a year.

The historical picture portrayed by this chart leaves little to the imagination. It shows that, as far as the differential profits of the integrated oil companies are concerned, the key factor, at least since the early 1970s, was and remains the relative price of oil. The high Pearson correlation coefficient between the two series (0.83) means that analysts trying to predict the differential profits of the integrated oil companies don't need to look very far. They don't need to project supply and demand, and not even consumption and production. They don't have to worry about China's avaricious appetite for energy or the shale-oil boom in the United States. They don't need to disentangle the web of international relations, and they don't have to deconstruct culture and religion. All they need to know is the relative price of oil 12 months earlier. And since oil profits go together with the earnings of the oil-producing countries (Figure 2), the same logic applies to OPEC. In short, in the oil sector, profits and incomes are 'all in the price'.[19]

[19] This claim applies equally to the global oil and gas sector as a whole. The Pearson correlation between this sector's EPS and the relative price of oil is 0.85 – practically the same as the one for the integrated oil companies only. The net profit of the entire oil and gas sector is roughly 50 per cent larger than that of the integrated oil companies (based on August 2014 data from Datastream), but the EPS of the two groupings are tightly correlated (Pearson coefficient of 0.97).

Figure 3
Differential Earnings per Share and the Relative Price of Crude Oil



NOTE: Series show monthly data smoothed as 12-month trailing averages. EPS denotes earnings per share and is calculated by dividing the stock price index by the price-earnings ratio. Differential EPS is calculated by dividing the EPS of the integrated oil index by the EPS of the world index. The relative price of oil is the average crude price deflated by the U.S. CPI. The last data points are October 2014 for the differential EPS and August 2014 for the relative price of oil.

SOURCE: Datastream (series codes: TOTMKWD(PI) and TOTMKWD(PE) for the price index and price-earnings ratio of all listed firms, respectively; OILINWD(PI) and OILINWD(PE) for the price index and price-earnings ratio of all listed integrated oil firms, respectively). IMF International Financial Statistics through Data Insight (series codes: L76AA&Z@C001 for the average price of crude oil; L64@C111for the U.S. CPI).

The Arma-Core

The leading armament contractors – based primarily in the United States, but also in Europe, the Soviet Union (later Russia) and other countries – have also come to benefit from higher oil prices. This benefit first became apparent in the 1970s. The waning of the Vietnam conflict shifted the focus of arms exports from East Asia to the Middle

East. During the late 1960s, East Asia absorbed nearly 40 per cent of the world's arms exports, while the Middle East and North Africa (MENA) accounted for only 15 per cent. By the mid-1970s, though, the situation reversed: the share of East Asia dropped to less than 10 per cent, while that of MENA increased fourfold, to roughly 60 per cent.[20]

The 1970s were lean years for the weapon makers. The end of the Vietnam War and the beginning of Détente caused domestic military budgets to drop sharply. In the United States, the GDP share of military expenditures was cut in half – from 10 per cent in the late 1960s to 5 per cent in the late 1970s.[21] Under these circumstances, a concurrent shrinkage of the export market – where profit margins are typically far higher than in domestic sales – would have spelled disaster for the armament contractors. And that is where the Middle East came to the rescue.

The price of oil, which tripled in inflation-adjusted terms during the early 1970s and again doubled later in the decade (Figure 1), increased the oil revenues of Middle East oil-producing countries many times over (Figure 2). And with their purchasing power rapidly rising, these countries went on a shopping spree. They imported anything and everything foreign, including plenty of weapons. According to our empirical estimates, between 1973 and 1989, every additional $100 of Middle East oil revenues generated $6 of armament imports.[22] In this way, higher oil prices became the lifeline of the ailing armament contractors.

Western Governments, Particularly the U.S.

The position of Western governments on the issue of oil prices has been more complex, and sometimes duplicitous. In public, most politicians have found it expedient to call for 'cheap', or at least 'affordable' energy, and for good reason. During the 1970s, higher oil prices were blamed for triggering a stagflation crisis that placed their voters between the rock of inflation and the hard place of stagnation. Economists called it a 'supply shock', an exogenous 'distortion' that rattled the otherwise self-equilibrating market system. And that branding made it easier to put the blame on others.[23]

The usual suspects were the greedy oil sheiks – although there were also other culprits, particularly the unscrupulous labour unions and the capricious sky gods. These 'actors', complained the economists, didn't play by the rules. Instead of simply reacting to 'market forces' as the textbooks require, they took an 'autonomous' initiative. Acting unilaterally, without provocation and with no justification, they simply

[20] See Rowley, Bichler and Nitzan (1989: 11, Table 1).
[21] See Bichler and Nitzan (2004b: 319, Figure 16).
[22] Nitzan and Bichler (1995: 493-496). For an earlier rough estimate, see Rowley, Bichler and Nitzan (1989: 31, Figure 9).
[23] For the conventional view on this subject, see for example Blinder (1979), Bruno and Sachs (1985) and Blinder and Rudd (2008).

increased the price of energy, labour and foodstuffs. Just like that. Worse still, the increases were entirely 'arbitrary': they were driven not by technology and desires (read supply and demand), but by power, greed and whim.

Unfortunately, though, there is no such thing as a free lunch. The laws of the market, like those of any organized religion, cannot be violated without repercussion. And since we haven't managed to prevent the gross violation of these laws, we must all pay the price in the form of generalized stagflation. Given this 'narrative', no politician in her right mind would openly call for high oil prices.

But there were other, less publicised sides to these developments. Rising oil prices served the large oil and armament companies, which during the 1970s and 1980s dominated the business universe, particularly in the United States, and whose interests the politicians could not easily ignore.[24] Rising oil prices were also expected to skew the geopolitical balance in favour of the United States and Britain, which had their own oil resources, and against Japan and Continental Europe, which did not. And, last but not least, rising oil prices helped fortify the autocratic regimes of Iran and Saudi Arabia – the 'twin pillars' of U.S. policy in the Middle East. Taken together, these considerations may serve to explain the apparently schizophrenic position of the U.S. administration, which, although officially in favour of low energy prices, was instrumental to the 1971 Tripoli and Teheran agreements that solidified OPEC and led to the twelvefold increase in the price of oil.[25]

From Free Flow to Limited Flow

The interest of the Weapondollar-Petrodollar Coalition in high oil prices radically transformed the nature of the oil business. Until the late 1960s, the sector operated on a 'free-flow' basis (our term). The main focus was volume. The Petro-Core still owned much of its crude oil, and with prices being relatively low and stable – Figure 1 shows that in the 1950s and 1960s they averaged $10-20 in 2013 dollars – profitability correlated positively with the level of output.

This situation changed completely in the 1970s. The rise of OPEC and the massive nationalization of oil resources deprived the Petro-Core as well as lesser companies of their previous properties in many of the oil-producing regions. They became 'service providers' for the oil-producing countries. They extracted, refined and marketed oil and its products, but their ownership of the raw material itself was significantly curtailed. Most importantly, they lost their previous control over prices.

It was the dawn of a new, 'limited-flow' regime (our term). Prices in this new regime have become deeply politicized. They were no longer set by the invisible hand of the

[24] During that period, the net profit of the oil firms and defence contractors reached 15 per cent of the global total (Bichler and Nitzan 2004b, Figure 15, p. 316).
[25] For more on these considerations and the other interests involved, see for example Bichler and Nitzan (1996) and Nitzan and Bichler (2002: 225-228, 247-250).

almighty 'market' (i.e., the leading oil companies and the main users of oil). Instead, they were determined, visibly and explicitly, by OPEC, with plenty of intervention and pressure from various governments and international organizations. And the oil itself, rather than flowing 'freely', was now fine-tuned by OPEC quotas to fit 'what the market can bear'.[26]

Initially, the leading oil companies were alarmed by this turn of events. Having occupied the commanding heights of the energy world for much of the twentieth century, they suddenly found themselves demoted to a status of 'interested bystanders', as one observer put it (Turner 1983: 147-148). Their apprehension, though, was short-lived. OPEC, they quickly realized, was their manna from heaven. Although no longer in the driver's seat, they remained indispensable for the cartel's extraction and transportation, not to speak of its downstream operations and complex business dealings.[27] In return for these services, the companies received something they could not have achieved on their own: a *tenfold* rise in the inflation-adjusted price of oil and a concomitant jump in their differential profit-read-power (Figure 3).

And so the oil arena shifted from the earlier 'free flow' logic of greenfield breadth to the new 'limited flow' logic of stagflationary depth. Instead of producing more and more oil to profit from a growing economy, OPEC and the companies concentrated on raising oil prices to profit from the sabotage of inflation and stagnation they inflicted on the rest of the world. This shift was supported by the armament contractors who saw their weapon exports to the Middle East soar, and it was condoned, usually tacitly though occasionally openly, by the U.S. and U.K. governments.

Energy Conflicts

Central to this shift was the new institution of 'energy conflicts'. As noted earlier, the common view on the subject is that resource wars – and certainly wars over oil – are fought to make the commodity accessible and cheap, at least for the aggressors. But in the late 1960s and early 1970s, we have argued, there emerged in the oil arena a new form of organized violence: the energy conflict. This type of conflict serves not the end users of oil, but its owners, sellers and associated allies; and it does so not by cheapening oil, but by making it more expensive.

As we have seen in Figure 1, the price of oil has little to do with the commodity's *actual* scarcity, however estimated. But it has plenty to do with its *perceived* scarcity. In the modern world of capital, accumulation is forward-looking. The capitalization ritual

[26] Or, as Ali Al-Naimi, Saudi Arabia's Oil Minister put it: 'The price is determined by the market, what we try to do is to make the market balanced. Today there is disequilibrium between supply and demand. Today we are trying to get the market to the normal equilibrium and the price will take care of itself' (Hoyos 2006).

[27] For a detailed scholarly account of this interdependency, see Blair (1976). A riveting literary description is offered by Clavell's novel *Whirlwind* (1986).

compels investors to look not to the past, but to the future: to fantasize alternative scenarios, assess their likely effect on oil, and discount these effects, weighted by their respective 'risk coefficients', into current prices.[28] And from the late 1960s onward, the most important scenario for the price of oil has been conflict in the Middle East.

We should note, though, that however important and central, the price of oil here is merely a means to an end. The end itself is profit – and more precisely, *differential profit* – and it is this magnitude we now turn to examine.

The historical link between energy conflicts and differential profits is demonstrated in Figure 4.[29] The chart shows the differential return on equity of the Petro-Core. This measure is computed in two steps: first, by subtracting the return on equity of the *Fortune 500* group of companies from the return on equity of the Petro-Core; and second, by expressing the resulting difference as a per cent of the *Fortune 500*'s return on equity. Positive readings (grey bars) indicate differential accumulation: they measure the extent to which the Petro-Core beats the *Fortune 500* average. Negative readings (black bars) show differential *de*cumulation: they tell us by how much the Petro-Core trails this average.

A stretch of differential *de*cumulation constitutes a 'danger zone' – i.e., a period during which an energy conflict is likely to erupt in the Middle East. The actual breakout of a conflict is marked by an explosion sign. The individual conflicts are listed in the note underneath the chart.

The Stylized Patterns

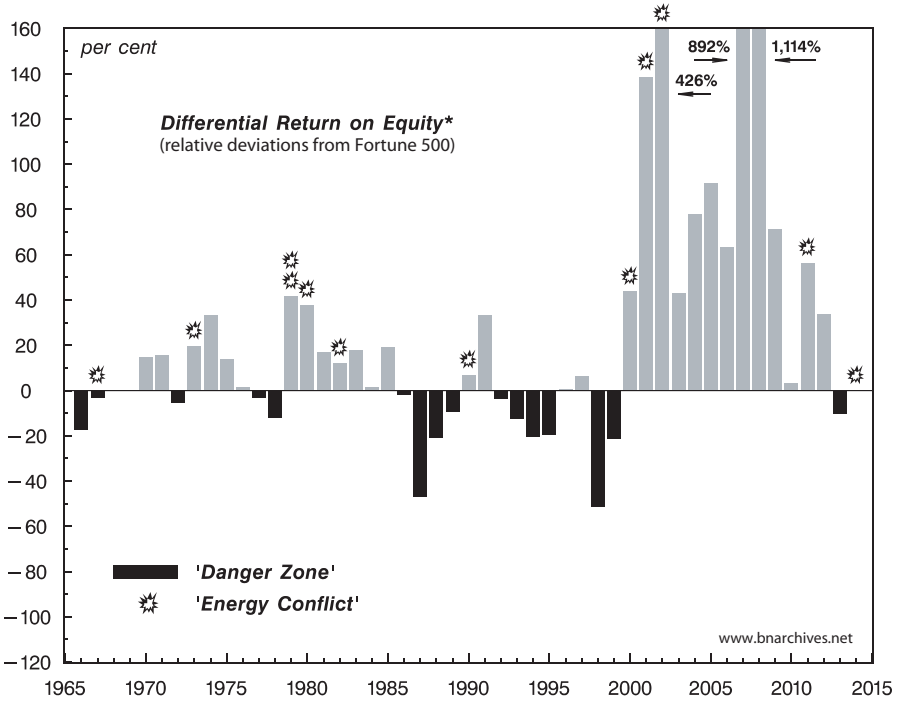
The figure shows three stylized patterns that have remained practically unchanged for the past half-century:

- First, and most importantly, every energy conflict save one was preceded by the Petro-Core trailing the average. In other words, for a Middle East energy conflict to erupt, the leading oil companies first have to differentially *de*cumulate.[30] The only exception to this rule is the 2011 burst of the Arab Spring and the subsequent blooming of 'outsourced wars' (our term for the ongoing fighting in Lebanon-Syria-Iraq, which is financed and supported by a multitude of governments and organizations in and outside the region). This round erupted without prior differential *de*cumulation – although the Petro-Core was very close to falling below the average. In 2010,

[28] For a typical example of such calculations, see Deeley (2013).
[29] This chart first appeared in Nitzan and Bichler (1995: 499). An earlier, non-differential precursor is given in Rowley, Bichler and Nitzan (1989: 26, Figure 8).
[30] In the late 1970s and early 1980s, and again during the 2000s, differential *de*cumulation was sometimes followed by a string of conflicts stretching over several years. In these instances, the result was a longer time lag between the initial spell of differential *de*cumulation and some of the subsequent conflicts.

its differential return on equity dropped to a mere 3.3 per cent, down from 71.5 per cent in 2009 and a whopping 1,114 per cent in 2008.

Figure 4
Energy Conflicts and Differential Profits:
The Petro-Core vs. the *Fortune 500*



* Return on equity is the ratio of net profit to owners' equity. Differential return on equity is the difference between the return on equity of the Petro-Core and of the *Fortune 500*, expressed as a per cent of the return on equity of the *Fortune 500*. For 1992-93, data for *Fortune 500* companies are reported without SFAS 106 special charges. The last data point is for 2013.

NOTE: The Petro-Core consists of British Petroleum (BP-Amoco since 1998), Chevron (with Texaco since 2001), Exxon (ExxonMobil since 1999), Mobil (till 1998), Royal-Dutch/Shell and Texaco (till 2000). Company changes are due to mergers. Energy Conflicts mark the starting points of: the 1967 Arab-Israel war; the 1973 Arab-Israel war; the 1979 Iranian Revolution; the 1979 Soviet invasion of Afghanistan; the 1980 Iran-Iraq War; the 1982 second Israeli invasion of Lebanon; the 1990-91 first Gulf War; the 2000 second Palestinian Intifada; the 2001 attack of 9/11, the launching of the 'War on Terror' and the invasion of Afghanistan; the 2002-3 second Gulf War; the 2011 Arab Spring and outsourced wars; the 2014 third Gulf War.

SOURCE: *Fortune*; *Compustat* through WRDS.

- Second, every energy conflict was followed by the oil companies beating the average. In other words, war and conflict in the region – processes that are customarily blamed for rattling, distorting and undermining the aggregate economy – have served the differential interest of the large oil companies at the expense of leading non-oil firms.[31] This finding, although striking, should not surprise our reader. As we have seen, differential oil profits are intimately correlated with the relative price of oil (Figure 3); the relative price of oil in turn is highly responsive to Middle East 'risk' perceptions, real or imaginary; these risk perceptions tend to jump in preparation for and during armed conflict; and as the risks mount, they raise the relative price of oil and therefore the differential accumulation of the oil companies.

- Third and finally, with one exception, in 1996-97, the Petro-Core never managed to beat the average without there first being an energy conflict in the region.[32] In other words, the differential performance of the oil companies depended not on production, but on the most extreme form of sabotage: war.[33]

Another Angle

How robust are these conclusions? Are they sensitive to the particular measure of differential profit being used? Will they still hold if we use a different proxy?

Figure 5 tries to assess these questions. Here the focus is on the world as a whole, and the measure for profit is earnings per share (EPS). The top two series contrast the average EPS performance of the world's listed integrated oil companies with the average EPS performance of all of the world's listed companies. Each series measures the annual rate of change of the respective EPS, computed by comparing any given month with the same month a year earlier and expressed as a three-year trailing average.

The bottom series shows the differential EPS growth of the integrated oil companies. This series is derived by subtracting the EPS growth rates of the world index from the EPS growth rate of the integrated oil index and expressing the result as a three-year trailing average. As in Figure 4, grey areas indicate periods during which the integrated oil companies beat the average (differential accumulation), while black areas show periods in which they trail the average (differential *de*cumulation).

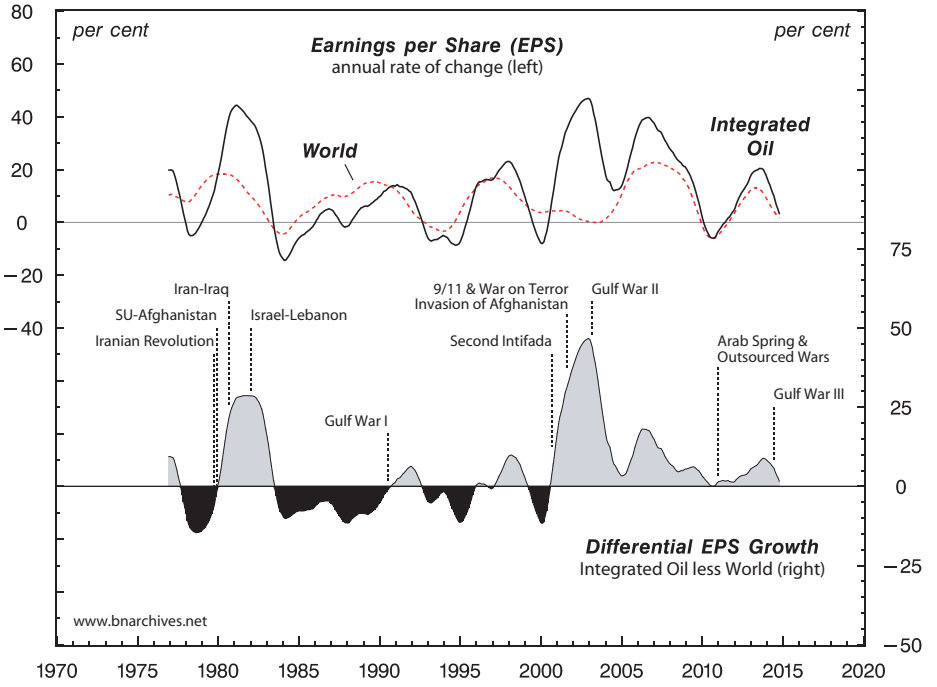
---

[31] It is important to note here that the energy conflicts have led not to higher oil profits as such, but to higher *differential* oil profits. For example, in 1969-70, 1975, 1980-82, 1985, 1991, 2001-02, 2006-07, 2009 and 2012, the rate of return on equity of the Petro-Core actually fell; but in all cases the fall was either slower than that of the *Fortune 500* or too small to close the positive gap between them, so despite the decline, the Petro-Core continued to beat the average.

[32] Although there was no official conflict in 1996-97, there was plenty of violence, including an Iraqi invasion of Kurdish areas and U.S. cruise missile attacks ('Operation Desert Strike').

[33] For the details underlying the individual energy conflicts, as well as a broader discussion of the entire process, see Bichler and Nitzan (1996), Nitzan and Bichler (2002: Ch. 5), Bichler and Nitzan (2004b) and Nitzan and Bichler (2006b).

Figure 5
Energy Conflicts and Differential Profits:
Integrated Oil Companies vs. the World



NOTE: Series show monthly data smoothed as three-year trailing averages. Earnings per share (EPS) are calculated by dividing the stock price index by the price-earnings ratio. The annual rate of change is measured relative to the corresponding month in the previous year. Differential EPS growth is calculated by subtracting the EPS growth rate of the world index from the EPS growth rate of the integrated oil index. The last data points are for October 2014.

SOURCE: Datastream (series codes: TOTMKWD(PI) and TOTMKWD(PE) for the price index and price-earnings ratio of all listed firms, respectively; OILINWD(PI) and OILINWD(PE) for the price index and price-earnings ratio of all listed integrated oil firms, respectively).

Now, note that, while the energy conflicts here are the same as those listed in Figure 4, the measure of differential profit is different in several important respects. (1) The geographical scope is much wider and the focus is less on corporate size and more on the nature of business activity. Whereas in Figure 4, the comparison is between a Petro-Core of four to six firms and the U.S.-based *Fortune 500*, here the comparison is between all of the world's listed integrated oil companies and the world average for all listed companies. (2) The profit metric is different. Whereas in Figure 4, the proxy of choice is return to equity, here it is earnings per share (EPS). (3) The nature of the variables is different. While in Figure 4 we look at levels, here we examine rates of change. (4) The temporality

is more refined. Whereas in Figure 4 the data are annual, here they are monthly, expressed as a three-year trailing average. (5) The comparison of the two indices is different. In Figure 4, the difference between the two profit measures is expressed as a per cent of the benchmark measure, whereas here it is presented in absolute terms. And (6), the period under examination is shorter – in Figure 4 it starts in 1966, while here the data begin only in 1973 (1976 for the three-year trailing averages).

All in all, then, our proxy for differential profits in Figure 5 is very different from the one we use in Figure 4. Yet the stylized patterns – as well as the exceptions to these patters – are almost exactly the same!

Similarly to Figure 4, the chart shows that, since 1976: (1) all energy conflicts were preceded by the world's integrated oil companies suffering differential *de*cumulation (with the exception of the 2011 Arab Spring / outsourced wars and the 2014 third Gulf War, when differential accumulation was very close to zero, but still positive); (2) all conflicts were followed by the integrated oil companies shifting to differential accumulation; and (3) except for the mid-1990s, the integrated oil companies have never managed to beat the average without a prior energy conflict.[34]

The Universal Logic

These stylized patterns appear almost too simple, not to say simplistic – particularly when compared to sophisticated explanations of Middle East wars. And maybe this is their beauty.

The experts on this subject – whether conservative or radical, Marxist or postist, materialist or culturalist, international relationsist or regional punditist – are undoubtedly right. The Middle East defies any simple logic – or at least that's what the rulers want us to think. No determinism can account for its cultural subtleties, no structural theory can explain its multilayered conflicts, no Eurocentric text can decipher its post-structural discourses. It is simply special.

And yet, somehow, this kaleidoscope of complex specificities gets enfolded, figuratively speaking, into the universal logic of modern capitalism: the differential accumulation of capital.[35] In the Middle East, we have argued, this process revolves around oil profits:

> Obviously, the flow of arms to the region [and its associated conflicts] is anchored not in one particular cause but in the convergence of many: internal tensions [such as those leading to the Arab Spring], inter-state confrontations [for

[34] Figure 5 would look virtually the same – and would lead to the exact same conclusions – if instead of the integrated oil companies we used the oil and gas sector as a whole. As noted in footnote 19, while the two groupings differ in overall size, their EPS measures are almost perfectly correlated.

[35] The notion of 'enfoldment' is beautifully articulated by Bohm (1980) and Bohm and Peat (2000).

> example, the 1980-88 Iraq-Iran War], conflicts between coalitions of countries [the first, second and third Gulf Wars], superpower intervention [a permanent feature], radical and anti-radical ideologies [the 1979 Iranian revolution, ISIS, etc.], nationalism [the Palestinian intifadas], clericalism [Iran, Egypt, Afghanistan, etc.], economic turbulence and business cycles [the unsatiated capitalist thirst for 'cheap energy']. . . . Yet, one way or another, these processes can be seen as already engulfed by and absorbed into the massive flow of the biggest prize of all: *oil profits*. (Nitzan and Bichler 2007: 376, translated from the Hebrew)

Our analysis of this process has focused on the Weapondollar-Petrodollar Coalition of the largest armament contractors and integrated oil companies, OPEC and various branches of Western governments. All members of the coalition, we've argued, share an interest in regional tensions. But when it comes to *open* hostilities and war, the balance tends to hang on the oil companies:

> The large oil companies and the leading arms makers both gained from Middle East 'energy conflicts' – the first through higher conflict premiums and the latter via larger military orders. But beyond this common interest the position of these groups differed in certain important respects. . . . Overall, 'energy conflicts' tended to boost arms exports both in the short-run and long-run, and given that the weapon makers have had an open-ended interest in such sales . . . their support for these conflicts should have been more or less unqualified. For the Petro-Core, however, the calculations are probably more subtle. . . . [T]he effects on their profits of higher war-premiums would be positive only up to a certain point. Furthermore, the outcome of regional conflicts is not entirely predictable and carries the inherent danger of undermining their intricate relations with host governments. For these reasons, we should expect the large oil companies to have a more qualified view on the desirability of open Middle-East hostilities. Specifically, as long as their financial performance is deemed satisfactory, the Petro-Core members would prefer the status quo of tension-without-war. When their profits wither, however, the companies' outlook is bound to become more hawkish, seeking to boost income via a conflict-driven 'energy crisis'. (Nitzan and Bichler 1995: 497)

Unfortunately for most subjects of the Middle East – and for the vast majority of the world population – the empirical regularities of energy conflicts and differential profits we have teased out of this hypothesis remain as true today as they were in the early 1970s.

Looking backward, these regularities helped us explain the history of the process till the late 1980s. Looking forward, they allowed us to predict, in writing and before

the event, the 1990-91 first Gulf War as well as the 2001 invasion of Afghanistan and the 2002 onset of the second Gulf War.

We have not predicted the recent spate of energy conflicts – but only because our research over the past decade has carried us away from the Middle East. The logic of our argument, though, remains intact. As Figures 4 and 5 show, any researcher who would have updated our data could have predicted, ahead of time, the 2011 Arab Spring and its associated outsourced wars, as well as the 2014 third Gulf War against ISIS.

The Broader Vista

The Middle East dramas, though, are themselves part of a bigger story. So far, we have shown that these dramas – the conflicts and wars, the oil crises and inflicted 'scarcities', OPEC's machinations and outside interventions, terrorism and nationalism, religion and culture – could be enfolded into the stylized link between energy conflicts and differential oil profits. But there is an even broader enfoldment to consider: the way in which this oil link fits the larger picture of global accumulation. Needless to say, this latter enfoldment is not easy to articulate, certainly not on the fly, so our outline below should be read as tentative and suggestive rather than definitive and exhaustive.

Reversals of Fortune

Begin with a bird's-eye view of the differential oil profits and the energy conflicts depicted in Figures 4 and 5. The history of this process can be divided into three rough periods:

1. *Late 1960s – early 1980s*. During this period, the oil companies tended to beat the average. There were only a few 'danger zones', and each zone was promptly followed by an energy conflict – or a string of conflicts – causing differential profits to quickly flip back into positive territory.

2. *Mid 1980s – late 1990s*. During this period, the oil companies tended to trail the average. With the exception of one energy conflict (the first Gulf War), 'danger zones' lingered with no relief in sight, causing the oil companies to suffer from protracted differential *de*cumulation.

3. *Early 2000s – present*. In this period, the oil companies have again taken the lead. Their differential profits have risen to record highs, having been boosted by frequent energy conflicts that seem to erupt at the mere suggestion of differential *de*cumulation.

Breadth and Depth

Now, as noted in above, dominant capital as a whole tends to oscillate between two main regimes of differential accumulation: breadth and depth. Breadth is driven largely by mergers and acquisitions, while depth is fuelled mostly by stagflation. And what is remarkable for our purpose here is that, since the late 1960s, these regimes seem to *coincide* with the ebb and flow of energy conflicts and differential oil profits.

Figure 6 shows the long-term movements of corporate amalgamation and stagflation in both the United States and the United Kingdom. Amalgamation is proxied by the 'buy-to-build' ratio, plotted against the left log scale. This ratio measures the magnitude of mergers and acquisitions expressed as a per cent of gross fixed capital formation (the first magnitude denotes the money spent on buying existing assets, while the second measures the money spent on building new assets, so dividing the former by the latter yields the 'buy-to-build' ratio).[36]

Stagflation, plotted against the right scale, is a synthetic index. It averages the standardized deviations of unemployment and inflation from their respective historical means. The average value of this index for the whole period is zero, by definition. Positive values indicate above-average stagflation, while negative values represent below-average stagflation.[37]

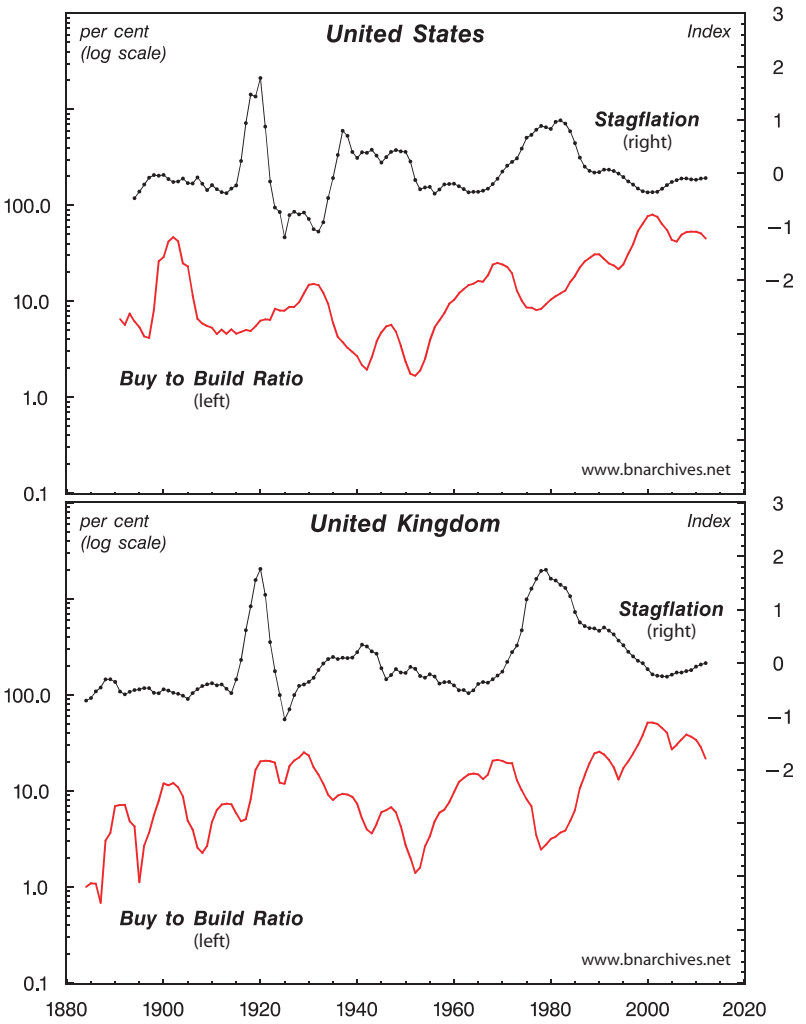
Figure 6 shows that, since the 1920s, in both the United States and the United Kingdom, corporate amalgamation and stagflation have tended to move counter-cyclically: when one measure rises, the other recedes, and vice versa. Moreover, the counter-cyclical patterns in the two countries are remarkably similar.[38]

[36] The first version of this figure – for the United States only – appeared in Nitzan (2001: Figure 9, p. 260). Joseph Francis' meticulous research (2013) corrected an error in our original buy-to-build data for the United States, revised and updated these data till 2012 and provided the first ever long-term estimates for the United Kingdom. For a discussion, see Bichler and Nitzan (2013d). Francis' data and computation are available here: http://bnarchives.yorku.ca/381/03/20131000_francis_the_buy_to_build_indicator_data.xls.

[37] Contrary to conventional belief, stagflation is anything but an anomaly. In modern capitalism, it is in fact the rule rather than the exception. To see why this is so, note that capitalist societies always operate with greater or lesser slack (just think of Marx's 'reserve army of the unemployed' or the monetarist/new-classical 'natural rate of unemployment'). In other words, capitalist societies always stagnate relative to their full potential, so, technically speaking, inflation always appears in the midst of stagnation – i.e., as *stag*flation (Nitzan 1992: Ch. 7; Nitzan and Bichler 2009a: Ch 16).

[38] The tight correlations between the two countries are shown in Bichler and Nitzan (2013d: Figures 3 and 4, p. 77).

Figure 6
Amalgamation and Stagflation



NOTE: Series show annual data smoothed as five-year trailing averages. The buy-to-build ratio denotes expenditures on mergers and acquisitions expressed as a percentage of gross fixed capital formation. Stagflation is the average of: (1) the standardized deviations from the average of the rate of unemployment; and (2) the standardized deviation from the average rate of inflation of the GDP implicit price deflator. The deviations were standardized by deducting from each year the arithmetic mean of the series over the whole period, then dividing the result by the same arithmetic mean. The last data points are for 2012.

SOURCE: Joseph Francis, The Buy-to-Build Indicator: New Estimates for Britain and the United States, *Review of Capital as Power*, 2013, Vol. 1, No. 1, pp. 63-72.

Although research on this topic is still in its infancy, the remarkable similarities between these two leading political economies suggest that breadth and depth regimes might be a fairly universal – and perhaps increasingly synchronized – phenomenon in modern capitalism.[39] And insofar as this phenomenon is increasingly universal, it might serve to explain the larger role of energy conflicts and differential oil profits.

Energy Conflicts and Stagflation

As we can see in Figure 6, merger activity peaked around the late 1960s before tipping into a free fall that lasted till the early 1980s. This retreat from amalgamation forced dominant capital to rely on rising stagflation, and the main engines of this stagflation were tensions and energy conflicts in the Middle East.

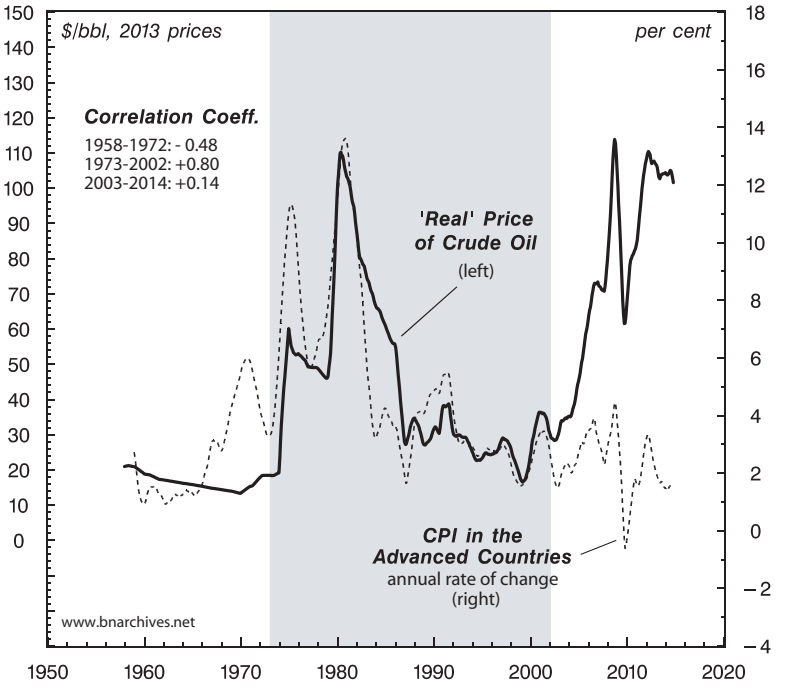
The crucial link in this process was provided by oil prices. Like many capitalist phenomena, broad-based inflation (read stagflation) often requires a trigger, and during the period in question this trigger was rising oil prices. The connection between oil prices and inflation is illustrated in Figure 7. The chart juxtaposes the 'real' price of crude oil on the left scale and the rate of consumer price inflation in the advanced countries on the right (monthly data smoothed as 12-month trailing averages). It also identifies three distinct periods, based on the changing correlation between the two series.

Until the early 1970s, the correlation was largely negative. Inflation fell and rose, but its fluctuations must have been driven by something other than the 'real' price of oil, which remained relatively stable. This indifference ended in 1973. From 1973 to 2002, the two series were tightly and positively correlated (Pearson coefficient of 0.8). During the 1970s, the 'real' price of oil soared and inflation rose sharply with it. And when 'real' oil prices collapsed in the 1980s and continued to fall through much of the 1990s, inflation decelerated in much the same way. During the most recent period, from the early 2000s to the present, this positive correlation loosened considerably; but then, that already puts us ahead of our story.

[39] For other studies of breadth and depth, see Nitzan and Bichler (2002) on Israel, Park (2013, 2015 forthcoming) on South Korea, and Brennan (2014) on Canada.

Figure 7

'Real' Oil Prices and CPI Inflation in the Advanced Countries



NOTE: Series show monthly data smoothed as 12-month trailing averages. The 'real' price of crude oil is the dollar price deflated by the U.S. CPI. The last data points are September 2014 for CPI inflation and October 2014 for the 'real' price of crude oil.

SOURCE: IMF International Financial Statistics through Data Insight (series codes: L76AA&Z@C001 for the average price of crude oil; L64@C111 for the U.S. CPI; L64@C110 for the CPI of the advanced countries).

Middle East Energy Conflicts and Differential Accumulation Cycles

With this link in mind, we can now begin to connect the specific patterns of Middle East energy conflicts with the broader differential accumulation cycles of depth and breadth.

The Rise of Stagflation (late 1960s – early 1980s)

During the late 1960s, dominant capital in the advanced countries started to shift from breadth to depth (Figure 6). By the early 1970s, the merger wave was receding rapidly, and as amalgamation weakened, stagflation picked up. The main trigger for the latter process was the build-up of Middle East tensions and the eruption of energy conflicts

(Figures 4 and 5). Tension and war fuelled the differential profits of the oil companies. And in the absence of amalgamation, these conflicts, which stalked overall inflation in the midst of stagnation (Figure 6), also helped dominant capital as a whole beat the overall average.

The convergence of these power processes during the 1970s and early 1980s gave an enormous boost to the Weapondollar-Petrodollar Coalition. The oil companies and the armament contractors, OPEC and key elements of Western governments – and now also dominant capital more broadly – all had an interest in rising oil prices. Under these circumstances, it is perhaps not surprising that energy conflicts were so frequent and that the differential profits of the oil companies were rarely allowed to fall into negative territory.

The Resurgence of Amalgamation (mid 1980s – late 1990s)

The 1980s brought a sharp reversal. Neoliberalism was in full swing, and with communism soon to disintegrate, the entire world was opening up for dominant capital. Merger and acquisition activity was now going global and by the early 1990s was already testing new records (Figure 6). The flip side was that dominant capital now lost all of its previous appetite for stagflation (Figure 6). Economic growth appeared to have resumed and inflation dropped sharply.

At this point, the Weapondollar-Petrodollar Coalition went out of favour. Although the coalition itself was still interested in high oil prices, the rest of dominant capital wasn't. This cleavage within the ruling classes reflected on the Middle East. In contrast to the previous stagflationary period, energy conflicts were now few and far between, and the differential profits of the oil companies seemed stuck in negative territory with no sign of reversal (Figures 4 and 5).

Systemic Crisis (early 2000s – present)

The early 2000s were marked by the rising threat of systemic crisis.[40] For the first time since the Great Depression of the 1930s, dominant capital, particularly in the advanced capitalist countries, seems to have confronted the asymptotes of its power.[41] At the household level, the income and asset shares of the top segments of society are now approaching record levels. At the aggregate level, the share of net profit in national income is reaching historical highs. And at the corporate level, the leading firms have

[40] For analyses and debate, see Bichler and Nitzan (2008a, 2009), Nitzan and Bichler (2009b) and Kliman, Bichler and Nitzan (2011).
[41] For a detailed examination of these asymptotes in the United States, see Bichler and Nitzan (2012a).

grown so much that their profits and capitalization are now many *thousands* of time bigger than those of the average firm.[42] These distributional gains attest to the peak power of capitalists in general and dominant capital in particular. But they also indicate that extending this power – or simply sustaining it – is becoming more and more difficult.

One symptom of this difficulty is the deceleration of corporate amalgamation. Compared to its 2000 record, the buy-to-build ratio is now one-third lower in the United States and nearly two-thirds lower in the United Kingdom (Figure 6). Like in the 1970s, dominant capital has reacted to this deceleration by trying to switch gears from amalgamation to inflation (i.e. stagflation).[43] But this time it isn't alone. In the 1970s, small and medium-sized firms were hostile to inflation, as were policymakers. Not anymore. Nowadays, capitalists and policymakers are scared of deflation, and for good reason. Given the asymptotic outlook for further pro-capitalist redistribution, equity and debt prices seem increasingly 'overcapitalized' relative to their expected earnings and underlying national incomes, and the last thing overcapitalized assets can withstand is a significant bout of deflation. The net result is that, unlike in the 1970s, the present pro-inflation coalition is much more broadly based. It encompasses not only the Weapondollar-Petrodollar Coalition and dominant capital as a whole, but also many governments and the multitude of medium and small capitalists who all yearn for some 'healthy' inflation to ease their deflationary fears.

This constellation seems consistent with the new flare-up of Middle East energy conflicts. With so much hanging on higher inflation, and given the historical role of oil prices as the 'spark' that sets inflation going, it is obvious that tension and war in the region would be more than welcome by everyone who stands to benefit from such inflation. And since the interested parties comprise some of the most powerful groups in the world, it shouldn't surprise us to see the oil companies again flying high and the region once more erupting in flames (Figures 4 and 5).

An Omen?

But there is a big fly in the ointment. As Figure 7 shows, over the past ten years or so, the positive link between oil prices and overall inflation seems to have weakened considerably. Between 2003 and 2014, the Pearson correlation coefficient of the two series fell to a feeble 0.14. The short-term movements are still in the same direction, so upticks in the 'real' price of oil are closely matched by upticks in inflation; but the long-term trends

[42] For the personal distribution of income and assets, see Piketty (2014); for the aggregate share of profit, see Bichler and Nitzan (2012a: Figure 11, p. 41 and Figure 13, p. 44); for the differential earnings of dominant capital, see Nitzan and Bichler (2014a: Figure 14, p. 143).
[43] For more on this transition from breadth to depth, see Bichler and Nitzan (2004b), Nitzan and Bichler (2006b) and Bichler and Nitzan (2008b).

are clearly opposite: while 'real' oil prices have moved upward, inflation has slid.[44] In other words, if conflict-driven oil prices are to reignite worldwide inflation, they would have to rise to levels far beyond their recent record.

This simple observation could prove ominous for the Middle East and the world more generally. In 1956, the Japanese political economist Shigeto Tsuru (1956) examined the role of U.S. military spending as an 'offset to savings', a way of absorbing the country's rising 'surplus'. Military expenditures, he observed, already amounted to 10 per cent of GDP, and if that level were necessary for economic prosperity, he continued, in ten years' time the United States would have a defence budget far too large for peacetime: 'We must say (and we should like to say for the sake of world peace) that it is rather questionable if the United States can spend on defense as much as 16 billion dollars more than today in 1968' (p. 28). Given that in 1966, exactly ten years later, the United States was deeply entangled in the Vietnam War, this must have been one of the most brilliant if sombre predictions in the social sciences.

The present divergence between 'real' oil prices and inflation depicted in Figure 7 may constitute a similar omen. The third Gulf War with ISIS might be the beginning of a new round of Middle East energy conflicts. But that is just the first step. In the past, energy conflicts have led to higher 'real' oil prices, which in turn boosted differential oil profits, and this second step is yet to happen. In fact, despite the hostilities, oil prices have *retreated* sharply from their 2013 record.[45]

There is of course no inherent reason why the stylized patterns presented in this paper must continue to hold in the future. But if they do – in other words, if the world continues to flirt with deflation and the Petro-Core with differential *de*cumulation, and if rising oil prices remain crucial for boosting overall inflation and the oil companies' differential accumulation – violence and conflict in the Middle East might need to intensify significantly in the years to come.

---

[44] While the correlation between inflation and the *level* of 'real' crude oil prices dropped to a negligible 0.14, the correlation between inflation and the *rate of change* of 'real' crude oil prices remains high at 0.78.

[45] Most analyses of this decline seem to replicate the explanations of the sharp price rise of the 1970s – only in reverse (see footnote 25). Some, like Daniel Yergin (2014), swear by the 'old-fashioned forces of supply and demand', stating that while 'there may be surplus of geopolitical risk in the world, there is an even greater surplus of oil'. Others, such as Rafael Ramirez, Venezuela's foreign minister and the former head of state oil company PDVSA, focus on geopolitics. The recent drops, he argues, occurred 'not due to market fundamentals, but to price manipulation to create economic problems among major producing countries' (Rathbone, Rodrigues, and Schipani 2014). The main culprit is Saudi Arabia. According to this view, the Saudis, possibly with a nod from the United States, have orchestrated a 'new oil-price war'. One effect of this price war is to clip the wings of U.S. shale-oil firms whose booming production challenges the Saudis' primacy. Naturally, this impact doesn't make Washington happy. But according to proponents of this argument, that is a small price to pay in exchange for the havoc inflicted by lower oil prices on America's current enemies – namely Russia, Iran and Venezuela – and for having the world economy stimulated by a lower 'oil tax' (Dyer and Crooks 2014; Lucas and McLannahan 2014). Astute commentators are careful to note the deflationary impact of lower oil prices, but this 'mixed blessing' rarely makes it to the front page.

Appendix: What Do Economists Know about Scarcity?

According to standard economic theory, commodities are not 'scarce' or 'abundant' as such.[46] They are scarce or abundant in relation to the 'desires' of sellers and buyers. When the desire to buy at a given price (i.e., the 'quantity demanded') exceeds the desire to sell at that price ('quantity supplied'), economists denote the difference as 'excess demand'. If the opposite situation prevails, they call it 'excess supply'.

For example, if the price of oil is $100/barrel, and if at that price buyers around the world wish to buy a total of 80 million barrels/day while sellers want to sell only 75 million, the result is an 'excess demand' of 5 million barrels/day. This positive difference means that, given the price of oil and the prevailing preferences of buyers and sellers, oil is 'scarce'. However, if the desires were different – for example, if at $100/barrel buyers wanted to buy only 80 million barrels/day while sellers wished to sell 82 million – we would have an 'excess supply' of 2 million barrels/day. In this situation, oil would be deemed 'abundant'. Moreover, different prices imply different desires to sell and buy, making the same commodity scarcer or more abundant, as the case may be.

Now, economists manipulate these magnitudes with great ease – but only conceptually. When it comes to empirical analysis, their hands are tied. And they are tied by the embarrassingly simple fact that they know nothing about the *actual* desires of sellers and buyers. Needless to say, this ignorance is fatal. It makes it impossible for economists to measure the levels of demand and supply, let alone which exceeds which and by how much. And as long as they don't know whether the commodity – be it oil, automobiles, software or anything else – is in excess supply or excess demand, they have no clue as to whether it is scarce or abundant.

Interestingly, most economists seem undeterred by this ignorance. In their everyday analyses, they simply assume that 'what we see is what we get'; or, in economically correct lingo, that the quantities that agents buy and sell are equal to – and therefore 'reveal' – their underlying preferences.[47] In practical terms, this assumption allows analysts to measure production as if it were supply and consumption as if it were demand.[48] And since the observed levels of consumption and production are presumed equal to the (unknown) desires of buyers and sellers, the difference between those levels – which to the

[46] In this and the following paragraph we again use inverted commas to highlight concepts we find problematic (see footnote 2).

[47] Early neoclassicists such as Stanley Jevons and Alfred Marshall admitted quite openly that wants, desires and satisfaction cannot be observed, let alone quantified; but they insisted on using them nonetheless, lest the whole edifice of their utilitarian economics comes down crashing (Jevons 1871: 11; Marshall 1920: 78; Nitzan and Bichler 2009a: 128-130). This insistence was later formalized by Paul Samuelson's concept of 'revealed preferences' (1938) – the idea that it is perfectly OK for economists to use reality to explain preferences instead of the other way around (Nitzan and Bichler 2009a: Ch. 5).

[48] A Google image search for phrases such as 'petroleum demand' or 'supply of oil' yields countless empirical charts. The series in the charts are labelled 'demand' and 'supply', but these titles are deeply misleading: their data measure not the *desires* of buyers and sellers as the theory mandates, but their *actual consumption and production*, which may have nothing to do with those desires, whatever they are.

naked eye appears as a shortfall or build-up of inventories – is equated with excess demand (scarcity) or excess supply (abundance), respectively.[49]

[49] (This footnote is meant for the economically initiated.) In practice, the observed depletion/build-up of inventories consists of two components: intended and unintended. When the intended component is zero, the depletion (build-up) is entirely unintended, by definition; and it is only then that the excess consumption (production) is equal to the excess demand (supply). However, since the desires of buyers and sellers are unknown, economists have no way of knowing which part of the inventory change is intended and which is unintended. And as long as the two components remain mingled, the accuracy of this scarcity proxy is impossible to assess.

Re-searching

6

Imperialism and Financialism: The Story of a Nexus [1]

Abstract

Over the past century, the nexus of imperialism and financialism has become a major axis of Marxist theory and praxis. Many Marxists consider this nexus to be a prime cause of our worldly ills, but the historical role they ascribe to it has changed dramatically over time. The key change concerns the nature and direction of surplus and liquidity flows. The first incarnation of the nexus, articulated at the turn of the twentieth century, explained the imperialist scramble for colonies to which finance capital could *export* its 'excessive' surplus. The next version posited a neo-imperial world of monopoly capitalism where the core's surplus is absorbed *domestically*, sucked into a 'black hole' of military spending and financial intermediation. The third script postulated a World System where surplus is *imported* from the dependent periphery into the financial core. And the most recent edition explains the hollowing out of the U.S. core, a 'red giant' that has already burned much of its own productive fuel and is now trying to 'financialize' the rest of the world in order to use the system's external liquidity. The paper outlines this chameleon-like transformation, assesses what is left of the nexus and asks whether it is worth keeping.

[1] This paper was first published in *Journal of Critical Globalization Studies* (Bichler and Nitzan 2012d, Issue 5, January).

Introduction

Over the past century, Marxism has been radically transformed in line with circumstances and fashion. Theses that once looked solid have depreciated and fallen by the sideline; concepts that once were deemed crucial have been abandoned; slogans that once sounded clear and meaningful have become fuzzy and ineffectual. But two key words seem to have survived the attrition and withstood the test of time: imperialism and financialism.[2]

Talk of imperialism and financialism – and particularly of the nexus between them – remains as catchy as ever. Marxists of different persuasions – from classical, to neo to post – find the two terms expedient, if not indispensable. Of course, the views between them differ greatly, but there is a common thread: for most Marxists, imperialism and financialism are prime causes of our worldly ills. Their nexus is said to explain capitalist development and underdevelopment; underlie capitalist power and contradictions; and drive capitalist globalization, its regional realignment and local dynamics.

The secret behind this staying power is flexibility. Over the years, the concepts of imperialism and financialism have changed more or less beyond recognition, as a result of which the link between them nowadays connotes something totally different from what it did a century ago.

The purpose of our article is to outline this chameleon-like transformation, to assess what is left of the nexus and to ask whether this nexus is still worth keeping. In so doing, our goal is not to present our own view of the nexus, but rather to critique what others have written about it.[3] We try to stick to the categories and units of the theories we examine – categories and units with which we often disagree – so that we can compare and contrast the theories on their own terms. And we make no attempt to pick and choose. We do not try to decide which version of the nexus is correct in some universal sense, and not even which version was correct for its time. Instead, our aim is to highlight the historical development of the nexus, particularly the loose manner in which it has been altered – to the point of meaning everything and nothing.

The paper comprises two parts. The first part examines the different schools. It traces the transmutation of the nexus – from its first articulation in the early twentieth century, to the version developed by the Monopoly Capital school, to the arguments of dependency and Word Systems analyses, to the thesis of hegemonic transition. The second part offers an empirical exploration. Focusing specifically on the hegemonic transition hypothesis, it identifies difficulties that arise when the theory meets the evidence and assesses their significance for the century-old nexus.

---

[2] As the article seeks to show, the precise terms are rather loose and their meaning varies across theorists and over time. 'Imperialism', 'empire' and 'colonialism' are used interchangeably, as are 'finance', 'fictitious capital', 'finance capital', 'financialization' and 'financialism'. Here we use 'imperialism' and 'financialism' simply because they rhyme.

[3] For our own analysis of capitalism, see Nitzan and Bichler (2009a).

PART I: THE SCHOOLS

Empire and Finance

The twin notions of imperialism and financialism emerged at the turn of the twentieth century. The backdrop is familiar enough. During the latter part of the nineteenth century, the leading European powers were busy taking over large tracts of non-capitalist territory around the world. At the same time, their own political economies were being fundamentally transformed. Since the two developments unfolded hand in hand, it was only natural for theorists to ask whether they were related – and if so, how and why.

The most influential explanation came from a British left liberal, Hobson (1902), whose work on the subject was later extended and modified by Marxists such as Hilferding (1910), Luxemburg (1913), Kautsky (1914), and Lenin (1917), among others.

Framed in a nutshell, the basic argument rested on the belief that capitalism had changed: originally 'industrial' and 'competitive', the system had become 'financial' and 'monopolistic'.[4]

This transformation, said the theorists, had two crucial effects. First, the process of monopolization and the centralization of capital in the hands of the large financiers made the distribution of income far more unequal, and that greater inequality restricted the purchasing power of workers relative to the productive potential of the system. As a result of this imbalance, there emerged the spectre of 'surplus capital', excess funds that could not be invested profitably in the home market. And since this surplus capital could not be disposed of domestically, it forced capitalists to look for foreign outlets, particularly in pristine, pre-capitalist regions.[5]

Second, the centralization of capital altered the political landscape. Instead of the night-watchman government of the *laissez-faire* epoch, there emerged a strong, active state. The *laissez-faire* capitalists of the earlier era saw little reason to share their profits with the state and therefore glorified the frugality of a small central administration and minimal taxation. But the new state was no longer run by hands-off liberals. Instead, it was dominated and manipulated by an aggressive oligarchy of 'finance capital' – a coalition of large bankers, leading industrialists, war mongers and speculators who needed a strong state that would crack down on domestic opposition and embark on foreign military adventures.[6]

And so emerged the nexus between imperialism and financialism. The concentrated financialized economy, went the argument, requires pre-capitalist colonies where surplus capital can be invested profitably; and the cabal of finance capital, now

[4] Hilferding (1910: Ch. 14); Lenin (1917: 190 and 193-194).
[5] Hobson (1902: 77-78, 85-86, 106).
[6] Hilferding (1910: 335); Luxemburg (1913: 371, 467); Lenin (1917: 243-244).

in the political driver's seat, is able to push the state into an international imperialist struggle to obtain those colonies.

At the time, this thesis was not only totally new and highly sophisticated; it also fit closely with the unfolding of events. It gave an elegant explanation for the imperial bellicosity of the late nineteenth century, and it neatly accounted for the circumstances leading to the great imperial conflict of the first 'World War'. There were of course other explanations for that war – from realist/statist, to liberal, to geopolitical, to psychological.[7] But for most intellectuals, these alternative explications seemed too partial or instrumental compared to the sweeping inevitability offered by the nexus of empire and finance.

History, though, kept changing, and soon enough both the theory and its basic concepts had to be altered.

Monopoly Capital

The end of the Second World War brought three major transformations. First, the nature of international conflict changed completely. Instead of a violent inter-capitalist struggle, there emerged a Cold War between the former imperial powers on the one hand and the (very imperial) Soviet bloc on the other (with plenty of hot proxy conflicts flaring up in the outlying areas). Second, the relationship between core and periphery was radically altered. Outright conquest and territorial imperialism gave way to decolonization, while tax-collecting navies were replaced by the more sophisticated tools of foreign aid and foreign direct investment (FDI). Third and finally, the political economies of the core countries themselves were reorganized. Instead of the volatile *laissez-faire* regime, there arose a large welfare-warfare state whose 'interventionist' ideologies and counter-cyclical policies managed to reduce instability and boost domestic growth.

On the face of it, this new constellation made talk of finance-driven imperialism seem outdated, if not totally irrelevant. But the theorists didn't give up the nexus. Instead, they gave it a new meaning.

The revised link was articulated most fully by the Monopoly Capital school associated with the New York journal *Monthly Review*.[8] Capitalism, argued the writers of this school, remains haunted by a lack of profitable investment outlets. And that problem, along with its solution, can no longer be explained in classical Marxist terms.[9]

The shift from competition to oligopoly that began in the late nineteenth century, these writers claimed, was now complete.[10] And that shift meant that Marx's labour

[7] For a cross section and reviews of such explanations, see, for example, Veblen (1915), Schumpeter (1919), Tuchman (1962, 1966) and Kennedy (1987: Ch. 5).
[8] Some of the important contributions to this literature include Steindl (1952), Tsuru (1956), Baran and Sweezy (1966) and Magdoff (1969).
[9] Baran (1957: 22 and 23, fn. 3); Baran and Sweezy (1966: 6 and 10, fn. 6).
[10] Baran and Sweezy (1966: Chs. 2 and 8).

theory of value and his notion of surplus value had become more or less irrelevant to capitalist pricing.[11]

In the brave new world of oligopolies, the emphasis on non-price competition speeds up the pace of technical change and efficiency gains, making commodities cheaper and cheaper to produce. But unlike in a competitive system, where market discipline forces firms to pass on their lower costs to consumers, under the new circumstances, cost reductions do *not* translate into falling prices. The prevalence of oligopolies creates a built-in inflationary bias that, despite falling costs, makes prices move up and sometimes sideways, but rarely if ever down.[12]

This growing divergence between falling costs and rising prices increases the income share of capitalists, and that increase reverses the underlying course of capitalism. Marx believed that the combination of ever-growing mechanization and ruthless competition creates a tendency of the rate of profit to *fall*. But the substitution of monopoly capitalism for free competition inverts the trajectory. The new system, argued its analysts, is ruled by an opposite 'tendency of the surplus to *rise'*.[13]

The early theorists of imperialism, although using a different vocabulary, understood the gist of this transformation. And even though they did not provide a full theory to explain it, they realized that the consequence of that transformation was to shift the problem of capitalism from production to circulation (or in later Keynesian parlance, from 'aggregate supply' to 'aggregate demand'). The new capitalism, they pointed out, suffered not from *insufficient* surplus, but from *too much* surplus, and its key challenge now was how to 'offset' and 'absorb' this ever-growing excess so that accumulation could keep going instead of coming to a halt.[14]

That much was already understood at the turn of the twentieth century. But this is where the similarity between the early theorists of imperialism and the new analysts of Monopoly Capital ends.

---

[11] See Hilferding (1910: 228), Sweezy (1942: 271) and the entire thrust of Baran and Sweezy (1966). Later on, Sweezy (1974) would defend himself and Baran against allegations of betrayal: *Monopoly Capital*, he said, had no intention of abandoning Marx's labour theory of value. On the contrary, the book had taken Marx's theory 'for granted', trying to show how labour values were transformed – first into competitive prices, and then into monopoly prices. However, as Howard and King (1992: 120) note, this defence was misleading and in fact unnecessary. Sweezy had always hailed the qualitative side of the labour theory of value, and that fact was worth reiterating; but to claim that he and Baran also took the quantitative aspects of that theory for granted was to contradict the gist of their own Monopoly Capital thesis.

[12] Baran and Sweezy (1966: 62-63).

[13] Baran and Sweezy (1966: Ch. 3).

[14] Baran and Sweezy (1966: 218).

Black Hole: The Role of Institutionalized Waste

Until the early twentieth century, it seemed that the only way to offset the growing excess was *productive and external*: the surplus of goods and capital had to be exported to and productively invested in pre-capitalist colonies. But as it turned out, there was another solution, one that the early theorists hadn't foreseen and that the analysts of Monopoly Capital now emphasized. The surplus could also be disposed off *unproductively and internally*: it could be wasted at home.

For the theorists of Monopoly Capital, 'waste' denoted expenditures that are necessary neither for producing the surplus nor for reproducing the population, and that are, in that sense, totally unproductive and therefore wasteful. These expenditures absorb existing surplus without creating any new surplus, and this double feature enables them to mitigate without aggravating the tendency of the surplus to rise.

The absorptive role of wasteful spending wasn't entirely new, having already been identified and elaborated on at the turn of the twentieth century by Veblen (1904, 1923). But it was only after the Second Word War, with the entrenchment of the Fordist model of mass production and consumption and the parallel rise of the welfare-warfare state, that the process was fully and conscientiously institutionalized as a salient feature of monopoly capitalism.

By the end of the war, the U.S. ruling class grew fearful that demobilization would trigger another severe depression; and having accepted and internalized the stimulating role of large-scale government spending, it supported the creation of a new 'Keynesian Coalition' that brought together the interests of big business, the large labour unions and various state agencies.[15] The hallmark of this coalition was immortalized in a secret U.S. National Security Council document (NSC-68), whose writers effectively called on the government to use high military spending as a way to secure the internal stability of U.S. capitalism.[16]

According to its theorists, monopoly capitalism gave rise to many forms of institutionalized waste – including a bloated sales effort, the creation of new 'desires' for useless goods and services and the acceleration of product obsolescence, among other strategies. But the two most significant types of waste were spending on the military and on the financial sector.[17]

The importance of these latter expenditures, went the argument, lies in their seemingly limitless size. The magnitude of military expenditures has no obvious ceiling: it depends solely on the ability of the ruling class to justify the expenditures on the

[15] Cf. Gold (1977).
[16] U.S. National Security Council (1950). For a critical examination of Military Keynesianism, see Nitzan and Bichler (2006a).
[17] On the surplus absorption of military spending, see for example, Tsuru (1956), Kalecki (1964, 1967) and Baran and Sweezy (1966: Cf. Ch. 7). On the role of finance, see Baran and Sweezy (1966: 139-141) and Magdoff and Sweezy (1983a, 1985).

grounds of national security. Similarly with the size of the financial sector: its magnitude expands with the potentially limitless inflation of credit. This convenient expandability turns military spending and financial intermediation into a giant 'black hole' (our term): they suck in large chunks of the excess surplus without generating any excess surplus of their own.[18]

Now, on the face of it, the efficacy of this domestic black hole should have made imperialism less necessary, if not wholly redundant. According to the theorists of Monopoly Capital, though, this would be the wrong conclusion to draw. It is certainly true that, unlike the old imperial system, monopoly capitalism no longer needs colonies. But the absence of formal colonies is largely a matter of appearance. Remove this appearance and you'll see the imperial impulse pretty much intact: the core continues to exploit, dominate and violate the periphery for its own capitalist ends.[19]

Spearheaded by U.S.-based multinationals and no longer hindered by inter-capitalist wars, argued the theorists, the new order of monopoly capitalism has become increasingly global and ever more integrated. And this global integration, they continued, has come to depend on an international division of labour, free access to strategic raw materials and political regimes that are ideologically open for business. However, these conditions do not develop automatically and peacefully. They have to be actively promoted and enforced – often against stiff domestic opposition – and they have to be safeguarded against external threats (the Soviet Bloc before its collapse and Islamic fundamentalism and rogue states since then, etc.). And because such promotion and enforcement hinge on the threat and frequent use of violence, there is an obvious justification, if not outright need, for a large, well-equipped army sustained by large military budgets.

In this context, military spending comes to serve a dual role: together with the financial sector and other forms of waste, it propels the accumulation of capital by black-holing a large chunk of the economic surplus; and it helps secure a more sophisticated and effective *neo*-imperial order that no longer needs colonial territories but is every bit as expansionary, exploitative and violent as its crude imperial predecessor.

---

[18] Classical Marxists interpret the role of waste rather differently. In their account, wasteful spending withdraws surplus from the accumulation process and therefore causes the pace of that process to decelerate. However, some classical Marxists, such as Kidron (1974), suggest that the deceleration may end up having a 'positive' impact: by slowing the pace at which constant capital accumulates, waste lessens the tendency of the rate of profit to fall.

[19] Perhaps the clearest advocate of this argument was the late Harry Magdoff, a writer whose empirical and theoretical studies stand as a beacon of scientific research (1969, 2003). Similar claims (minus the research) are offered by Meiksins Wood (2003).

Dependency

The notion of neo-imperialism boosted and gave credence to a subsidiary theory of dependency.[20] This support was somewhat paradoxical, since the lineage between the two theories was weak, if not contradictory. Recall that, by emphasizing the role of *domestic* waste, particularly through the open-ended offsets of military spending and the financial sector, the theory of Monopoly Capital served to deemphasize, if not totally negate, the absorptive importance of the periphery.[21] But the analysts of dependency put their emphasis elsewhere. The persistence of (neo) imperialism, they claimed, showed that, regardless of its own internal dynamics, the core still needs to keep the periphery chronically subjugated and underdeveloped.

This dependency, went the argument, is the outcome of five hundred years of colonial destruction. The basic claim, originally made by Baran (1957: Ch. 5), was that capitalist development is inherently uneven. By the sixteenth century, this unevenness had created a major fracture between Europe and the periphery: the European powers embarked on a colonial process of primitive accumulation, a process that fuelled their own growth while stunting that of the periphery.

From then onward, the imperial powers relentlessly and systematically undermined the socio-economic fabric of the periphery, making it totally dependent on the core. And when decolonization finally started, the periphery found itself unable to take off while the capitalist core prospered.[22] At that point, there was no longer any need for core states to openly colonize and export capital to the periphery. Using their disproportionate economic and state power, the former imperialist countries were now able to hold the postcolonial periphery in a state of debilitating economic monoculture, political submissiveness and cultural backwardness – and, wherever they could, to impose on it a system of unequal exchange.

Unequal exchange can take different forms. It may involve a wage gap between the 'less exploited' labour aristocracy of the core and the 'more exploited' simple labour of the periphery.[23] Or the core can compel the periphery to buy its exports at 'high' prices (relative to their 'true' value), while importing the periphery's products at 'low' prices (relative to their 'true' value). As a result of the latter strategy, the terms of trade get 'distorted', surplus is constantly siphoned into the core (rather than exported

[20] Some of the important texts here include Prebisch (1950), Baran (1957), Frank (1967), Emmanuel (1972), Galeano (1973), Amin (1974b), Wallerstein (1974, 1980) and Cardoso and Faletto (1979). For a good summary of the dependency literature, see So (1990).
[21] According to Baran and Sweezy (1966: 105), foreign investment in developing countries serves to *aggravate* the absorption problem: the returns on such investment are not fully reinvested in the periphery, the leftovers flow back to the advanced countries and the surplus gets augmented instead of being offset.
[22] Frank (1966); Wallerstein (1974).
[23] Emmanuel (1972).

from or domestically absorbed by the core), and the eviscerated periphery remains chronically underdeveloped.[24]

This logic of dependent underdevelopment was first articulated during the 1950s and 1960s as an antidote to the liberal modernization thesis and its Rostowian promise of an imminent takeoff.[25] And at the time, that antidote certainly seemed to be in line with the chronic stagnation of peripheral countries.

But what started as a partial theory soon expanded into a sweeping history of world capitalism. According to this broader narrative, capitalism was and remained imperial from the word go: it didn't simply start *with* conquest; it started *because* of conquest. Its very inception was predicated on geographical exploitation and domination – a process in which the financial-commercial metropolis (say England) used the surplus extracted from a productive periphery (say India) to kick-start its own economic growth. And once started, the only way for this growth to be sustained is for the metropolis to continue to eviscerate the periphery around it. The development of the emperor depends on and necessitates the underdevelopment of its subjects.[26]

The next theoretical step was to fit this template into an even broader concept of a World System – an all-encompassing global approach that seeks to map the hierarchical political relationships, division of labour and flow of commodities and surplus between the peripheral countries at the bottom, the semi-peripheral satellites in the middle and the financial core at the apex. From the viewpoint of this larger retrofit, capitalism is no longer the outcome of a specific class struggle, a conflict that developed in Western Europe during the twilight of feudalism and later spread to and reproduced itself in the rest of the world. Instead, capitalism – to the extent that this term can still be meaningfully used – is merely the outer appearance of Europe's imperial expedition to rob and loot the rest of the world.

This view reflected a fundamental change in emphasis. Whereas earlier Marxist theorists of imperialism accentuated the centrality of exploitation in production, dependency and World-Systems analysts shifted the focus to trade and unequal exchange. And while previous theories concentrated on the global class struggle, dependency and World-Systems analyses spoke of a conflict between states and geographical

---

[24] See Amin (1974a). The inverted commas in the referenced paragraph highlight concepts that the theory of unequal exchange can neither define nor measure. Since nobody knows the 'correct' value of labour power, it is impossible to determine the extent of exploitation in the two regions. Similarly, since no one knows the 'true' value of commodities, there is no way to assess whether export and import prices are too 'high' or too 'low'. This latter ignorance makes it impossible to gauge the degree to which the terms of trade are 'distorted' and, indeed, in whose favour; and given that we don't know the magnitude or even the direction of the 'distortion', it is impossible to tell whether surplus flows from the periphery to the core or vice versa, or how large the flow might be.

[25] Rostow (1960).

[26] Galeano (1973: 38-42, 49-51, 67-70, 86-90, 145-148, 206-216, 225-228).

regions. The new framework, although nominally Marxist on the outside, has little Marxism left on the inside.[27]

And if we are to believe the postists who quickly jumped on the dependency bandwagon, there is nothing particularly surprising about this particular theoretical bent. After all, 'history' is no more than an ethno-cultural clash of civilizations, a never-ending cycle of imperial hegemonies in which the winners (ego) impose their culture on the losers (alter).[28] To the naked eye, the totalizing capitalization of our contemporary world may seem like a unique historical process. But don't be deceived. This apparent uniqueness is a flash in the pan. Deconstruct it and what you are left with is yet another imperial imposition – in this case, the imposition of a Euro-American 'financialized discourse' on the rest of the world.

Red Giant: An Empire Imploded

The dependency version of the nexus, though, didn't hold for long, and in the 1970s the cards again got shuffled. The core stumbled into a multifaceted crisis: the United States suffered a humiliating defeat in Vietnam, stagflation decelerated and destabilized the major capitalist countries and political unrest seemed to undermine the legitimacy of the capitalist regime itself. In the meantime, the periphery confounded the theorists: on the one hand, import substitution, the prescribed antidote to dependency, pushed many developing countries, primarily in Latin America, into a debt trap; on the other hand, the inverse policy of privatization and export promotion, implemented mostly in East Asia, triggered an apparent 'economic miracle'. Taken together, these developments didn't seem to sit well with the notion of Western financial imperialism. So once more the nexus had to be revised.

According to the new script, 'financialization' is no longer a panacea for the imperial power. On the contrary, it is a 'sign of autumn', prime evidence of imperial decline.[29]

The reasoning, whether explicit or implicit, goes back to the basic Marxist distinction between 'industrial' activity on the one hand and 'commercial' and 'financial' activities on the other. The former activity is considered 'productive' in that it generates surplus value and leads to the accumulation of 'actual' capital. The latter activities,

[27] The question of what constitutes a 'proper' Marxist framework is highlighted in the debates over the transition from feudalism to capitalism. Important contributions to these debates are Dobb (1946), Sweezy (1950) and Brenner (1977, 1978). For edited volumes on this issue, see Hilton, ed. (1978) and Aston and Philpin, eds. (1985).
[28] For a typical narrative, see Hobson (2004).
[29] Braudel (1985: Vol. 3, p. 246).

by contrast, are deemed 'unproductive'; they don't generate any new surplus value and therefore, in and of themselves, do not create any 'actual' capital.[30]

This distinction – which most Marxists accept as sacrosanct and to which we return later in the article – has important implications for the nexus of imperialism and financialism. It may be true, say advocates of the new script, that finance (along with other forms of waste) helps the imperial core absorb its rising surplus – and in so doing prevents stagnation and keeps accumulation going. But there is a price to pay. The addiction to financial waste ends up consuming the very fuel that sustains the core's imperial position: it hollows out the core's industrial sector, it undermines its productive vitality, and, eventually, it limits its military capabilities. The financial sector itself continues to expand absolutely and relatively, but this is the expansion of a 'red giant' (our term) – the final inflation of a star ready to implode.

The process leading to this implosion is emphasized by theories of hegemonic transition.[31] The analyses here come in different versions, but they all seem to agree on the same basic template. According to this template, the maturation of a hegemonic power – be it Holland in the seventeenth century, Britain in the nineteenth century or the United States presently – coincides with the 'over-accumulation' of capital (i.e. the absence of sufficiently profitable investment outlets). This over-accumulation – along with growing international rivalries, challenges and conflicts – triggers a system-wide financial expansion marked by soaring capital flows, a rise in market speculation and a general inflation of debt and equity values.[32] The financial expansion itself is led by the hegemonic state in an attempt to arrest its own decline, but the reprieve it offers can only be temporary. Relying on finance drains the core of its energy, causes productive investment to flow elsewhere and eventually sets in motion the imminent process of hegemonic transition.

Although the narrative here is universal, its inspiration is clearly drawn from the apparent 'financialized decline' of U.S. hegemony.[33] Since the 1970s, many argue, the country has been 'depleted': it has grown overburdened by military spending; it has

[30] For more on the question of who is productive and who is not, see Nitzan and Bichler (2009a: Ch. 7).
[31] Cf. Braudel (1985); Wallerstein (1984); and Arrighi (1994).
[32] For a succinct summary, see Arrighi and Silver (1999). Building on Braudel and Weber, they outline a 'demand and supply theory of financialization' (our term). On the capitalist supply side, profits that grow relative to stagnating investment opportunities give rise to soaring financial liquidity. On the government demand side, budget deficits caused by stunted growth force states to compete for liquid capitalist funds. 'All systemwide financial expansions past and present', say Arrighi and Silver, 'are the outcome of the combined if uneven development of these two complementary tendencies' (32).
[33] On the leading role of the United States in this process, see Arrighi and Silver (1999: 33) and Arrighi *et al.* (1999: 88-89).

gotten itself entangled in unwinnable armed conflicts; and it has witnessed its industrial-productive base sucked dry by a Wall Street-Washington Complex that prospers on the back of rising debt and bloated financial intermediation.[34]

In order to compensate for its growing weakness, these observers continue, the United States has imposed its own model of 'financialization' on the rest of the world, hoping to scoop the resulting expansion of liquidity. Some states have been compelled to replicate the model in their own countries, others have been tempted to finance it by buying U.S. assets and pretty much all have been pulled into an unprecedented global whirlpool of capital flow.

However, the spread of 'financialization', goes the argument, has only been partly successful. For a while, the United States benefited from being able to control, manipulate and leverage this expansion for its own ends. But in the opinion of many, the growing severity of recent financial, economic and military crises suggests that this ability has been greatly reduced and that U.S. hegemony is now coming to an end.

PART II: AN EMPIRICAL INQUIRY

Up until now, our discussion was fairly even handed. We devoted more or less the same attention to each version of the nexus, and for good reason. Judged against their concrete historical backdrops, all versions look relevant, even solid. At their time, they all offered insight into the world they described and often provided a platform for popular struggle and alternative politics.

But this even-handedness is superficial: although the theories themselves may be comparable, their empirical bases are not. When Lenin wrote his *Imperialism* (1917) in Zurich in the early twentieth century, the data on which he based his argument were meagre and fractured. There were no organized statistics, no time series and no aggregate facts to speak of. Much of his evidence was drawn from works written by Hobson twenty years earlier (1894, 1902). The situation was quite different half a century later. By the time Baran and Sweezy published their *Monopoly Capital* (1966), systems of national accounts had already been implemented, primarily in the developed countries, and aggregate data analysis had become increasingly commonplace.[35] This new infrastructure enabled Baran and Sweezy to enlist the help of Joseph D. Phillips, a statistical expert who subjected their thesis to systematic empirical examination. The result, published in the famous appendix to their book, was an empirical feat that Lenin could not even have fathomed. And yet, even Baran and Sweezy had to restrict their analysis to the United States, and particularly to its macro economy: national accounting were still far less developed in the rest of the world; organized statistics for

[34] For the 'depletion thesis', see for example Melman (1970, 1974). A broader historical application is given in Kennedy (1987). The central role of finance in this depletion is emphasized in Hudson (2010).
[35] On the history of the national accounts, see Kendrick (1968, 1970).

corporations and financial intermediation were still in their infancy; and global databases were not yet on the radar screen. It was only in the 1980s, with the transnationalization of capital and the advent of cheap computing, that a global statistical picture, however imperfect, became a practical possibility.

The purpose of this section is to use some of these new data to examine the most recent version of the nexus – the theory of hegemonic transition. The examination is not exhaustive, but illustrative. It seeks to highlight the importance of empirical analysis – both as a check on our theoretical speculations and as a catalyst for the development of new questions and new concepts.

The argument is developed in steps. To put things in context, we begin by outlining the historical evolution of capital flow and transnational ownership; then we examine the shifting global distribution of profit between the different regions; and finally, we zero in on the process of financialization and its relation to hegemonic transition.

Capital Flow and Transnational Ownership

The highly publicized imperial misgivings of the United States make the hegemonic-transition version of the nexus seem persuasive. But when we look more closely at the facts, the theoretical surface no longer looks smooth; and as we get even closer to the evidence, cracks begin to appear.

Start with the cross-border flow of capital, the international manifestation of 'financialization'. This process is often misunderstood, even by high theorists, so a brief clarification is in order. Contrary to popular belief, the flow of capital is financial, and *only* financial. It consists of legal transactions, whereby investors in one country buy or sell assets in another – and that is it. There is no flow of material or immaterial resources, productive or otherwise. The only things that move are ownership titles.[36]

[36] The generalization here applies to portfolio as well as foreign direct investment. Both are financial transactions, pure and simple. The only difference between them is their relative size: typically, investments that account for less than 10% of the acquired property are considered portfolio, whereas larger investments are classified as direct. The flow of capital, whether portfolio or direct, may or may not be followed by the creation of new productive capacity. But the creation of such capacity, if and when it happens, is conceptually distinct, temporally separate and causally independent from the mere act of foreign investment. The act of foreign investment consists either of transferring existing ownership titles from domestic to foreign residents, or of simultaneously adding foreign ownership titles to the liabilities side of the balance sheet and cash and/or securities to the asset side. In the latter case, the additional funds on the assets side can then be put to various uses: they can be used to build new capacity or to speculate in the commodities market; they can be used to pay dividends or buy back the company's share; they can be given to the government in return for short-term bonds or smuggled out of the country; etc. But the particular use, whatever it may be, is separate from the act of foreign investment and is entirely unrelated to whether that investment is portfolio or direct.

These changes in ownership, of course, are of great importance. If the flow of capital is large enough, the stock of foreign-owned assets will grow relative to domestically owned assets. And as the ratio rises, the ownership of capital becomes increasingly *trans*national.

The history of this process, from 1870 to the present, is sketched in Figure 1, where we plot the ratio between the value of global foreign assets and global GDP (both denominated in U.S. dollars). The figure contains two partly overlapping annual series: the thicker grey series, which covers selected years during the period 1870-2000, is taken from a study by Maurice Obstfeld and Alan Taylor; the thinner black series, which covers the entire period of 1970-2007, is from a study by Philip Lane and Gian Maria Milesi-Ferretti (with full references indicated in the footnote to the figure). Both series are estimated based on a changing sample of countries. The ratio is computed in three steps: first, by aggregating the foreign assets of the available sample of countries; second, by computing their combined GDP; and third, by dividing the first number by the second. In both series, the sample size increases over time; and as the number of countries grows, the estimates they provide serve to better reflect the actual global ratio.[37]

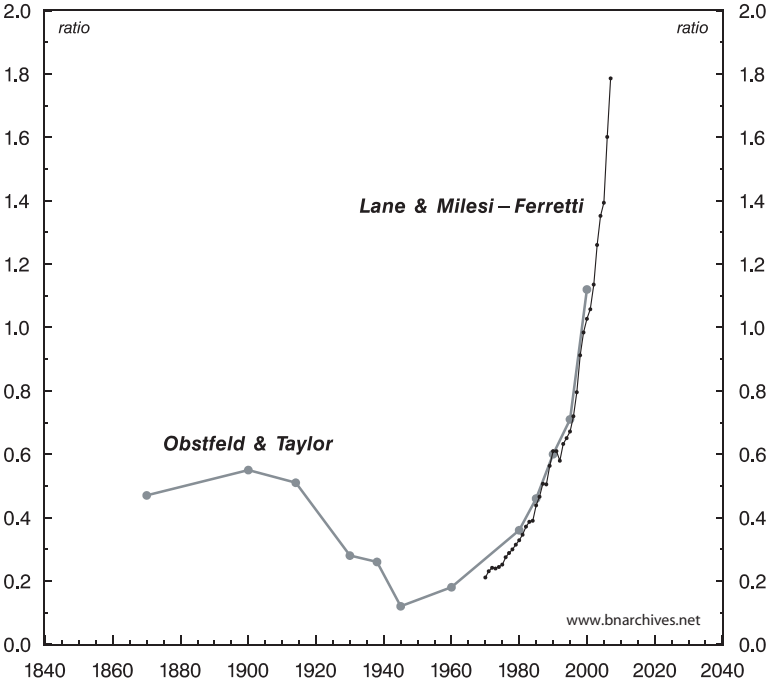
Admittedly, the raw numbers underlying these computations are not the most accurate. The data on foreign ownership are scarce; often they are of questionable quality; rarely if ever are they available on a consistent basis; and almost always they require painstaking research to collate and sometimes heroic assumptions to calibrate. There are also serious problems in estimating global GDP, particularly for earlier periods. Finally, the accuracy of the estimates changes over time, so temporal comparisons must be interpreted with care. But even if we take these severe limitations into consideration, the overall picture seems fairly unambiguous.

The figure shows three clear periods: 1870-1900, 1900-1945 and 1945-2007. The late nineteenth century, marked by the imperial expansion of 'finance capital', saw the ratio of global foreign assets to global GDP grow from 0.47 in 1870 to 0.55 in 1900 (though keep in mind the inaccuracy and bias of the early estimates). This upswing was reversed during the first half of the twentieth century. The mayhem, isolationism and protectionism brought about by the two world wars and the Great Depression on the one hand and the emergence of domestic 'institutionalized waste' on the other undermined the flow of capital and caused the share of foreign ownership to recede. By 1945, with the onset of decolonization under U.S. 'hegemony' and the beginning

[37] The sample data for the earlier years are not only more inaccurate; most likely, they are also systematically biased. The reason is that the ratio of foreign assets to GDP, particularly during the earlier years, was probably smaller in the countries excluded from the sample than in the countries included in it; and if that is indeed the case, the smaller the sample was, the more it overstated the actual global ratio. Obstfeld and Taylor compute a 'hybrid' ratio between the sample foreign assets and the global (rather than the sample) GDP. The resulting estimates are lower than those reported in Figure 1, but their temporal pattern is the same. For a visual comparison of these two estimates, see Francis, Bichler and Nitzan (2010: Figure 2, p. 7).

of the Cold War, the ratio of foreign assets to global GDP hit a record low of 0.12. This was the nadir.

Figure 1
Ratio of Global Gross Foreign Assets to Global GDP



NOTE: Gross foreign assets consist of cash, loans, bonds and equities owned by non-residents. Both gross foreign assets and GDP are estimates based on a changing sample of countries. The Obstfeld & Taylor series (thick grey line) uses a sample that gradually grows from four countries in 1870, to seven in 1900, to 26 in 1980, to 63 in 2000. The Lane & Milesi-Ferretti series (thin black line) uses a sample that gradually grows from 101 countries in 1970, to 177 in 2000, to 178 in 2007.

SOURCE: Thick grey line (1870-2000): Maurice Obstfeld and Alan. M. Taylor, *Global Capital Markets: Integration, Crisis and Growth* (Cambridge: Cambridge University Press, 2004), pp. 52-53, Table 2-1. Thin black line (1970-2007): Philip Lane and Gian Maria Milesi-Ferretti, 'The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004', *Journal of International Economics*, 2007, No. 73, pp. 223-250 (with data updated to 2007 by the authors). Downloaded on August 8, 2009, from http://www.imf.org/external/pubs/ft/wp/2006/data/wp0669.zip.

The next half century brought a massive reversal. In the early 1980s, when Ronald Reagan and Margaret Thatcher started to peddle the wonders of neoliberalism, the ratio of foreign assets to GDP was already soaring; and by 2007, after a quarter century of exponential growth, it reached an all-time high of 1.78.[38]

This final number represents a significant level of transnational ownership. According to recent research by the McKinsey Global Institute, between 1990 and 2006 the global proportion of foreign-owned assets has nearly tripled, from 9% to 26% of all world assets (both foreign and domestically owned). The increase was broadly based: foreign ownership of corporate bonds rose from 7% to 21% of the world total, foreign ownership of government bonds rose from 11% to 31% and foreign ownership of corporate stocks rose from 9% to 27%.[39]

Of course, numbers alone tell only part of the story. The issue here is not merely that foreign ownership is significant in size and rapidly growing. It is also that the attitude toward such ownership has changed radically. The following comparison illustrates this change. In 1987, Kuwait Investment Office (KIO) took advantage of the privatization of British Petroleum to buy 22% of the company's outstanding shares. At the time, the neoliberal Thatcher government was so horrified by this attack on its national 'crown jewel' that it forced KIO to reduce its stake to a more acceptable 9.9%. By contrast, when in 2008 Sheikh Mansoor of Abu Dhabi bought 16% of Barclays Bank – and then sold it less than a year later for a 70% profit – nobody even blinked.[40] The difference? Capital has become totally vendible, within and across borders. There are no crown jewels any more. With the exception of 'national-security' companies and other such oddities, every asset is now fair game. During the recent crisis, the U.S. authorities all but begged sovereign wealth funds to buy U.S. assets.[41]

---

[38] The conventional view, at least until recently, was that global capital mobility is cyclical more than secular, and that the levels of foreign ownership reached at the end of the twentieth century still pale in comparison to those recorded at the beginning of that century (see, for example, Hirst and Thompson 1999: 27-29). This conclusion, though, owed less to the facts and more to misleading calculations. Most analysts, having no access to the actual data on foreign assets and capital flow, relied on the indirect evidence offered by the current account. The logic was that countries that run current account deficits must cover those deficits with capital inflow, so if one sums up the deficits across all countries, the result must be equal, by definition, to the overall sum of global capital flow. This logic, though, is valid only if capital flows in one direction – from countries with current account surplus to countries with current account deficit. But over the past half century, capital has been increasingly flowing in *both* directions; and with this two-way flow – inward *and* outward – the overall movement of capital and the level of foreign assets are no longer related to changes in the current accounts. For more on this issue, see Wallich (1984) and Nitzan (2001).

[39] Farrell *et al.* (2008: 73, Exhibit 3.10). Not surprisingly, the United States, which still has the world's largest pool of capitalized assets, exhibits the lowest levels of inward transnationalization. But these levels, although low relative to other countries, are by no means trivial: in 2006, foreigners owned 14% of all U.S.-listed equities, 22% of its listed bonds, and 20% of the combined value of the two – up from negligible levels in 1990 (74, Exhibits 3.11 and 3.12).

[40] For the BP episode, see Bichler, Rowley and Nitzan (1989: 5-6). For the Barclays Bank story, see Larsen (2009).

[41] See for example, Heinrich (2008).

The Shifting Locus of Ownership

Having outlined the global increase in foreign ownership and the accompanying change in attitude, the next step is to break the aggregate front and examine the *distribution* of this ownership. This is what we do in Figure 2, which compares the foreign asset shares of British and U.S. owners from 1825 to the present.

The figure contains two sets of partly overlapping series: each country is represented first by a dotted series for 1825-1980, and second by a solid series that partly overlaps with and further extends it for the period 1970-2007 (the data sources, along with the statistical caveats, are the same as for Figure 1). Note that the solid series are based on a larger sample of countries. Consequently, during the overlapping period of 1970-1980, these series show the shares of the two countries to be smaller than those measured by the dotted series.

The chart shows two important differences between the earlier era of 'classical imperialism' dominated by Britain and the more recent 'neo-imperial' period led by the United States.

First, there is the pattern of decline. British owners saw their share of global assets fall from the mid-nineteenth century onward, but until the end of the century their primacy remained intact. The real challenge came only in the twentieth century, when capital flow decelerated sharply and foreign asset positions were unwound; and it was only in the interwar period, when foreign investment gave way to capital flight, that the share of British owners fell below 50%.

The U.S. experience was very different. U.S. owners achieved their primacy right after the Second World War, when capital flow had already been reduced to a trickle – and that position was undermined the moment capital flow started to pick up. In 1980, when U.S. 'financialization' started in earnest, U.S. owners accounted for only 28% of global foreign assets. And by 2003, when record capital flow and the U.S. invasion of Afghanistan and Iraq prompted many Marxists to pronounce the dawn of an 'American Empire', the asset share of U.S. owners had been reduced to a mere 18%.[42]

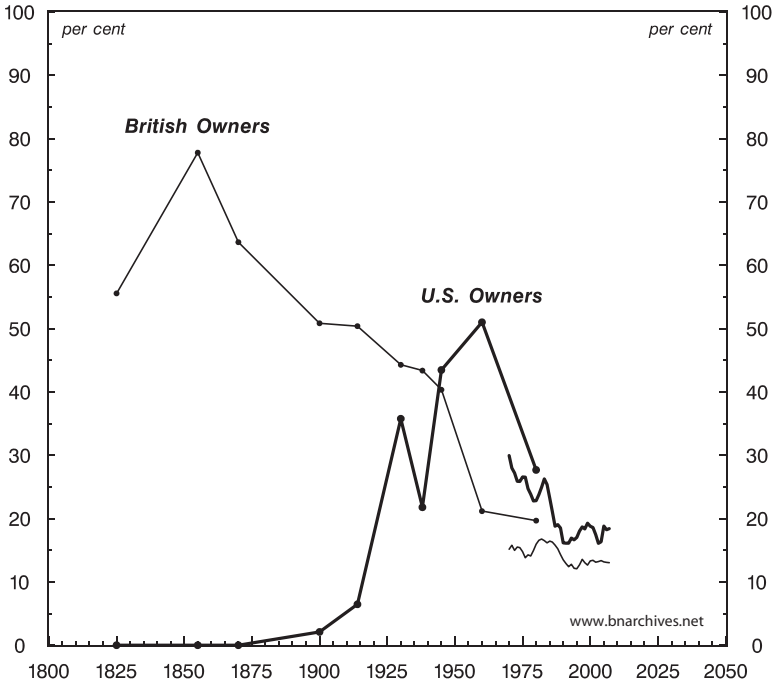
Second, there is the identity of the leading owners. In the previous transition, power shifted from owners in one core country (Britain) to those in another (the United States). By contrast, in the current transition (assuming one is indeed underway) the contenders are often from the periphery. In recent years, owners from China, OPEC, Russia, Brazil, Korea and India, among others, have become major foreign investors with significant international positions – including large stakes in America's 'imperial' debt.[43]

---

[42] For the effect on these conclusions of a changing sample of countries, see the debate in Francis, Bichler and Nitzan (2010: 1-2 and 7-8).

[43] Joe Francis provides a further breakdown of global ownership by region (Francis, Bichler, and Nitzan 2010: 14-15).

Figure 2
Shares of Global Gross Foreign Assets



NOTE: Gross foreign assets consist of cash, loans, bonds and equities owned by non-residents. The dotted series for both British and U.S. owners are based on sample data from Obstfeld & Taylor, with global gross foreign assets representing the aggregate for an unspecified number of countries in 1825, four in 1870, seven in 1900 and 26 in 1980 (with additional increments between these signposts). The solid series for both British and U.S. owners are based on sample data from Lane & Milesi-Ferretti, with global gross foreign assets representing the aggregate for 101 countries in 1970, 177 in 2000, and 178 in 2007 (with incremental increases between the signposts).

SOURCE: Dotted series (1825-1980): Maurice Obstfeld and Alan. M. Taylor, *Global Capital Markets: Integration, Crisis and Growth* (Cambridge: Cambridge University Press, 2004), pp. 52-53, Table 2-1. Solid series (1970-2007): Philip Lane and Gian Maria Milesi-Ferretti, 'The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004', *Journal of International Economics*, 2007, No. 73, pp. 223-250 (with data updated and extended to 2007 by Lane and Milesi-Ferretti). Downloaded on August 8, 2009, from http://www.imf.org/external/pubs/ft/wp/2006/data/wp0669.zip.

Does this shift of foreign ownership represent the rising hegemony of countries such as China – or is what we are witnessing here yet another mutation of imperialism? Perhaps, as some observers seem to imply, we've entered a (neo) neo-imperial order in which the 'Empire' actually *boosts* its power by selling off its assets to the periphery?

The Global Distribution of Profit

Surprising as it may sound, such a selloff is not inconsistent with the basic theory of hegemonic transition. To reiterate, according to this theory, hegemonic transitions are always marked by a financial explosion that is triggered, led and leveraged by the core in a vain attempt to arrest its imminent decline. Supposedly, this explosion enables the hegemonic power to amplify its financial supremacy in order to (temporarily) retain its core status and power. And if retaining that power requires the devolution of foreign assets and the selloff of domestic ones, so be it.

The question is how to assess this power. How do we know whether the core's attempt to leverage global 'financialization' is actually working? Is there a meaningful benchmark for power, and how should this benchmark be used and understood?

Unfortunately, most theorists of hegemonic transitions prefer to deal with general concepts and tend to avoid the nitty gritty data, so it's often unclear how they themselves gauge the shifting trajectories of global power. But given the hyper-capitalist nature of the current epoch, it seems pretty safe to begin with the bottom line: net profit.

Net profit is the pivotal magnitude in capitalism. It determines the health of corporations and their ability to borrow, it tells investors how to capitalize assets and it sets limits on what government officials feel they can and cannot do. It is the ultimate yardstick of capitalist power, the category that subjugates the social individual and makes the whole system tick. It is the one magnitude no researcher of capitalism can afford to ignore.[44]

Of course, the level of profit as such tells us nothing about power. Power is not absolute; it is relative. So in order to assess its extent and movement, our focus should be not the absolute magnitude of profit, but its differential size and temporal redistribution.[45]

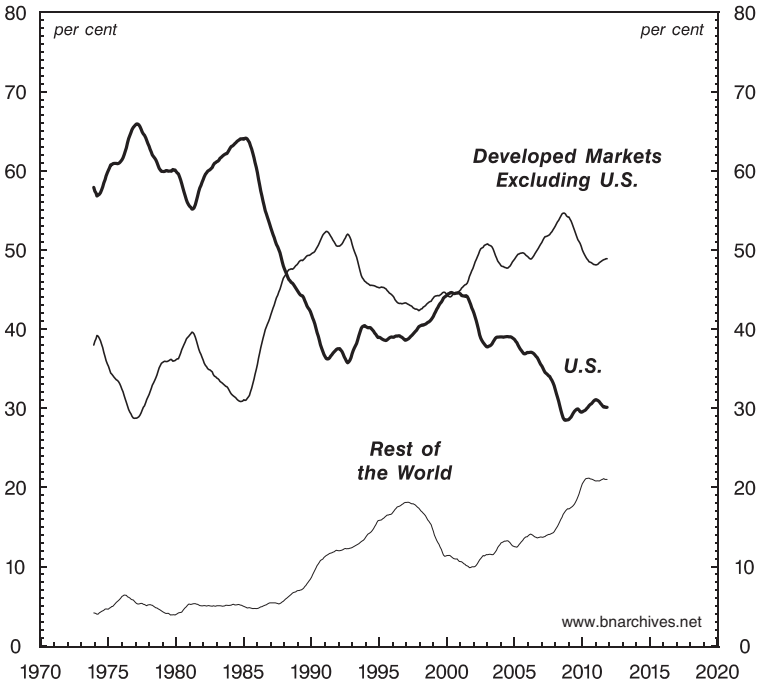
With this rationale in mind, consider Figure 3, which traces the changing distribution of global net profit earned by publicly traded corporations. The chart, covering the period from 1974 to the present, shows three profit series, each denoting the profit share of a distinct corporate aggregate: (1) firms listed in the United States; (2) firms listed in developed markets excluding the United States; and (3) firms listed in the rest of the world – i.e. in 'emerging markets'. In all three series, the underlying raw earnings are reported on a consolidated basis: they include the net profit of parent corporations, the earnings of domestic and foreign subsidiaries, and the earnings share in minority-held companies.

---

[44] There are of course other important yardsticks for capitalist power, such as risk, hype and the normal rate of return. But these yardsticks are intimately related to profit, and given that our concern here is long-term tendencies, the use of net profit seems warranted.

[45] For more on the differential nature of capitalist power, see Nitzan and Bichler (2009a: Ch. 14).

Figure 3
Net Profit Shares of Listed Corporations
(% of World Total)



NOTE: Net profit is computed as the ratio of market value to the price-earning ratio. Data for developed markets excluding the U.S. is calculated by subtracting from the profit of firms listed in developed markets the profit of firms listed in the U.S. Data for rest of the world is calculated by subtracting from the profit of all firms the profits of those listed in developed markets. Series display monthly data and are smoothed as 12-month moving averages. The raw earning data are reported on a consolidated basis, including domestic and foreign subsidiaries and the equity share in minority held firms. The last data points are for November 30, 2011.

SOURCE: Datastream (series code: TOTMKWD(MV) and TOTMKWD(PE) for the market value and price-earning ratio of all listed firms, respectively; TOTMKUS(MV) and TOTMKUS(PE) for the market value and price-earning ratio of U.S.-listed firms, respectively; TOTMKDV(MV) and TOTMKDV(PE) for the market value and price-earning ratio of firms listed in developed countries, respectively).

The chart demonstrates a sharp reversal of fortune. Until the mid-1980s, U.S.-listed firms dominated: they scooped roughly 60% of all net profits, leaving firms listed in other developed markets 35% of the total and those listed in 'emerging markets' less than 5%.

But then the tables turned. During the second half of the 1980s, the net profit share of U.S.-listed firms plummeted, falling to 36% in less than a decade. The 1990s seemed to have stabilized the decline, but in the early 2000s the downward drift resumed. By the end of the decade, U.S. firms saw their net profit fall to 30% of the world total.

The other two aggregates moved in the opposite direction. By 2010, the profits of firms listed in developed countries other than the U.S. reached 50% of the total (down from a peak of 53% a couple of years earlier), while the share of 'emerging market' firms quadrupled to more than 20%.

These numbers, of course, should be interpreted with care. First, note that our profit data here cover only publicly traded firms that are included in the Datastream universe of companies; they do not include unlisted firms, or listed firms that are not part of the Datastream universe. This fact means that variations in profit shares reflect a combination of three very different processes: (1) changes in the amount of profit earned by listed firms, (2) the pace of listing and delisting of firms, and (3) the adding of previously excluded stock markets to the Datastream universe. The two latter factors became important during the late 1980s and 1990s: Europe and the 'emerging markets' saw their stock market listings swell as many private corporations went public, and Datastream added markets that were previously not part of its universe of companies – this at a time when the number of listed firms in the United States remained flat.

Second, the location of a firm's listing says nothing about its operations and owners. Many firms whose shares are traded in the financial centres of the United States and Europe in fact operate elsewhere. And then there is the issue of ultimate ownership. Recall that currently nearly one third of all global assets are owned by foreigners (and perhaps more, given the opaqueness of international criminal ties and money laundering). This proportion is already large enough to make it difficult to determine the 'nationality of capital', and if it were to rise further the whole endeavour would become an exercise in futility.

The theoretical implications of these caveats have received little or no attention from students of hegemonic transitions, and their quantitative implications remain unclear. But even if we take the 'nationality of capital' at face value and consider the numbers in Figure 3 as accurate and representative of this nationality, it remains obvious that 'financialization' has *not* worked for the hegemonic power: despite the alleged omnipotence of its Wall Street-Washington Complex, despite its control over key international organizations, despite having imposed neoliberalism on the rest of the world, and despite its seemingly limitless ability to borrow funds and suck in global liquidity – the bottom line is that the net profit share of U.S.-listed corporations has kept falling and falling.[46]

[46] Using the data from Figure 3, Joe Francis showed that there is a relatively tight correlation between the declining net profit share of U.S.-listed firms and the devaluating U.S. dollar. In principle, the dollar's devaluation can impact the U.S. profit share in two opposite ways: on the one hand, nominal devaluation lowers earnings reported in U.S. dollars relative to earnings

The Engine of 'Financialization'

Now, in and of itself, the collapse of the U.S. profit share – much like the selloff of U.S. assets – isn't at odds with the theory of hegemonic transition. To repeat, this theory suggests that the hegemonic/imperial power, having been weakened by its prior financial excesses (among other ills), will kick-start, promote and sustain a system-wide process of 'financialization'. According to this theory, the latent purpose is to leverage this process in order to slow down the hegemon's own decline – but nowhere does the theory say that this 'strategy', whether premeditated or implemented on the go, has to *succeed*.

Presented in this way, the story sounds historically compelling, logically consistent and empirically convincing – but only if we can first establish one basic fact. We need to show that the global process of 'financialization' indeed has been *led by the United States.* This is the starting point. Only if U.S. 'financialization' preceded, was bigger than and propelled 'financialization' in the rest of the world can we speak of the United States leveraging this process for its own ends. And only then can we assess whether that leveraging has succeeded or failed.

So let's look at the evidence.

Concepts and Methods: How to Measure 'Financialization'?

The initial step in this sequence is to measure 'financialization'. Conceptually, the task may seem simple. All we need to do is calculate the share of financial activity in overall economic activity and then trace the trajectory of the resulting ratio. When this ratio goes up, we can say that the economy is being 'financialized'; when it comes down, we would conclude that it is being 'de-financialized'.

But that is easier said than done.[47]

Begin with the term 'financialization'. The concept is rooted in the classical debate on the source of productivity, a controversy that began with the French Physiocrats, if not earlier, and that continues to haunt economists till this very day. Situated in this

---

reported in other currencies (although with U.S. corporations earning more and more of their profits abroad, the effect of this process has been progressively mitigated); on the other hand, devaluation (after corrections for relative inflation rates), makes U.S.-made goods and services relatively cheaper, and that cheapening should enable U.S.-based firms to raise their global market share. Based on Joe Francis' data, the former (negative) effect has completely overwhelmed the latter (positive) impact, suggesting that U.S. firms were unable to turn cheaper exports to their advantage. More broadly, and assuming one accepts the nationally based approach to capitalist power (which we, personally, do not), the very decline of the U.S. dollar should be indicative of the waning global power of U.S. capitalists. For more on this issue, see Francis, Bichler and Nitzan (2010: 3, Figure 1, as well as pp. 8-9 and 16).

[47] For a detailed analysis of the associated difficulties and impossibilities that we discuss in this section only in passing, see Nitzan and Bichler (2009a: Chs. 6-8 and 10) and Bichler and Nitzan (2009).

larger debate, Marxists tend to identify economic activity as productive if it generates surplus value. Industry, they say, generates such surplus value and is therefore productive. By contrast, commerce and finance do not generate surplus value (but merely appropriate it), which makes them unproductive. The concept of 'financialization' draws on this distinction. It denotes a shift of emphasis from productive industrial activity to unproductive financial activity – a process that is dominated by financiers, directed by financial organizations and governed by the logic of financial intermediation.

The reality of this shift, though, remains elusive. One basic difficulty is that, unlike during the early twentieth century, when Rudolf Hilferding published his treatise on *Finance Capital*, the entity of 'finance' can no longer be equated, however superficially, with 'banks', and not even with 'financial institutions' more generally. Over the past half century, the process of conglomeration has created highly diversified corporate giants whose 'financial' operations cannot be meaningfully disentangled from their 'productive' and 'commercial' dealings.

And that is just for starters. Contemporary capitalism has become thoroughly mediated through discounting and capitalization, and that fact makes every mediated activity *both* 'economic' and 'financial' at the same time. In this context, discriminating between the veneer of financial mediation that is common to all market activity and activity that is 'purely' financial becomes a Sisyphean task.

The main stumbling block here is that, despite hundreds of years of theorizing and endless claims to the contrary, economists do not know how to identify 'productivity', let alone measure it. In the mainstream case, the productivity of an input is counted in terms of the universal utils the input generates. But utils are totally fictitious units. They have no objective existence, even on paper. So liberals have grown accustomed to going in reverse. Instead of measuring the util productivity of an input directly, they deduce it indirectly, by assuming it is 'revealed' by income. According to this logic, if the CEO of Goldman Sachs earns 100,000 times more than an Exxon mechanic, he must be 100,000 times more productive. However, since their respective productivity can never be observed independently of the associated income, the above conclusion ends up hanging on nothing but faith.

Sadly, Marxist computations do not fare much better.[48] Contrary to mainstream economists, for whom productivity is determined by the generation of utils, for Marxists it hinges on the production of surplus value. In this framework, the CEO of Goldman Sachs, by virtue of his 'financial' function as a banking executive, cannot generate surplus value and therefore is unproductive; by contrast, an Exxon mechanic, by virtue of his 'industrial' profession, generates surplus value for his employer and is therefore productive.

[48] The reference here is only to classical Marxists. Neo-Marxists, at least those who have given up on the labour theory of value, lack any objective means of separating productive from unproductive activity to start with.

But this argument, too, has a lethal glitch. Value and surplus value are denominated in universal units of socially necessary abstract labour, and these units are no more real than neoclassical utils. Marxists have never been able to objectively observe, let alone measure, them independently of prices, and this inability leads to a dead end: without a measurement independent of prices, there is no way to verify who *actually* generates surplus value and who does not; without knowing (rather than assuming) where surplus value is generated, there is no objective means of separating productive from unproductive activity; and without that separation, the decision of what constitutes a 'purely' financial activity becomes arbitrary.

One popular way around this obstacle is to associate productive activity with profit and financial activity with net interest (and in some looser versions, also with dividends, rent, excessive depreciation and amortization, taxes and other forms of so-called 'rentier income'). From this perspective, the extent of 'financialization' can be approximated by measuring the ratio of net interest to profit income (or some similar variant): the higher this ratio, the greater the 'financialization', and vice versa.[49]

This framework, though, can be very misleading, even by its own logic. To begin with, the ratio of interest to profit as such has nothing to do with 'financialization': it does not show the growing importance of financiers; it does not show the greater role of financial intermediation; and it does not show the increasing subjugation of society to the principles of financial calculations. In the national accounts, the magnitude 'net interest' denotes the interest payments that private enterprises make to their creditors less the interest payments that private enterprises receive from their debtors.[50] This net interest, like profit, is a legal classification of capitalist income. In this classification, net interest is the return on debt, whereas profit is a return on equity. And that's basically it.

Further, and more importantly for our purpose, there is no correspondence between interest and profit on the one hand and the *type* of production on the other. All corporations – whether they are an Exxon (typically classified as 'industrial'), a Mitsubishi Trading (classified as 'commercial'), or a Goldman Sachs (classified as 'financial') – are capitalized through both debt and equity and therefore pay both interest and profits. The result is that, all else being equal, the higher the debt/equity ratio in a society, the greater the ratio of net interest to profit – regardless of what is being produced or how it is produced. And since both debt and equity are 'financial' entities to start with, the ratio of net interest to profit can tell us nothing about the degree of 'financialization'.

[49] For various measures of this type, see for example Krippner (2005), Epstein and Jayadev (2005), Crotty (2005) and Orhangazi (2008, especially Ch. 2).

[50] Note that 'private enterprises' here include mortgaged home owners, and that the national statisticians subject many of the interest data to cruel imputations.

The Inconvenient Facts

But not all is lost. For the sake of argument, we can forgo our reservations and stick with the most basic conventions. And the convention – at least among capitalists, investors and, increasingly, academic students of the subject – is to treat 'finance' as synonymous with the FIRE sector; i.e. with firms whose primary activities involve financial intermediation (banking, trust funds, brokerages, etc.), insurance or real estate.

Based on this conventional (albeit theoretically loose) definition of finance, and given our specific concern here with capitalist power, it seems appropriate to proxy the extent and trajectory of 'financialization' by looking at the distributive share of total net profit accounted for by FIRE corporations. The magnitude of this share would then indicate the extent to which FIRE firms have been able to leverage 'financialization' for their own end, and the way this share changes over time would tell us whether their leverage has increased or decreased.

This distributional measure of 'financialization' is depicted by the two series in Figure 4. The first series shows the net profit of FIRE corporations as a per cent of the net profit of all U.S.-listed firms. The second series computes the same ratio for firms listed outside the United States. And here we run into a little surprise.

According to the theory of hegemonic transition, the engine of 'financialization' is the United States. This is the black hole of the World System. It is the site where finance has been used most extensively to absorb the system's surplus. It is the seat of the all-powerful Wall Street-Washington Complex. It is where neoliberal ideology first took command and from where it was later imposed with force and temptation on the rest of the world. It is the engine that led, pulled and pushed the entire process.

But the facts in Figure 4 seem to tell a different story. According to the chart, the United Sates has *not* been leading the process. If anything, it seems to have been 'dragged' into the process by the rest of the world. . . .

During the early 1970s, before the onset of systemic 'financialization', the U.S. FIRE sector accounted for 6% of the total net profit of U.S.-listed firms. At the time, the comparable figure for the rest of the world was 18% – three times as high! From then on, the United States was merely playing catch-up. Its *pace* of 'financialization' has been faster than in the rest of the world; but with the sole exception of a brief period in the late 1990s, its *level* of 'financialization' has always been lower. In other words, if we wish to stick with the theory of a finance-fuelled red giant that has exhausted its own energy and is now slowly imploding as its peripheral liquidly runs out, we should apply that theory not to the United States, but to the rest of the world!

Indeed, even the most recent period of crisis seems at odds with the theory. According to the conventional creed, both left and right, the current crisis is payback for

the sins of excessive 'financialization' and improper bubble blowing.[51] In this Galtonean theory, deviations and distortions always revert to mean, ensuring that the biggest sinners end up suffering the most. And since the U.S. FIRE sector was supposedly the main culprit, it was also the hardest hit.

Figure 4
Net Profit Shares of Listed FIRE Corporations
(% of Region)

NOTE: Net profit is computed as the ratio of market value to the price-earning ratio. Total profit and FIRE profit for firms outside the U.S. are calculated as a residual, by subtracting from the world figures the corresponding figures for the U.S. The raw earning data are reported on a consolidated basis, including domestic and foreign subsidiaries and the equity share in minority-held firms. The last data points are for November 30, 2011.

SOURCE: Datastream (series code: TOTMKWD(MV) and TOTMKWD(PE) for the market value and price-earning ratio of all listed firms, respectively; FINANWD(MV) and FINANWD(PE) for the market value and price-earning ratio of all listed FIRE firms, respectively; TOTMKUS(MV) and TOTMKUS(PE) for the market value and price-earning ratio of U.S.-listed firms, respectively; FINANUS(MV) and FINANUS(PE) for the market value and price-earning ratio of U.S.-listed FIRE firms, respectively).

[51] Bichler and Nitzan (2008a, 2009).

The only problem is that, according to Figure 4, the U.S. *wasn't* the main culprit. On the eve of the crisis, the extent of 'financialization' was greater in the rest of the world than in the U.S. And yet, although the world's financiers committed the greater sin, it was their U.S. counterparts who paid the heftier price. The former saw their profit share decline moderately from 37% to 23% of the total, while the latter watched their own share crash from 32% to 10%. And when the market finally rebounded, FIRE in the rest of the world recovered to about 30% (not far from its all-time high), while in the United States it reached barely 18% (a bit over half of its former record). It seems that the gods of finance have their own sense of justice.

Or maybe not? According to Michael Hudson, the conventional focus on profit, although adequate in most cases, can be very deceptive when applied to the FIRE sector. The reason is twofold. First, there is the issue of tax accounting. The process of financialization, he says, allows FIRE firms to leverage their political primacy over 'industrial' companies by gradually reclassifying more and more of their profit as cost. They do that by claiming excessive depreciation and depletion allowances on their real-estate assets; these allowances – which far exceed what is needed to replenish the depreciation portion of the underlying real-estate – serve to reduce their taxable income, often to nil; and that reduction greatly boosts their after-tax cash flow. The second part of the story has to do with international differences. According to Hudson, this tax minimization by the FIRE sector has been much more successful in the United States than elsewhere in the world. And since FIRE firms capitalize their entire after-tax cash flow, focusing on net profit only – as we do in Figure 4 – is likely to produce a misleading picture. Our data in this figure show the net profit share of U.S.-listed FIRE firms to have lagged behind the comparable share of FIRE firms listed in the rest of world. But if instead of net profit we were to measure cash flow – i.e. net profit *plus* depreciation – the results would have been the exact opposite: U.S. FIRE would be the leader and the FIRE sector in the rest of the world the lagger.[52]

We find these claims intriguing but unconvincing. The first difficulty is theoretical. It is certainly true that individual firms, investors and analysts often consider various measures of cash flow, particularly in short-term matters of mergers, acquisitions and divestments. But in general, and especially over the longer term, the ultimate yardstick that guides accumulation is not the 'shadow measure' of cash flow, but the legally sanctified entity of reported net earnings.

[52] The argument regarding the key role of depreciation and depletion allowances is elaborated in Hudson (2010). His suggestion that the deprecation allowances of U.S.-listed FIRE firms are much larger (if not infinitely larger) than those of FIRE firms listed outside the United States, and therefore that the data in Figure 4 are misleading, was made in a series of private communications with us in September 2009.

Figure 5
Cash Flow Shares of Listed FIRE Corporations
(% of Region)

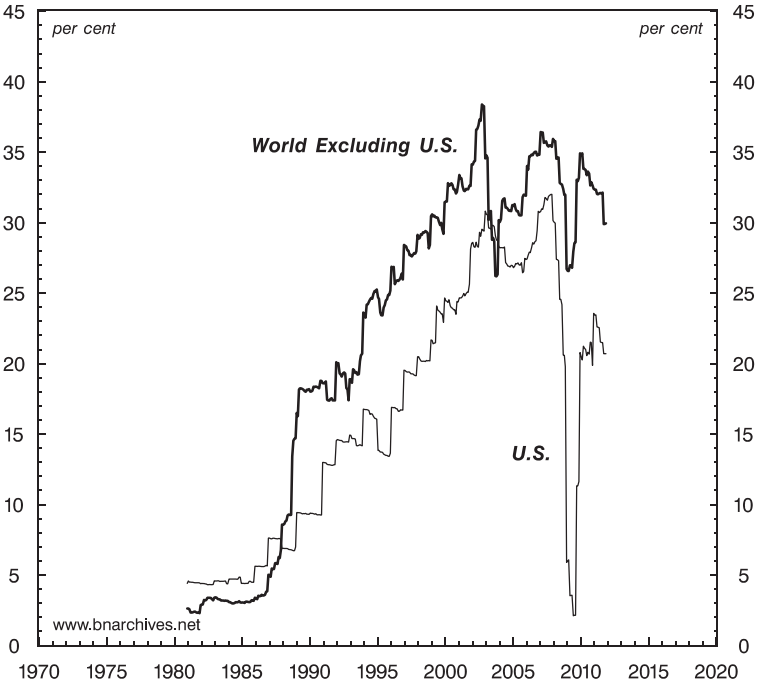
NOTE: Cash flow is the sum of net earnings and all non-cash charges or credits. Normally cash flow consists of net profit before preferred dividends, depreciation, amortization, reserve charges, provision for loan losses for banks and provision for future benefits for insurance companies; it excludes extraordinary items and changes in working capital. Cash flow is computed by dividing market value by the price-to-cash-flow ratio. Total cash flow and FIRE cash flow for firms outside the U.S. are calculated as a residual, by subtracting from the world figures the corresponding figures for the U.S. The last data points are for November 30, 2011.

SOURCE: Datastream (series code: TOTMKWD(MV) and TOTMKWD(PC) for the market value and price-to-cash-flow ratio of all listed firms, respectively; FINANWD(MV) and FINANWD(PC) for the market value and price-to-cash-flow ratio of all listed FIRE firms, respectively; TOTMKUS(MV) and TOTMKUS(PC) for the market value and price-to-cash-flow ratio of U.S.-listed firms, respectively; FINANUS(MV) and FINANUS(PC) for the market value and price-earning ratio of U.S.-listed FIRE firms, respectively).

The second difficulty has to do with the facts. Regardless of whether one uses net profit or cash flow, the conclusion seems to be the same: U.S.-listed FIRE firms are laggers rather than leaders. The relevant data are presented in Figure 5. The chart compares two series: the first series shows the cash flow of FIRE corporations as a per cent

of the cash flow of all U.S.-listed firms; the second series computes the comparable ratio for FIRE firms listed outside the United States. Now, unlike the data for net profit, those for cash flow are more 'jumpy', perhaps as a result of the often arbitrary nature of depreciation allowances, occasional changes in tax laws and the absence of temporal smoothing when monthly observations are interpolated from quarterly and annual reports. But the overall trajectories of the cash-flow series are not much different from those of net profit: in both cases, the FIRE share is larger outside than inside the United States, and in both cases the overall trend has been for U.S.-listed firms to play catch-up with the rest of the world, rather than vice versa.

Figure 6
EBIT Shares of Listed FIRE Corporations
(% of Region)



NOTE: EBIT denotes corporate earnings before interest and taxes. Total EBIT and FIRE EBIT for firms outside the U.S. are calculated as a residual, by subtracting from the world figures the corresponding figures for the U.S. The last data points are for November 30, 2011.

SOURCE: Datastream (series code: TOTMKWD(DWEB) and FINANWD(DWEB) for the EBIT of all listed firms and all listed FIRE firms, respectively; TOTMKUS(DWEB) and FINANUS(DWEB) for the EBIT of all U.S.-listed firms and U.S. FIRE firms, respectively).

And since we have already broadened the vista, it is worthwhile to extend the examination to cover the entire flow of non-labour corporate income. Figure 6 offers such a comparison by measuring the share of listed FIRE firms in EBIT – a shorthand for earnings before interest and taxes. This measure, reminiscent of the Marxist 'surplus' loosely measured in price terms, gives a broad view of capitalist income before it gets divided and appropriated by various capitalist and governmental entities. As before, one series in the chart measures the share of FIRE in the EBIT of all U.S.-listed firms, while the other measures the same share for FIRE firms listed in the rest of the world. Now, because it includes interest and taxes, EBIT is 'looser' than net profit and cash flow, and as such it cannot easily be interpreted as a proxy for capitalist power. And yet here, too, the historical conclusion stands: the U.S. FIRE sector has *lagged* the rest of the world. Until the late 1980s, the share of FIRE in EBIT was higher in the United States than elsewhere – but that was when both ratios were insignificantly small. However, once the two series started to rise, U.S.-listed FIRE firms consistently lagged behind their foreign counterparts.

In other words, regardless of the particular flow – be it the quintessential measure of net profit or the wider indices of cash flow and EBIT – the pattern remains the same: the process of 'financialization', assuming we accept its standard definition, appears to have been 'led' not by the United States, but by the rest of the world.

The End of a Nexus?

Of course, this isn't the first time that a monkey wrench has been thrown into the wheels of the ever-changing nexus of imperialism and financialism. As we have seen, over the past century the nexus has had to be repeatedly altered and transformed to match the changing reality. Its first incarnation explained the imperialist scramble for colonies to which finance capital could *export* its 'excessive' surplus. The next version talked of a neo-imperial world of monopoly capitalism where the core's surplus is absorbed *domestically*, sucked into a 'black hole' of military spending and financial intermediation. The third script postulated a World System where surplus is *imported* from the dependent periphery into the financial core. And the most recent edition explains the hollowing out of the U.S. core, a 'red giant' that has already burned much of its own productive fuel and is now trying to 'financialize' the rest of the world in order to use the system's external liquidity.

Yet, here, too, the facts refuse to cooperate: contrary to the theory, they suggest that the U.S. 'Empire' has followed rather than led the global process of 'financialization', and that U.S. capitalists have consistently been less dependent on finance than their peers elsewhere.

Of course, this inconvenient evidence could be dismissed as cursory – or, better still, neutralized by again adjusting the meaning of imperialism and financialism to fit

the new reality. Undoubtedly, there are those who will hail such adjustment as evidence of strength and vitality, the hallmark of a theory flexible enough to account for new circumstances. But too much flexibility makes for irrefutability. So maybe it is time to stop the carousel and cease the repeated retrofits. Perhaps we need to admit that, after a century of transmutations, the nexus of imperialism and financialism has run its course, and that we need a new framework altogether.

7

No Way Out: Crime, Punishment and the Capitalization of Power [1]

Abstract

The United States is often hailed as the world's largest 'free market'. But this 'free market' is also the world's largest penal colony. It holds over seven million adults – roughly five per cent of the labour force – in jail, in prison, on parole and on probation. Is this an anomaly, or does the 'free market' require massive state punishment? Why did the correctional population start to rise in the 1980s, together with the onset of neoliberalism? How is this increase related to the upward redistribution of income and the capitalization of power? Can soaring incarceration sustain the unprecedented power of dominant capital, or is there a reversal in the offing? The paper examines these questions by juxtaposing the 'Rusche thesis' with the notion of capitalism as a mode of power. The empirical analysis suggests that the Rusche thesis holds under the normal circumstances of 'business as usual', but breaks down during periods of systemic crisis. During the systemic crises of the 1930s and the 2000s, unemployment increased sharply, but crime and the severity of punishment, instead of rising, dropped perceptibly.

[1] This article was first published in *Crime, Law and Social Change* (Bichler and Nitzan 2014b, Vol. 62, No. 3, April). It was first presented at the Third Forum on Capital as Power, 'Capitalizing Power: The Qualities and Quantities of Accumulation', held on September 28-30, 2012, at York University in Toronto.

Introduction

In May 2011, the U.S. Supreme Court ordered the State of California to release 30,000 to 40,000 of its 140,000 inmates (Supreme Court of the United States 2011; Liptak 2012). California's prisons have become so overcrowded that the Supreme Court declared the situation unconstitutional. The decision was imminent. For nearly two decades, California, along with many other states, was busy getting 'tough on crime'. In the early 1990s, the state enacted the 'Three-Strikes Law', which mandates life sentences for third-time serious crime offenders, and it pursued the country's 'war on drugs' and other law-enforcement campaigns with increasing zeal. Soon enough, its prisons were overflowing at nearly twice their capacity.

The United States is often portrayed as the archetypical liberal model. It is the world's largest, most prosperous 'free market' and the greatest generator of profit on earth. And yet this liberal haven is also the largest penal system in the world. There are now more than two million inmates in its prisons and jails and another five million on probation and on parole. If you add these two numbers together, you get a 'correctional population' of over seven million. This correctional population is the largest in the world – both absolutely and relative to the overall population – and it is also the largest the country has ever seen.

From a conventional viewpoint, this combination of market prosperity and intense punishment may seem puzzling. The common expectation is for crime and punishment to correlate with poverty, backwardness and deprivation; to be a feature of the Third World, not the First.

Knowingly or not, this expectation is grounded in the customary separation of production from state and capital from power. According to the liberal version of this separation, accumulation breeds economic prosperity, and prosperity in the economic sphere in turn reduces crime and calls for less punishment in the socio-political sphere. The radical viewpoint, particularly the Marxist, transcends this simplistic economism. But the economics/politics bifurcation nonetheless remains, as Marxists still prioritize the cycle of industrial production and employment as key to understanding the ups and downs in imprisonment.

This paper rests on a very different understanding of what constitutes capitalization, how it evolves historically, and the ways in which it relates to crime and punishment. Our starting point is to annul the standard separation between 'economic' production and accumulation on the one hand and 'political' institutions and the state on the other. If we discard the politics/economics duality and instead think of capital as power and of capitalism as a mode of power, the puzzle disappears. The greater the capitalization of power, the greater the resistance to that capitalization and the larger the force needed to prevent this resistance from exploding. As profits increase to make distribution more unequal, the result is mounting resistance from below, and this resistance in turn leads to retaliation from above. The rising crime and

intensifying punishment that we now see in the United States are key manifestations of this dialectic of capitalized resistance and retaliation.

The Questions

The purpose of this article is to examine the issue of crime and punishment within the larger context of capitalized power, and specifically in relation to the limits of such power.

This exploration continues the line of argument we have developed over the past several years in a series of conference presentations and papers. In 2009-2011, we introduced the concepts of systemic crisis and systemic fear (Nitzan and Bichler 2009b; Bichler and Nitzan 2010b; Kliman, Bichler, and Nitzan 2011).[2] We claimed that the current crisis – which started not in 2008 but in 2000 – is systemic, and that capitalists are now concerned not so much about employment, production or even profit, but about the very survival of their system.

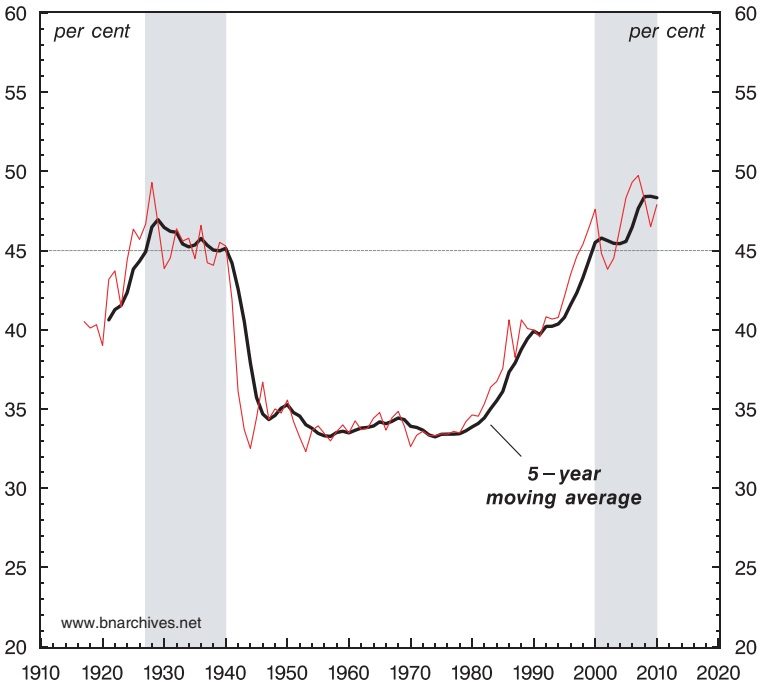
Then, in 2011-12, we examined the 'asymptotes of power' (Bichler and Nitzan 2012a).[3] Capitalists in general and dominant capitalists in particular, we argued, have objective reasons to fear for their system. We showed that, in the United Sates, the present distribution of income-read-power – ranging from the most aggregate indicators of the national accounts all the way to the differential earnings of dominant capital – is pushing against its class limits. And we suggested that, if the pushing continues, it could trigger systemic collapse.

The goal of the present paper is to examine the darker side of this struggle. In the past, resistance to capital was associated mainly with production, workers, left political parties, strikes and mass demonstrations. But as the world changed, new forms of resistance and retaliation have emerged, and the ones we will look at here are crime and punishment. There is an impressive and thought-provoking Marxist literature that deals with the political economy of crime and punishment. But as we shall see, this literature, which goes all the way back to Friedrich Engels (1971, originally published in 1845), follows a research path and offers explanations that are quite different from the ones given here.[4]

---

[2] The arguments explored in these articles were presented at the First Forum on Capital as Power: 'Crisis of Capital, Crisis of Theory', held at York University on October 29-30, 2010.
[3] This work was first presented at the Second Forum on Capital as Power: 'The Capitalist Mode of Power: Past, Present, Future', held at York University on October 20-21, 2011.
[4] Recent contributions to this literature include Lynch (1988), Michalowski and Pearson (1990), Michalowski and Carlson (1999), Lynch (1999), Lynch and Michalowski (2006), Greenberg and West (2001) and Carlson, Bradshow and Buist (2013). For a critical review, see Lynch (2010).

Figure 1
Income Share of the Top 10% of the U.S. Population



NOTE: Income is defined as 'market income', including capital gains; it excludes government transfers. Grey areas indicate periods during which the 5-year moving average of the data series exceeded 45%. The last data point is for 2010.

SOURCE: The World Top Incomes Database http://g-mond.parisschoolofeconomics.eu/topincomes/ (retrieved on September 19, 2012).

Let us start with two charts that relate the distribution of income and capital on the one hand with the extent of state punishment on the other. Figure 1 shows the income share of the top 10 per cent of the U.S. population. This share offers a proxy, however imperfect, for the power of the ruling class and the thick power belt that supports it. The shaded areas in the figure denote two historical extremes – periods during which the income share of the top 10 per cent of the population exceeded 45 per cent. During the 1930s, this share approached 47 per cent of total income. And in retrospect, that level proved to be the asymptote of capitalist power. Pushing against it triggered a systemic crisis, followed by the complete *creordering* of the U.S. political economy and a sharp decline in capitalist power, proxied here by a large drop in income inequality. The situation now is remarkably similar, both quantitatively and qualitatively. During the 2000s, the income share controlled by the top 10 per cent of the population approached 48 per cent, a level whose attainment and sustainment

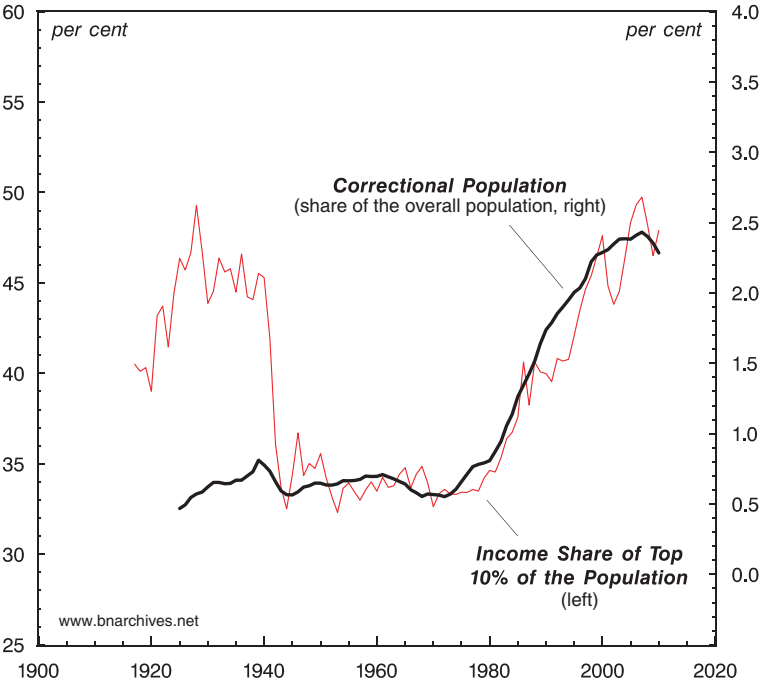
required the ruling class to subject the underlying population to increasing doses of violence, pain and sabotage.

Figure 2 illustrates one key manifestation of this process – and the difficulty of sustaining it. The chart reproduces the distributional measure from Figure 1 and contrasts this measure with the adult 'correctional population', expressed as a share of the overall population. The correctional population comprises adults in prison, in jail, on probation and on parole.[5] And as the chart shows, the 'correctional' share of the population is tightly and positively correlated with the distributional power of the ruling class: the greater the power, the larger the dose of violence inflicted on the underlying population. Presently, almost 2.5 per cent of the U.S. population is under some sort of institutional punishment – which, as indicated, is the largest proportion in the world and the highest in the country's history. Although there are no hard and fast rules here, it is doubtful that this massive punishment can be increased much further without highly destabilizing consequences. The 2011 Supreme Court order to release 30,000 to 40,000 prisoners is perhaps a sign that the ruling class is apprehensive of such a destabilization; and the apparent peak in both income inequality and the correctional population suggests that capitalist power may be approaching its asymptotes and that a systemic reversal could be in the offing.

Now, let us focus on the correctional population. In Figure 3, the black series at the bottom denotes the correctional population as a share of the overall population (which we take from Figure 2). The top red series shows the annual rate of change of the bottom series. Historically, this rate of change has fluctuated between −10 and +10 per cent, and the question we need to ask is what drives these changes: Why did the correctional population remain fairly stable till the late 1970s? Why did is soar during much of the neoliberal 1980s and 1990s? And why did it level off in the 2000s?

[5] Raw data for the overall correctional population are available only from 1980 onward. For the period of 1925-1979, the raw data cover jail and prison inmates only. Note, however, that for the period of 1980-2010, the overall correctional population and the number of jail and prison inmates are tightly correlated, with a Pearson coefficient of 0.993. For this paper, we assumed that the two series moved in tandem also during the period of 1925-1979 and used the latter series to extrapolate the former. Our empirical work here utilizes the resulting raw/extrapolated series for the overall correctional population. The conclusions, though, would have been the same had we used the jail and prison population instead.

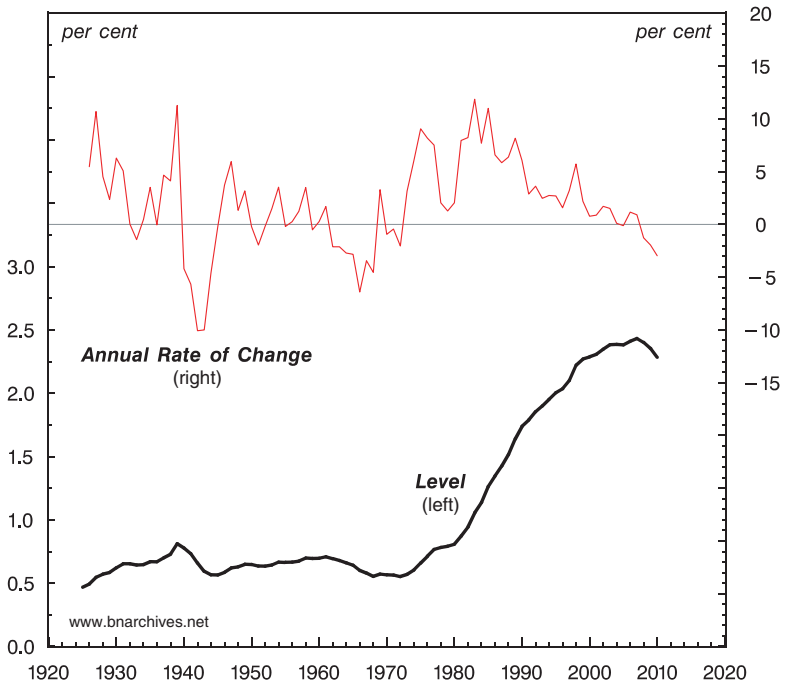
Figure 2
U.S. Income Distribution and the Correctional Population



NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.98); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are for 2010.

SOURCE: The income share of the top 10% of the population is from The World Top Incomes Database http://g-mond.parisschoolofeconomics.eu/topincomes/ (retrieved on September 19, 2012). Data on the correctional population are from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv)). Population data till 1929 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Aa7); from 1930 onward, the data are from the U.S. Bureau of the Census through Global Insight (series code: N@US).

Figure 3
U.S. Correctional Population as a Share of the Overall Population



NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.98); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are for 2010.

SOURCE: Data on the correctional population are from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv)). Population data till 1929 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Aa7); from 1930 onward, the data are from the U.S. Bureau of the Census through Global Insight (series code: N@US).

Georg Rusche

Until the 1930s, these types of questions were never asked, let alone answered. The subject of crime and punishment was studied mostly by novelists, legal experts, doctors, psychologists, philosophers and moralists. It was rarely if ever dealt with by political economists, and it was certainly never studied scientifically.

The first to undertake this type of study was the German political economist Georg Rusche (for a biographical sketch of Rusche, see Melossi 2003). Rusche was born in 1900 and received his PhD in economics in the mid-1920s. He was interested in labour economics, and he also became involved in prison work. This background led him to contemplate the connection between punishment and the labour market. In the early 1930s, he was commissioned by the Frankfurt School to write a book on the subject, and shortly thereafter he produced a concise article, titled 'Labor Market and Penal Sanction', where he spelled out his thesis (Rusche 1933). Six years later, he published, together with Otto Kircheimmer, the full manuscript, titled *Punishment and Social Structure* (Rusche and Kirchheimer 1939).[6]

According to Rusche, crime and punishment were too important to be left out of political economy. They needed to be anchored in economic theory, he said, and they had to be embedded in the evolution of class relations and class conflict. What were the basic propositions the researcher should start from? Rusche offered four.

- The first proposition – which today may sound like a liberal triviality – concerned the goal of the penal system. Crime consists of acts forbidden by society, and one of the purposes of the penal system, Rusche posited, is to limit and reduce those acts.

- The second proposition – which nowadays may ring like a mainstream cliché, but back in the 1930s sat well with the materialist emphasis of Marxist analysis – had to do with Bentham's 'calculus of pleasure and pain'. In order to deter crime, the penal system needs to convince people that 'crime doesn't pay'; in modern economic parlance, we would say that it needs to make the expected pain from punishment greater than the expected gains from crime.

- The third proposition identified what we may call the 'asymptotes of penality'. Most people disposed to crime come from the lower strata of society, where the conditions of life are the hardest. This fact means that in order to deter crime, the penal sanction must be worse than the living conditions of these lower strata. 'If the prison doesn't underbid the slum in human misery', Rusche (1933: 4) quotes Bernard Shaw, 'the slum will empty and the prison will fill'. In other words, the lowest living conditions in society set the upper limit of the penal system.

[6] Although the detailed analysis was published jointly by Rusche and Kirchheimer, this paper focuses on the key propositions first articulated by Rusche alone.

- The fourth and final proposition concerned the rate of unemployment. Many factors affect the living conditions of the lower strata, says Rusche. But the most important by far is the labour market, and particularly the 'excess supply/demand' for labour, or the rate of unemployment. When there is 'excess supply', unemployment rises and wages decline, causing crime to increase and punishment to intensify. And when there is 'excess demand' and unemployment decreases, the opposite process is set in motion.

These observations, which Rusche says hold in *every* society, set the general boundaries of penality:

- When labour is abundant, deprivation is close to its limits, so the unemployed can be deterred from crime only by the ultimate punishment: death. Rusche gives the example of China, where a huge reserve army of unemployed makes human life worth close to nothing. Under those conditions, he observes, it is common for captured criminals to be executed without much fuss.

- By contrast, when labour is scarce and there are not enough workers to fill all the jobs, the penal system shifts toward reform and exploitation. The goal now is not to prevent the hungry from criminal acts, but to convince unwilling labourers and criminals that they need to be working. This situation, says Rusche, existed for example during the European Enlightenment of the seventeenth century, when 'excess demand' for labour ushered in by the Mercantilist Era brought prison reforms. Moreover, since 'excess demand' for workers drives wages up, it became profitable to lock up criminals and use them as forced labour, and that too was a feature of European Mercantilism. All in all, a tight labour market causes the system to move from execution to exploitation.

Now these are the two logical extremes: death on the one hand, penal reform and forced labour on the other. A political economy of crime and punishment, says Rusche, needs to start from this analytical skeleton and then flesh out the real historical process that Disraeli referred to as the 'two nations' and Marx called the 'class struggle'. The first person to offer such analysis was Rusche.

Rusche's own work was largely historical and comparative. He went through a series of epochs, examining in each case (1) the conditions of the labour market; (2) the nature of crime; and (3) the intensity of punishment. And what he found was largely consistent with his hypothesis.

- During the early Middle Ages, land was abundant and the population sparse. Most crime was about passion rather than property, and punishment usually took the form of revenge, penance or monetary fines.

- In the late Middle Ages, land grew scarcer and the population more abundant. There were peasant wars and social unrest, and armies of beggars became commonplace. Property crime and robbery were on the rise, but criminals were often unable to pay, so punishment grew crueller and execution more common.

- During the Mercantilist period, roughly the seventeenth century, wars, hunger and plagues reduced the population, while trade raised the demand for workers. Labour became scarcer and wages increased. It was in this context that the Enlightenment movement made punishment more humane and that imprisonment emerged as a new venue to exploit forced labour.

- In the Industrial Revolution, roughly the eighteenth century, mechanization made workers abundant, wages fell and the reserve army of the unemployed swelled. Forced labour was no longer necessary, and prison conditions became punitive and grew harsher.

- In America till the late nineteenth century, rapid industrial development, abundant land and a relatively small population made labour scarce and wages high. The crime scene accorded with Rusche's hypothesis: criminal offences were low; prison reform was in full swing; conditional sentences, parole and probation were increasingly used; and scientists began to study the causes of crime and how welfare policies can abate them.

- Rusche also provided an interesting comparison between the United States and Germany during the 1930s. In America, he said, massive unemployment and weak unions drove wages down, causing the penal system to become more overcrowded, brutal and repressive. In Germany, in contrast, the presence of strong labour unions mitigated the decline of wages and helped moderate penal sanctions.

- Finally, Rusche was also prescient in predicting the use of concentration camps to solve the labour shortages created by the rearmament drives of totalitarian regimes.

The Puzzle

Rusche himself received little recognition in his lifetime and committed suicide in 1950. Although he offered a very impressive starting point for what was then a totally new approach, for a long time his work remained largely unknown and did not make it to the mainstream of either criminology or sociology, let alone political economy.

It was only in the 1980s, with soaring U.S. crime and the massive increase in incarceration, that his approach finally gained some traction, particularly in the critical literature. Also, there were now more systematic data to study, and with computing becoming cheaper, critical sociologists and radical criminologists started to subject Rushe's hypotheses to various empirical investigations.

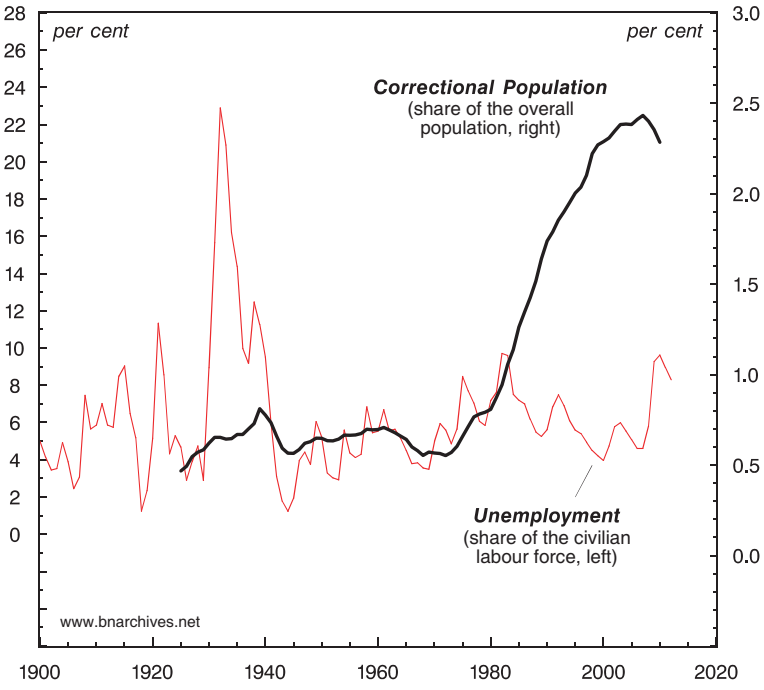
But then there arose a puzzle. Whereas Rusche's long-term historical hypotheses seemed to shed light on various epochs and lead to derivative theses and theories, the conclusions from shorter-term analyses, particularly of contemporary Western societies, were more ambiguous.

The breakdown happened around the 1980s. The central axis of Rusche's argument is that penality should be positively correlated with 'excess supply' in the labour market. Most researchers take the rate of unemployment as the key proxy for 'excess supply' of labour and the share of the overall population under 'correction' as the proxy for penality.[7] These two proxies are plotted in Figure 4 – unemployment on the left scale and the correctional population on the right. Now, the chart shows that until the early 1980s the two proxies were correlated positively (though by no means tightly). However, from the early 1980s onward, this correlation breaks down completely. With Ronald Reagan in office and neoliberalism in full swing, unemployment declined – yet the correctional population went vertical. On the face of it, then, it would seem that the Rusche thesis was loosely valid until the beginning of neoliberalism, but not afterwards.[8]

[7] The 'excess supply' of labour and the level of penality could be estimated in many different ways. Given the broad nature of our claims, we deliberate focus on the simplest, most conventional measures.

[8] Inverarity and MCarthy (1988, 1989) offer empirical support for the Rusche thesis till the 1980s. For a recent review of the empirical literature and its shortcomings, see Pfaff (2008). For a theoretical critique, see Lynch (2010).

Figure 4
U.S. Unemployment and the Correctional Population



NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. Prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.91); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are 2010 for the correctional population and 2012 for unemployment.

SOURCE: Data on the correctional population are from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv)). Population data till 1929 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Aa7); from 1930 onward, the data are from the U.S. Bureau of the Census through Global Insight (series code: N@US). Unemployment till 1947 is from *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ba457); from 1948, data are from the U.S. Bureau of Labor Statistics through Global Insight (series code: RUC@US).

Incarceration and Exploitation

This apparent breakdown meant that, from the early 1980s onwards, radical criminologists and critical sociologists were no longer able to establish a simple link between unemployment and incarceration. Their explanations, writes Michael Lynch (2010 :73), have 'failed to explore the independent significance of the direct effect of economic structures on incarceration and punishment, and thus are inconsistent with the position taken by Rusche and Kirchheimer'.

Lynch's own solution is to make Rusche's labour-market thesis a subset of the broader Marxist understanding of 'productive relationships' in capitalism. His starting point is the rate of exploitation in the so-called 'productive sector', specifically manufacturing. Competitive forces compel capitalists in this sector to use labour-saving technical change, he explains; the result is growing mechanization, which tends to raise the rate of exploitation, defined as the sectoral ratio of surplus value to variable capital; with the ratio between capitalist and labour incomes increasing over time, manufacturing employment tends to diminish and the working class suffers increasing marginalization, alienation and exploitation; and it is these later impacts that lead to rising crime, stiffer penal enforcement and higher incarceration.

This broad Marxist view, Lynch argues, enfolds the narrow Rusche thesis. 'The unemployment rate', he writes, 'taps into a *portion* of the marginalization process, but fails to represent its more expansive outcomes (alienation and exploitation; deskilling of the labor force; distinctions between types and duration of unemployment, etc.,) associated with Marx's theory of surplus value' (2010: 78, emphasis added). The broad exploitation perspective, he adds, also differs from the post-Fordist model (De Giorgi 2006, 2007), according to which the historical shift from 'economies of scale' to 'economies of scope' has served to loosen the links between unemployment, crime and penality.

Lynch (2010) puts his model to a statistical test. Focusing on the United States during the period of 1977-2004, his multivariate empirical analysis shows changes in incarceration to be positively correlated with the rate of exploitation in manufacturing.[9] He is unable, however, to support Rusche's thesis – namely, that the level of incarceration during this period is positively correlated with unemployment.

The main difficulty with this approach lies in the underlying categories (for a detailed critique of Marxist value theory, see Nitzan and Bichler 2009a). In order to measure the rate of exploitation in society, Marxists need, among other things, to identify the socially necessary abstract labour contents of commodities and to distinguish productive activity (which generates surplus value) from unproductive activity (which uses it). Unfortunately, labour values cannot be observed, and there is

[9] Lynch computes the amount of surplus value as the difference between manufacturing value added and the manufacturing wage bill. Assuming that prices are equal to values, this measure excludes the very large surplus value that, according to Marxist analysis, originates in manufacturing but ends up being consumed by the unproductive sectors.

no objective way to separate productive from unproductive activity. The common solution is to take a shortcut. Most Marxist analysts use the neoclassical price and quantity estimates of the national account as proxies for Marxist labour values, and they further assume that all surplus value originates in several sectors of the national accounts that they classify as 'productive' (usually manufacturing, agriculture, construction, mining and utilities).

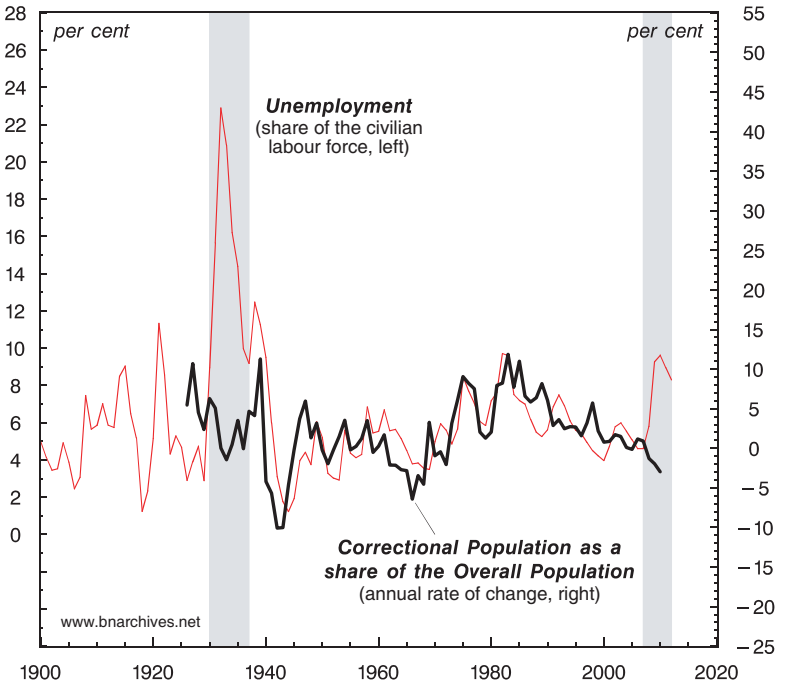
This seems to us a theoretically problematic and historically outdated framework on which to build an encompassing political economy of contemporary capitalism. Does it make sense to trace the origin of all capitalist income to a shrinking sector that currently accounts for a mere 10-20 per cent of all business activity, and that is likely to get even smaller? And if penality in society is indeed driven by the exclusion, alienation and marginalization of workers, shouldn't this impact be mediated, at least in part, through the rate of unemployment? Crime and punishment in capitalism certainly need to be understood as part of the broader logic of accumulation. But in our view, this broader logic can no longer be easily analysed with the 'material' categories of nineteenth-century sweatshops, abstract labour, productive capital and the rate of exploitation.

***Re*-search**

One way or the other, the *empirical* rejection of the Rusche thesis has been too hasty. It seems to us that, at any point in time, penality should be proxied not by the overall level of the correctional population, but by its rate of change. The reason is simple. The overall level of the correctional population is determined by two factors: (1) the cumulative results of past crime and punishment; and (2) current crime and punishment that cause this cumulative result to increase or decrease. The current rate of unemployment affects only the second of these factors; it influences not the past levels of crime and punishment, but their current rate of change.

Figure 5 reflects this shift in emphasis, and the effect is dramatic. The figure shows the same rate of unemployment as in Figure 4. But penality now is proxied not by the level of the correctional population relative to the overall population, but by the annual rate of change of this ratio. There are two important things to note in this chart.

Figure 5
U.S. Unemployment and the Correctional Population



NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.91); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are 2010 for the correctional population and 2012 for unemployment.

SOURCE: Data on the correctional population are from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv)). Population data till 1929 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Aa7); from 1930 onward, the data are from the U.S. Bureau of the Census through Global Insight (series code: N@US). Unemployment till 1947 is from *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ba457); from 1948, data are from the U.S. Bureau of Labor Statistics through Global Insight (series code: RUC@US).

1. We can see that, for much of the past century, annual changes in the U.S. correctional population were almost perfectly 'explained', at least statistically, by annual changes in the rate of unemployment.[10] Rusche was right – indeed more right than he could have anticipated. According to the figure (and Occam's razor), there is no need for complicated models, multiple variables and assorted excuses (when the models fail). The two forms of sabotage – unemployment and penality – mirror each other very closely.

2. But there are two important exceptions to the rule – the first occurred during the Great Depression of 1930s, the second in the present crisis. During both of these systemic crises, which the chart shades in grey, the two series are not positively, but negatively correlated. In both, unemployment rises sharply – but penality, instead of soaring in tandem, decelerates sharply or actually falls.

So we have an enigma. If our interpretation of Rusche is correct, then what explains the decoupling of unemployment and penality during systemic crises? Is this a mere coincidence, or do systemic crises alter the underlying relationship of the two processes? We return to this enigma at the end of the paper.

Decompose

Let us try to make sense of the two observations made in the previous section. The first step is to decompose the rate of change of the correctional population. Consider Equation (1), where the dots on top of the variables indicate temporal rates of change. In this equation, the rate of change of the share of the correctional population in the overall population is approximately equal to the rate of change of the correctional population less the rate of change of the overall population.

$$1. \quad \left(\frac{\dot{correctional\ population}}{overall\ population} \right) \approx \dot{correctional\ population} - \dot{overall\ population}$$

Now, if the rate of change of the overall population is fairly stable, variations in the share of the correctional population in the overall population (the left-hand side of the equation) will be dominated by the rate of change of the correctional population (first element on the right).

So let's decompose the rate of change of the correctional population. Mathematically, this rate of change comprises three components: (1) the intensity of

[10] The Pearson correlation coefficient is 0.59 for 1937-2007 and 0.67 for 1945-2007. When the data are smoothed as 5-year moving averages, the 1945-2007 coefficient rises to 0.8.

punishment, proxied by the change in the correctional population relative to crime (with Δ denoting the difference between two successive observations); (2) the crime rate, measured by the ratio of crime to the overall population; and (3) the correctional population as a share of the overall population. The decomposition is given by Equation (2):

2. $$\dot{correctional\ population} = \frac{\Delta\ correctional\ population}{correctional\ population}$$

$$= \frac{\Delta\ correctional\ population}{crime} \times \frac{crime}{overall\ population} \times \frac{overall\ population}{correctional\ population}$$

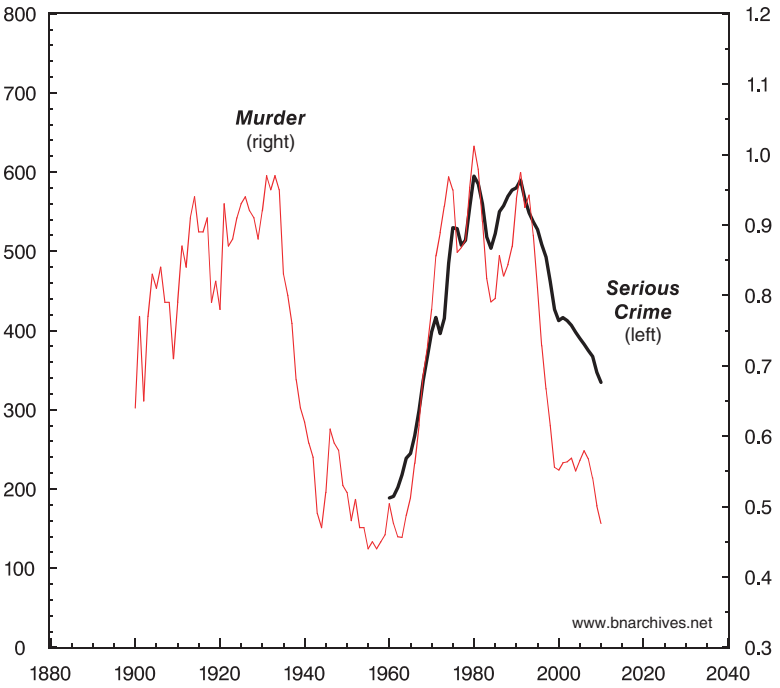
$$= \frac{intensity\ of\ punishment \times crime\ rate}{correctional\ population\ as\ a\ share\ of\ the\ overall\ population}$$

Crime and Punishment

Let us look more closely at the numerator of the third line of Equation (2), beginning with the crime rate. Figure 6 shows the historical evolution of what the FBI calls the 'serious crime rate'. Serious crimes include criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft and motor-vehicle theft (U.S. Department of Justice. Federal Bureau of Investigation). The FBI collects these statistics from various sources, standardizes them and expresses them as a ratio to the overall population. For example, in 2010, the serious crime rate was 334 for every 10,000 people, or 3.3 per cent. Note the long-term cyclicality of the serious crime rate. It rose from its nadir of 2 per cent in 1960 to a peak of 6 per cent in 1980. At that point, criminologists, social commentators and politicians thought that all hell was breaking loose, that the crime rate was likely to shoot through the roof, and that the social fabric of the U.S. was about to disintegrate (see for example, Levitt 2004). None of these predictions has materialized. Instead of rising, the crime rate started a long-term decline, and by 2010 it was half as high as it was in 1980.

Figure 6

U.S. Serious Crime and Murder Rates (per 10,000 persons)



NOTE: The serious crime rate consists of Part I Index Crimes of the FBI Unified Crime Reporting (UCR) expressed in relation to the overall population. Part I Index Crimes include criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft and motor-vehicle theft. The last data points are for 2010.

SOURCE: The number of murders is from *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ec191 for 1900-1932 and Ec22 for 1933-1959); and from UCR Online (http://www.ucrdatatool.gov/Search/Crime/State/StateCrime.cfm for 1960-2005; http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl01.xls for 2006-2010). Population data till 1929 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Aa7); from 1930 onward, the data are from the U.S. Bureau of the Census through Global Insight (series code: N@US). The serious crime rate (Part I Index Crimes relative to the population) is from UCR Online as above.

Unfortunately, we do not have unified serious crime statistics for years prior to 1960. But we do have data for the murder rate, depicted here by the thin red line. The number of murders of course is much smaller than the overall number of serious crimes. In 1980, for instance, for every 10,000 people there were 600 serious crimes

but only one murder. The key for our purposes, though, is that the two series are highly correlated. And if this correlation also held prior to 1960, it implies that the U.S. crime rate has followed a fairly stylized long-term cycle.

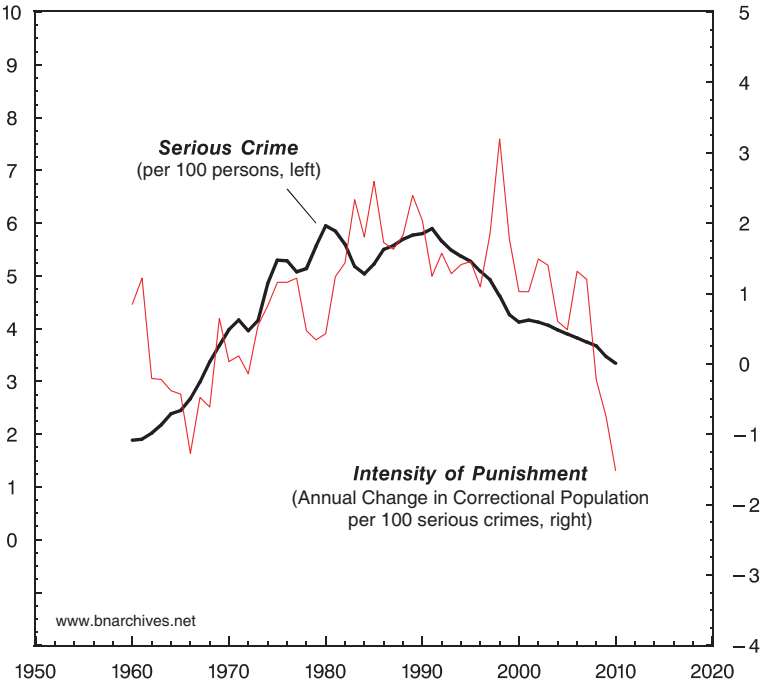
Bearing this cyclicality in mind, we can move to Figure 7. The thick black line in the figure measures the serious crime rate per 100 people. The chart also shows the intensity of punishment, proxied by the thin red line. If you look at Equation (2), you can see that this intensity is measured in two steps. The first step is to compute net change in the correctional population. For example, in 2010 the correctional population fell by 157,000. This figure represents, for that year, the number of people who were caught, tried and sentenced, less the number of those released. For 2010 the net figure was negative – there were more people leaving the correctional system than entering it. The second step is to divide this net change by the number of serious crimes reported that year and multiply the result by 100. This computation gives us the net change in the correctional population *per 100 crimes*. In 2010, this ratio was −1.5, which means that for every 100 serious crimes, there were 1.5 people deleted from the correctional population. By contrast, in 1998 the number was +3.2, which means that for every 100 serious crimes, there were 3.2 people added to the correctional population. Note that this is a 'composite measure' that reflects four different processes: (1) the efforts and the effectiveness of the police; (2) changes in the legal code; (3) the harshness of the courts; and (4) the release rate of those previously sentenced.

The chart shows that the two measures – crime and the intensity of punishment – are tightly correlated. Now, recall that, according to Rusche, crime and punishment are *both* driven by conditions in the labour market – particularly unemployment – so the correlation between them suggests we should examine their separate relationships to unemployment.

Figure 8 shows the relationship between the serious crime rate and the unemployment rate since the 1960s. In general, the data seem consistent with Rusche's hypothesis, at least until recently. They show the two processes to be moving in tandem, rising until the 1980s and receding afterwards. But by the late 2000s, the relationship between unemployment and crime seems to have broken down: while unemployment has risen sharply, the crime rate, instead of increasing, has continued to drop.

Figure 9 shows the relationship between the intensity of punishment and unemployment. And the patterns here are similar to those in Figure 7. There is a positive relationship between unemployment and the intensity of punishment, with both rising till the 1980s and falling afterwards. And here, too, the relationship inverts in the late 2000s: while unemployment rises dramatically, the intensity of punishment drops sharply and indeed becomes negative (note in particular the late 1990s). Note that the short-term correlation since the 1980s is looser than before; but even in this looser correlation, the divergence between the series in the late 2000s stands out clearly.

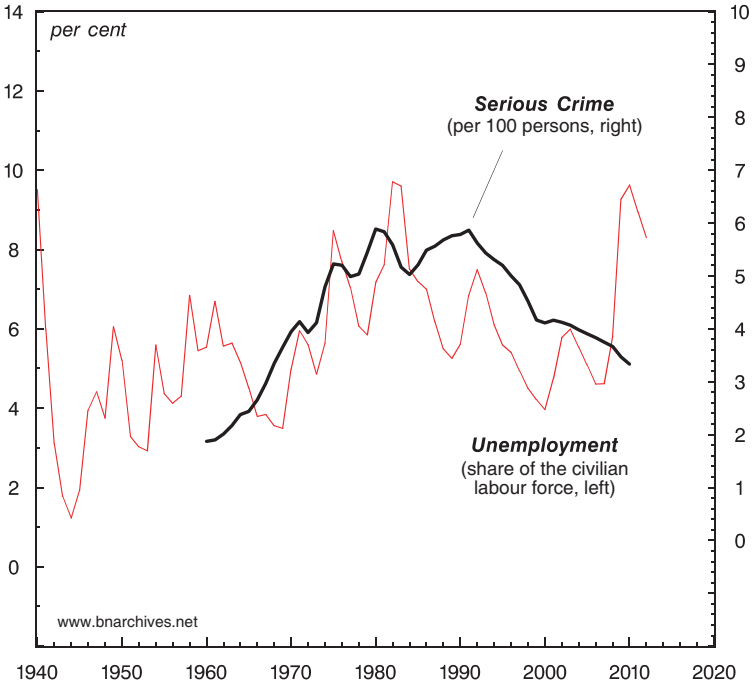
Figure 7
U.S. Serious Crime and the Intensity of Punishment



NOTE: The serious crime rate consists of Part I Index Crimes of the FBI Unified Crime Reporting (UCR) expressed in relation to the overall population. Part I Index Crimes include criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft and motor-vehicle theft. The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.91); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are for 2010.

SOURCE: The serious crime rate (Part I Index Crimes relative to the population) is from UCR Online (http://www.ucrdatatool.gov/Search/Crime/State/StateCrime.cfm for 1960-2005; http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl01.xls for 2006-2010). The correctional population is from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv).

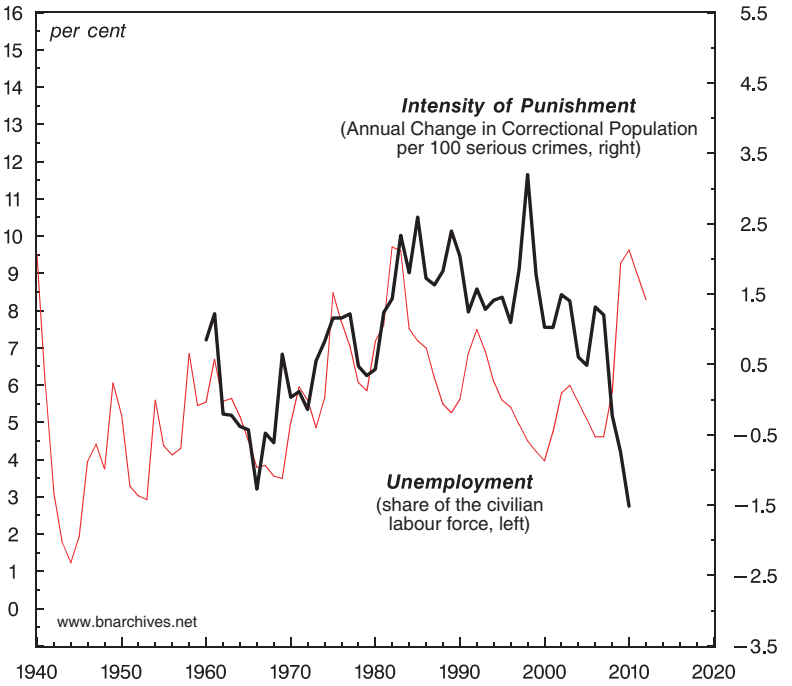
Figure 8
U.S. Unemployment and Serious Crime



NOTE: The serious crime rate consists of Part I Index Crimes of the FBI Unified Crime Reporting (UCR) expressed in relation to the overall population. Part I Index Crimes include criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft and motor-vehicle theft. The last data points are 2010 for serious crime and 2012 for unemployment.

SOURCE: The serious crime rate (Part I Index Crimes relative to the population) is from UCR Online (http://www.ucrdata-tool.gov/Search/Crime/State/StateCrime.cfm for 1960-2005; http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl01.xls for 2006-2010). Unemployment till 1947 is from *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ba457); from 1948, data are from the U.S. Bureau of Labor Statistics through Global Insight (series code: RUC@US).

Figure 9
U.S. Unemployment and the Intensity of Punishment



NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.91); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The serious crime rate consists of Part I Index Crimes of the FBI Unified Crime Reporting (UCR) expressed in relation to the overall population. Part I Index Crimes include criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft and motor-vehicle theft. The last data points are 2010 for net change in correctional population and 2012 for unemployment.

SOURCE: The correctional population is from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv)). The number of serious crimes (Part I Index Crime) is from UCR Online (http://www.ucrdatatool.gov/Search/Crime/State/StateCrime.cfm for 1960-2005; http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/10tbl01.xls for 2006-2010). Unemployment till 1947 is from *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ba457); from 1948, data are from the U.S. Bureau of Labor Statistics through Global Insight (series code: RUC@US).

Taking Stock

What do these relationships mean for capital as power and for the limits on that power? To contextualize our conclusions, let us reiterate our earlier findings. In our recent work, we noted that this is not a regular crisis but a systemic one, and that it is not a crisis of production or finance, or of a mismatch between them, but a crisis of power. The ruling class, we said, is struck by systemic fear – that is, fear for the survival of capitalism. The reverberations of crime and punishment – including the recent Supreme Court order to release a quarter of California's prisoners – may be signs of that fear.

We then outlined the objective 'asymptotes of capitalist power'. The ruling class, we said, is fearful for a reason. The logic of capital as power is deterministic. It forces dominant capitalists to accumulate differentially and augment their power. They have no choice in this matter. They have to push toward the asymptotes of their power, relentlessly. And as they get closer to those asymptotes, their push elicits counter forces, making systemic collapse increasingly likely.

In the present paper we have looked at the dark side of this process – the side of resistance. In the past, most analyses of resistance were anchored in the productive process. The focus was on industrial strikes, workers, mass movements and political parties. This 'materialist' focus was subsequently challenged by the ethno-cultural revolution. Instead of the old myths of the Enlightenment and socialism, there arose a new emphasis on power and postist ideologies. Subjective deconstruction substituted for history's 'laws of motion'. Determinism was discredited, but so was meaning and significance.

Our own work breaks with this postist fashion. Autonomous resistance – such as the May 1968 uprising in France or the first Palestinian Intifada of 1987/8 – does not abide by the logic of capital and therefore cannot be analysed from within that logic. But most resistance to capital as power is not autonomous, but heteronomous: it does not initiate – it *responds*; it is less an action and more a *reaction*; it is not external but *integral* to the conflictual logic of capital as power. In short, it is part and parcel of the capitalist mode of power, and that embeddedness makes it amenable to objective, deterministic inquiry.[11]

In order to engage in such inquiry, though, we need to transcend the conventional frame of reference. Most critical researchers continue to separate the capitalist reality into 'production' and 'power'. In this framework, the labour market is part of the economy and accumulation, while the penal system is part of the state and the socio-political system more broadly. Rusche sought to challenge this view: he tried to analyse penality in relation to both production and discipline, and unemployment in relation to both criminality and the economy. But working within the Marxist frame of

[11] The concepts of heteronomy and autonomy are developed in Castoriadis (1991b). On the difference between the heteronomy of capital and the autonomy of resistance, see Nitzan and Bichler (2009a).

reference, he continued to think of capitalism as a mode of production. So his attempt, however ingenious, remained focused on material conditions and therefore was incomplete.

From the viewpoint of capital as power, penality and unemployment are not distinct aspects of politics and economics, respectively. Instead, they are different forms of capitalized resistance and sabotage. Human creativity is a positive form of resistance to capitalist power, and the threat of unemployment is the means by which the ruling class tries to strategically sabotage and subjugate this creativity to capitalist ends. Similarly with crime and punishment. Illegality is a negative form of resistance to capitalist power (a 'primitive rebellion', as Engels 1971 called it), and penality is the major institution that keeps this resistance from undermining the capitalist *creorder*.

These forms of resistance and sabotage fit into the breadth and depth regimes of capital as power (Nitzan 2001; Nitzan and Bichler 2009a: Chs. 15-17). In the past, we argued that during a depth phase, the sabotage of stagflation (stagnation and inflation) assists the process of 'accumulation through crisis' (Nitzan and Bichler 2002). Now, since crime and punishment are tightly correlated with unemployment, we can see how this additional form of sabotage kicks in. During the depth phase of the 1970s and 1980s, unemployment and inflation increased, as did crime and punishment. Conversely, during the breadth phase of the 1990s, they all decreased.

And here we come to the enigma of Figure 5. During the systemic crises of the 1930s and 2000s, the tight correlation between penality and unemployment seems to have broken down: in both periods, the sabotage of unemployment rose sharply; yet crime and punishment, instead of rising in tandem, actually receded.

What could explain this enigma? One possibility is that some of the data we use are incorrect or inaccurate. A second possibility is that our top-down presentation of the data is too crude, and that a more refined set of proxies for unemployment, crime and punishment will eliminate the anomaly. But there is also a third, substantive, possibility, and that is that systemic crises *alter the rules of the game*. These crises not only dent the resolve of the ruling class; they also change the class disposition of criminals. Under the system of 'business as usual' (including its cyclical crises), the poor feel that there is 'no way out'. Without jobs, without dignity and with little prospect for change, the only alternative is crime. But during a deep, systemic crisis, there emerges another, transformational, alternative. This alternative is based not on individual alienation and protestation, but on class solidarity; not on defying the system through Quinney's 'crimes of resistance' (1980), but on altering its very structure. Perhaps it is the emergence of this democratic opening during a systemic crisis that causes crime to drop despite soaring unemployment.[12]

[12] The third possibility was suggested to us by the Israeli criminologist, Professor Jacob Reuven.

Interviews

8

The 1%, Exploitation and Wealth: Tim Di Muzio Interviews Shimshon Bichler and Jonathan Nitzan [1]

1.

Tim Di Muzio: You argue that the capital as power framework does not offer a general theory of society but an incisive account of how capitalists shape and reshape our world through the logic of differential capitalization and accumulation. As you well know, the Occupy Wall Street movement has organized under the banner 'We are the 99%', opposing what they refer to as the global 1%.

Could the capital as power framework be conceptualized as the political economy of the 1%? If not, do you see any way in which the capital as power framework could contribute to a critical political economy of the 1%? Does your latest article on the asymptotes of power speak to any of these debates?

Shimshon Bichler & Jonathan Nitzan: Your question invokes the century-old dilemma of what kind of determinism we can impose on society and the world more generally. This dilemma emerged largely as a consequence of the second scientific revolution and parallel developments in logic and mathematics, and it remains largely

[1] This interview was first published in *Review of Capital as Power* (Bichler, Nitzan, and Di Muzio 2012, Vol. 1, No. 1).

unresolved. Is there a 'general logic' to be discovered, or is 'reality' fractured into multiple and possibly contradictory patterns? Should we adhere to the traditional identitary-ensemblist logic of Cantor's set theory, or should we follow Castoriadis' notion of the magmas – those fuzzy groupings that include yet extend beyond the traditional logic and that allow the *nomos* to partly defy the determinism of the *physis* (Castoriadis 1987: Ch. 7)? Are we to look for a singular totality, or should we follow Bohm's framework of infinite enfoldments (Bohm 1980; Bohm and Peat 1987)?

Modern theories and doctrines of society – from liberal political economy to Marxism to statism, as well as their many offshoots and fusions, from social systems to postism – tend to follow the traditional path, each imposing its own determinism, logic and rules. These impositions may be natural or historical, positivist or dialectical, simple or complex. Most of them imitate the determinism of the first scientific revolution, while a few, mainly of the postist variety, reject determinism altogether (although this wholesale rejection is itself a form of determinism). But whatever the approach, the imposition tends to be *universal*: each approach articulates its rules, structures and patterns (or their absence) in general terms, applicable to *society as whole*.

It is important to note, though, that the origin of these universal approaches is always *particular*: liberalism originally spoke for the interests of capitalists, Marxism for those of workers and statism for the state apparatus. And in each case, the particular starting point has been leveraged into a complete theory of society: liberalism claims the principles of utility and productivity to be inherent in every social atom; Marxism makes labour time the linchpin of both the accumulation of capital and the resistance of workers; and statism sees the imperatives of the state as the governing rationale of modern society.

Our own analysis of capitalism rejects these particular-cum-universal views. Our principal aim, as you indicate, is to understand not society 'in general', but the underlying logic of its ruling class. We call this logic the 'capitalist mode of power'. If there is a meaningful determination in capitalism, we argue, it can be found only in the uncompromising ethos, rituals, institutions and organizations that the ruling class imposes on itself and everyone else. It is only here, in the 'megamachine of capital', that we can expect to observe fairly stable structures and patterns, or at least to estimate their statistical hierarchies and boundaries. Our research on dominant capital and differential accumulation strives to substantiate this view.

But the logic of the capitalist regime, although universalizing, is by no means intrinsic. It permeates everything, but it is not inherent. It does not spring up naturally, on its own. For this logic to exist, capitalists have to relentlessly impose, force and imprint it on every living tissue of society. And they are compelled to do so because enfolded in their logic is the greatest menace of all: an unknown magma of meanings and significations that capital cannot grasp or mould, but merely cap and withhold. This magma is like the infinite irrationality that pervades and upsets the apparent smoothness of Pythagorean rationality. It is the bedrock of humane resistance and change, the creative energy of society than hasn't succumbed to the capitalist mode of

power. And because this humane energy lies outside the logic of capital as power, it cannot be examined and analysed – let alone predicted – by that logic.

Now, on the face of it, this portrayal seems consistent with your suggestion: if we think of dominant capital as represented by what the Occupy movement calls the 1% and the underlying magma of humanity as proxied by the remaining 99%, can we not treat the theory of capital as power as the political economy of the 1%?

Unfortunately, the answer is not as simple as it may seem. Our framework seeks to research, theorize and negate the way in which the ruling class *creoders* – or creates the order of – the capitalist mode of power. And in that respect, it certainly resonates, at least in spirit and motivation, with the anti-systemic Occupy movement, particularly with those who emphasize autonomy and direct democracy. But we need to bear in mind here that the capitalist ruling class is not the same thing as the 1%, and that its mode of power cannot be reduced to a simple contrast between rich and poor.

Begin with the numbers. Who are the 1%, and who are the 99% that the Occupy movement calls 'We'? Strictly speaking, the 1% consists of the top income earners and asset holders in society. If we were to rank every individual according to what he or she earns and owns and set the top percentile as our cut-off point, those above that point will constitute 'the 1%', and the 99% below it will comprise the 'We'.

This, though, is not the only possible division. We can use any other cut-off point. For example, we can contrast the top 0.1% with the bottom 99.9%, or the top 10% with the bottom 90%, etc. These divisions are obviously all arbitrary, so their association with the ruling class is loose to begin with. More importantly, these divisions are usually used not to examine the structure of power or the ways in which this power is imposed, but to accentuate the contrast between the 'rich' and the 'poor'. Most commonly, they are marshalled to show that the top strata of society have 'access to resources' and live lavishly, while the bottom strata lack such access and are left to feed on the crumbs.

This focus on 'rich versus poor' is not accidental. The Occupy movement is largely a *reaction* to the current systemic crisis. The movement decries the outcome of the crisis, but, so far, it has had little or nothing to say about the causes of the crisis, let alone on what can be done about them. And this reaction is hardly unique. Note that the present systemic crisis started not in 2008, but in 2000 or even earlier, and that it was accompanied, from the beginning, by increasing counter-systemic reverberations. The reverberations were first felt in 1998 (a year after the 1997 Asian Crisis) with the anti-globalization demonstrations in Seattle; they continued with the growth of the ecological movement; and they spread further with the recent popular uprisings in the Middle East and elsewhere. However, so far, these counter-systemic movements, although full of energy, remain acts of protestation. They abhor the apparent injustice, inefficiency and corruption of the system, but they do not offer a meaningful alterative to that system. They point their finger at greedy corporations and financial intermediaries that 'mismanage' our resources and highjack our future; they accuse governments of being corrupt, complacent, or simply unable to regulate the 'excesses' of the system; and they

blame these maladies for a growing inequality that allows the top 1% to engross a disproportionate share of society's 'wealth'. But they find it difficult to explain how any of these developments can be *fundamentally* altered.

In our view, the key reason for this difficulty is that these counter-systemic movements remain hostage to the very capitalist cosmology they contest. This cosmology – which all political economists, left and right, seem to share, and which the protesters, unknowingly, tend to reproduce – rests on three key premises. The first premise is that 'economics' and 'politics' are two distinct realms of society; the second premise is that the economy is an 'objective' productive entity that obeys a set of mechanical functions (in the liberal case) or historical laws of motion (in the Marxist one), and that politics either distorts this economy (in the liberal case) or supports it (in the Marxist version); the third and final premise is that the economy itself is further divided into two domains: a 'real' sphere of material production and consumption on which the economy rests, and a 'nominal' sphere of volatile money and speculative finance that often upsets the real sphere and throws it out of balance (for more on the capitalist cosmology, see Bichler and Nitzan 2012b).

This conventional viewpoint fractures society into numerous spheres, realms and systems that 'interact' with and 'affect' each other positively or negatively. In this fractured view, the income and wealth inequality between the 1% and the 99% are rooted in the objective laws of the 'economy'. The main cause of inequality lies in the 'real' sphere of production (the high productivity of capitalists according to the liberals, excessive exploitation if we follow the Marxists), and its immediate impact is on the 'real' level of consumption (plenty for the 1%, little for the 99%). This 'real' inequality could be amplified by the 'nominal' sphere of the economy (for example, by the financial mischief of the banks, or the bubbly activity of stock-market speculators). The inequality then reaches beyond the economy to interact with the other spheres of society. It affects 'politics', 'culture', 'ethnicity', 'race' and 'gender', among other realms (for instance, by enabling the rich to 'buy power' and 'influence' government policy; by keeping the poor in a lifecycle of hard work, social deprivation and petty crime; and by accentuating racial, ethnic and gender divisions); and it is in turn affected by those very realms (for example, when lower corporate taxes augment inequality, or when unemployment and welfare payments reduce it).

If the Occupy movement wants to offer an alternative to the capitalist regime, it has to shed this fractured cosmology. Capitalism is the most universalizing mode of power, and so should be the framework that seeks to understand and negate it. In our research, we have tried to study the fabric of capitalist power, its historical evolution and multifaceted manifestations. We have shown how seemingly distinct phenomena, which the social sciences associate with separate realms of society, can be examined as part of a single totality. We have demonstrated how different processes, organizations or institutions – be they asset prices, earnings, risk, credit, leverage and mergers and acquisitions (usually classified as 'financial'); inflation, stagflation, unemployment, growth and productivity ('economic'); state, government, the army, violence,

political parties, NGOs and social movements ('political); communication, public relations, advertising, propaganda, entertainment and religion ('cultural'); or wars, peace treaties, energy conflicts and superpower confrontations ('international') – all get quantified, capitalized and integrated into the megamachine of capital as power.

The quantitative manifestation of this complex megamachine is a matrix of differential income streams and asset holdings that maps the distribution of capitalist power. One of the many measures included in this matrix is the indicator that the Occupy movement has rallied against: the income and asset share of the 1%. But if we wish to use this index, we should understand it not as an 'economic' measure of 'access to resources', unequal 'standards of living' or 'distributive injustice', but as an indirect proxy for capitalist power.

We use a similar power proxy in our recent paper on 'The Asymptotes of Power' (Bichler and Nitzan 2012a). Figures 16 and 17 in the article plot the ups and downs in the income share of the top 10% of the U.S. population since the late 1920s, showing its historical U-shape and the fact that its respective peaks were recorded during the two systemic crises of the 1930s and the 2000s. This focus on the top 10% of the population is meant to highlight the power not only of dominant capital, but also of the thick 'power belt' of managers, lawyers, accountants, journalists, public officials, opinion makers and other professionals that surrounds, serves and protects the mode of power and the class that rules it. The charts also show that this broad proxy of power has been positively and tightly correlated with the 'correctional population', measured by the share of the U.S. labour force that is in prison, in jail, on probation and on parole. The paper uses this and similar correlations to suggest that, in the 1930s and again since the 2000s, the rising power of dominant capital and its power belt was predicated on increasing sabotage, rising fear and growing pains inflicted on the underlying population. If this trajectory were to continue, the paper argues, capital would be pushed toward the asymptotes of its power, with untold consequences for the future of humanity.

This pronouncement, though, is no more than preliminary. The problem is that the measures and proxies we use to critique the capitalist regime, including the income shares of the top 1% and 10%, are generated by the capitalist regime itself. They are based on and drawn from a conceptual and statistical infrastructure created for capitalist purposes, mostly by capitalist organizations and the government organs and NGOs that serve them. These categories and measures work to bolster the mode of power and those who rule it, in part by concealing the very existence of this regime and hiding the identity of its masters. In order to tease out from the data what they seek to hide, we need bend the categories and reinterpret the measures – and even then, the results often highlight no more than a small fragment of the larger totality.

Obviously, this is not the way to go.

Many in the Occupy movement, particularly the anarchists, imagine a world without corporate/state organizations, nationalism, racism, institutionalized religion and other xenophobic barriers to a humane society. And as outcasts of a society besieged

by all those ills, we share their aspiration for direct democracy. But we very much doubt that these goals are served by rallying against the 'Wall-Street-Washington Complex', 'financialization', 'American Imperialism' and 'the 1%'. If the Occupy movement wants to change the world, it should resist the temptation of catchy slogans and put aside worn-out theories and dogmas, and instead develop its own novel understanding of how the capitalist mode of power operates.

And that novel understanding cannot be concocted out of thin air. It needs an alternative conceptual and statistical infrastructure from which to grow, and such an infrastructure can only come from *re*-searching: from seeking new facts, from inventing new categories, from developing new methods of inquiry, from devising new systems of accounting and measurement and from building new theories.

In our view, the first step in that direction is an *independent, non-academic research institute*. The Occupy movement needs an autonomous organization that will theorize and empirically research the capitalist mode of power with no strings attached. Arthur Koestler titled the first volume of his autobiography *Arrow in the Blue* (1952). The 'arrow' in the title stood for political action, while the 'blue' represented contemplation and theorization – and according to Koestler, although he engaged in both, he could never engage in both at the same time. An autonomous research institute may help mitigate this problem: the institute will inform the struggle, while the struggle will raise questions for the institute to grapple with. By finding out what capitalism is, the movement might then be able to articulate what it wishes to have in its stead and how to fight for what it wants to achieve.

2.

Tim Di Muzio: Marxists have a number of disagreements with the capital as power framework. But it seems that one of the most prominent is that the framework eschews the labour theory of value in favour of a new power theory of value that sees accumulation not as a narrow offshoot of production, but as a broad power process. For Marxists, since exploitation is rooted in the production process and is the expropriation of surplus value, abandoning this idea means that there is no reason to struggle against capitalism, let alone a justification for democratic/socialist/communist revolution. How, then, might the capital as power framework contribute to a practical and/or philosophical justification for resistance or revolution? Furthermore, is there any relationship of exploitation in the capital as power framework? Does the concept of exploitation matter at all to your approach?

Shimshon Bichler & Jonathan Nitzan: Marx studied capitalism as a mode of production. But for him, the capitalist mode of production meant not merely a 'productive system', or even as an 'economic system', but as an entire societal regime – the regime of capital. He was interested in the underlying structure and dynamics of that regime:

What brought this regime into being and made capitalists its rulers? How had this regime developed? What would come in its place? To answer these questions was to decipher the underlying *forces* that shape change and resistance to change, to discover the *mechanisms* that stabilize and transform social reality, to lay bare the *rules* that govern the broad contours of social action and its historical evolution. To answer these questions, in other words, was to understand the nature of *power in society*.

The secret to such an understanding, Marx argued, lies in production and, specifically, in its relationship to labour. Following Hegel, Marx saw labour as a deeply dialectical process. Labour enables human beings to discover their subjectivity and manifest their societal existence – but it is also the means through which they are being controlled by and subjugated to others. In capitalism, the worker creates goods and services, yet the capitalist uses those goods and services against their own creator. In this way, labour becomes the chief leverage of societal power – as well as the leading agent in the abolition of that power.

According to Marx, the engine of the capitalist regime is the exploitation of industrial-productive workers. The capitalist extracts the surplus labour of these workers – which he then ploughs back into production in the form of accumulated capital with the sole purpose of extracting more surplus labour in order to accumulate more capital. The process gains momentum through incessant technical change and increasingly 'rational' means of organizing production and consumption. Industrial workers and machines get entangled in a Gordian Knot that makes them increasingly productive and profitable. The stock of capital grows in volume and value, and that growth empowers its capitalist owners, disempowers the workers and fuels the class struggle between them. Around this skeleton of industrial production, exploitation and struggle grows the political, legal and cultural fabric of capitalism. And the totality of these relationships is what Marx calls the capitalist mode of production.

Now, on the face of it, this portrayal suggests two important similarities between Marx's view and our own theory of capital as power. First, both frameworks are concerned with *social power writ large*. For Marx the question is how production and exploitation, organized through the process of accumulation, dictate the totality of human relations in capitalism; whereas for us the question is how power relations – including the power relations between capitalists and workers (although not the Marxist relations) – are capitalized to *creorder*, or create the order of, this very totality. Second, both theories see capital accumulation as the key mechanism of social power – and *no more*. Capital is a means of control, not an agent of creation. In and of itself, capital is barren. Societal creativity – the transformation of nature and society for the good life – is the work of productive labourers (in Marx) and of the social hologram less the capitalists and their power apparatus (in our theory).

But underneath the similarities there is also a crucial difference. For Marx, capital is logically and historically conditioned on labour, and specifically on wage labour: without wage labour, there could be no surplus value and therefore no capital and no capitalism. By contrast, in the theory of capital as power, wage labour is a critical

component – but not the only critical component – in the emergence of capitalism. Furthermore, the importance of wage labour lies not in the surplus value it supposedly generates, but in its relation to the reification of force. Capitalism, our theory argues, is a system of capitalized power, and the wage contract is the institution that quantifies, commodifies and eventually helps capitalize the direct power of capitalists over workers.

During the early stages of the bourgeois revolution, the relationship between owners and workers dominated the power structure of the European bourg. The wage contract helped depersonalize and abstract this structure. By making labour a vendible commodity, it relieved owners of any responsibility for their workers beyond the daily wage, it gave workers a mobility that feudalism forbade, and it anchored both in a new morality of liberty and opportunity. The wage contract first appeared in warfare (the hired soldiers of the communes) and then in production (the 'blue nail' cloth workers), and as the institution spread, the ability of capitalists to constantly and flexibly creorder the nature and overall architecture of their power increased exponentially. The wage contract forced workers to become ever more efficient in ways that slaves and serfs could never be made to be; it helped capitalists divide and conquer workers when the latter attempted to organize and resist; and it enabled the bourgeoisie to leverage the power embedded in this new structure in their struggle to topple the feudal regime.

But the power enabled by the wage contract, although crucial in the early stages of the bourgeois revolution and still very important today, is only one aspect of capitalist power at large. Not only has the power of capitalists over workers expanded beyond the labour day and into consumption, leisure, culture and politics, but capitalist power more generally has now penetrated every corner of society, from ideology and the genetic code, to the law, politics and international relations, to the future of the environment and the very survival of humanity.

To see the crucial implications of this difference between exploitation in production and power at large, we need to examine Marx's argument more closely before returning to the theory of capital as power. The starting point is valuation. Because capitalism is a system of commodities, and because commodities – and the social groups behind them – are related through prices, any general theory of capitalism must rest on a theory of value. Marx based his own theory of value on labour time – and more specifically, on *socially necessary abstract labour time*. The exchange value of commodities, he said, depends on the average productive labour needed to make them (the socially necessary aspect), and this socially necessary labour, he continued, can be measured in universal (read abstract) units. In this way, the labour of productive workers, properly socialized and abstracted, becomes the elementary particle on which the entire logic of capitalism rests.

This quantitative aspect of the theory – i.e., its reliance on the *magnitude* of socially necessary abstract labour time – is the heart and centre of Marx's scientific socialism. Marx claimed his theory to be superior to the bourgeois alternatives, partly because it did something they couldn't: it *objectively* derived the rate of profit – the quantitative

compass of capitalism – from the material conditions of the labour process. Prices of production, he wrote, 'are conditioned on the existence of an average rate of profit', which itself 'must be deduced out of the values of commodities. . . . Without such a deduction, an average rate of profit (and consequently a price of production of commodities), remains a vague and senseless conception' (Marx 1909, Vol. 3, pp. 185-86). The very same point was reiterated by Engels. 'These two great discoveries', he wrote, 'the materialistic conception of history and the revelation of the secret of capitalist production through surplus value, we owe to Marx. With these discoveries socialism became a science. The next thing was to work out all its details and relations' (Engels 1966, Section I).

And this is where the problem begins.

First, neither Marx nor his followers have ever been able to offer an objective way of measuring socially necessary abstract labour. This failure is crucial, since, without this elementary particle, their science is akin to physics without mass or chemistry without the periodic table: it loses its explanatory power. And the science is just half the problem. The other half is Marx's political rejection of capitalism – a system based on an unjust and contradictory process of exploitation. And here, too, there is a difficulty.

As noted, for Marx exploitation is a quantitative concept, based on units of socially necessary abstract labour. But if these abstract units cannot be shown to exist, let alone be measured, on what *scientific* grounds can one claim that capitalism is exploitative and therefore objectionable and unsustainable? Moreover, how do we decide what is socially necessary? Marx tried to solve the problem by stating that the socially necessary cost of labour power is the actual wage as dictated by the particular epoch and concrete societal context, and that surplus value is simply the remainder left when this wage is deducted from the worker's product – but this solution was dangerously circular, not to say irrefutable.

A second, related hurdle has to do with the separation between 'productive' and 'unproductive' labour. According to Marx's theory, the two types of labour are very different: productive labour produces value and surplus value, whereas unproductive labour merely consumes those values. The key difficulty here is to decide who is productive and who is not, and Marxists have found themselves having to invest much time and effort trying to sort it out. Unfortunately, most of this time and effort has been spent for naught. Contrary to common belief, 'productivity' is not a straightforward, objective concept; it is replete with highly subjective considerations, which in turn makes the entire problem theoretically insoluble and empirically intractable. Worse still, even if the productive-unproductive division were crystal clear, there would still remain the equally daunting challenge of fitting it into the broader theory.

During the twentieth century, the relationship between the so-called 'surplus using' and 'surplus producing' sectors became top-heavy, with the unproductive sector apparently growing much faster than the productive one. This development was unknown to classical Marxism, so the challenge was to develop *neo*-Marxist explanations

that would sort out which sectors serve to 'offset' or 'absorb' the growing surplus, and how. Some theories concentrated on the unproductive governmental, legal and military arms of the state. Others emphasized the unproductive managerial, marketing and sales apparatuses of large corporations. And still others pointed to the growing process of 'financialization', in which banks, insurance companies, real-estate firms and other unproductive intermediaries suck in increasing chunks of surplus.[2]

This emphasis on surplus absorption, though, had one serious shortcoming: it endowed the shrinking productive sector with ever-greater surplus-generating capacity. To avoid this rather implausible assumption, other theorists, particularly those associated with 'cultural' or 'political' Marxism, opted for a more creative solution: they made surplus generation and absorption look more balanced simply by shifting sectors from one side of the equation to the other. One example of this fix was offered by Henry Lefebvre (1991, 2003), who made the city part of the productive base – a daring feat for which he was expelled from the French Communist Party. Another was given by Louis Althusser (1971), who, conjuring up ideas from the Frankfurt School, sorcerously moved political ideology into the productive base. In so doing, he made the state a potential partner to capital in generating surplus and accumulating capital, thus opening up a whole new field for subsequent generations of cultural and statist Marxists to capitalize on.

The chief casualty of these explanations and fixes was the labour theory of value. With no agreement on what constitutes socially necessary abstract labour time, and with no ability to decide who is productive and who is not, the scientific core of Marxism – the quantitative theory of prices, distribution and accumulation – broke down. And with the theoretical core decimated, the notion of exploitation lost its clear meaning, the capitalist laws of motion dissipated, and the logic for resisting capitalism became opaque.

This void leads us to the third problem: the broader Marxist theory of politics. According to Marx's logic, the state and the law – as well as culture, religion, international relations and globalization, among other processes – are all causally tied to and ultimately steered by the generation of value and surplus value. In the final analysis, national parties, foreign policy, regional wars and superpower conflicts – as well as their countertendencies, from protest and reform to utopias and revolutions – should all be traceable, directly or indirectly, to the productive base of economic valuation and exploitation. But are they?

---

[2] Later on, many Marxists would switch to emphasizing the negative effects of 'financial' or 'nominal' capital, which, in their view, eviscerates and destabilizes capitalism – in contrast to 'productive' or 'real' capital', which propels it forward (albeit with plenty of contradictions). The problem with this view is that nobody knows exactly how to distinguish financial from productive capital in the first place. This difficulty never arises in our own work, which argues that there is no such thing as 'real' or 'productive' capital, and that *all* capital is finance – and *only* finance. This solution, though, contradicts the basic real-nominal duality that all political economists adhere to, so obviously it cannot be accepted by Marxists.

Many Marxist careers have been devoted to articulating these complex dialectical derivations. But the empirical-historical evidence to substantiate these articulations is not that impressive. In the end, it is hard to discern any connection between the exploitation of productive workers in Britain in the 1950s and the country's foreign policy in Iran; between the changing rate of exploitation in twentieth-century South Africa and the institution and dissolution of Apartheid; or between the rate of exploitation in contemporary Chinese manufacturing and government prosecution of religious sects – particularly when the rate of exploitation itself is not only unknown, but unknowable.

We need to remember that Marx fashioned his theory of value after the liberal version of David Ricardo. Ricardo's theory, conceived during the first half of the nineteenth century, reflected the early stages of European industrialization, when capitalists were still struggling to shape and control their emerging regime. At the time, it seemed reasonable to associate the soaring profitability and accumulation of factory owners with the explosive expansion of their industrial activity and the horrendous conditions enforced on their industrial workers. But this emphasis that led Marx to base his own value theory on 'industrial exploitation' is historically bounded: what seemed obvious in Victorian England started to look increasingly out of sync in the twentieth century and became practically irrelevant in the twenty-first; it is grossly insufficient if not utterly misleading for understanding contemporary capital accumulation; and it is a dangerous starting point for developing non-capitalist, democratic alternatives.

And here we come to the fourth and final difficulty: the class struggle. If we follow Marx and anchor this struggle in the underlying notions of production and exploitation, we inevitably end up with a narrow clash between the owners of the 'means of production' and their 'productive' workers – while the rest of the population, classified as 'unproductive', is pushed to the sidelines. This understanding of the class struggle was a keystone of many twentieth-century revolutions – from the Russian and the Chinese to the Cuban and the Cambodian. Resistance to capitalism and capitalists excited the followers of these revolutions, while socialist dogma assisted their liberation struggles, solidified their national identity and helped their initial industrialization. But soon enough, the socialist projects faltered, inflicting incalculable costs on the underlying population.

Marxists often blame those failures on unfortunate 'mistakes', adverse 'externalities' and the 'special circumstances' that enabled gang leaders such as Stalin, Mao and Pol Pot to hijack the revolutions. But there was also a deeper, systemic flaw that Marxists, understandably, prefer to ignore: the revolutionaries relied on an *inadequate theory of value*. In Cambodia, for example, the Khmer Rouge turned their society upside down on the premise that the labour of city dwellers was largely unproductive. Cambodian society, they said, would be better off if its urban population were to be relocated, en masse, to the agricultural countryside, where it would become productive and create value instead of just consuming it (Samphan 1976; Mackey 2011). A similar template

was followed by the Soviet Union, China and other socialist experiments, where assumptions about the 'creation of value' underpinned massive forced relocations and grandiose 'productive' projects that ended up killing millions and subjugating the rest to ruthless tyrannies. (According to Solzhenitsyn (1974), in the Soviet Union surplus and growth were generated by and benchmarked on the simple labour of the abstract Gulag.)

All of this serves to suggest that capitalism cannot be effectively resisted, let alone replaced, if we misunderstand what it means and how it operates. Protest and revolution occur for many different reasons – all mediated by notions of justice and dignity, the sense of having nothing to lose or something to gain, the image of an alternative and the confidence of achieving it. This complexity, although recognized by Marxists, can be linked to their theory only from the outside. For Marx, the bearer of revolution is the 'productive' working class. And yet, in the twentieth century, industrial labourers were often conservative and indifferent, and sometimes hostile, to revolutionary change. Can this failure be attributed entirely to 'false consciousness' – or might the fault lie in the very definition of 'productive workers' as a class and in the labour theory of value that makes this class the vanguard of progress? And then, what are we to make of the many uprisings and revolts spearheaded by students (from May 1968 to the present Occupy movement), veterans (Europe after WWI), women (from Argentina to Nigeria), the 'homeless middle class' (Israel), civil-right activists (from Northern Ireland to the United States), peasants (from France to Mexico), blacks (from Haiti to South Africa) and the 'unproductive' marginalized masses (from the dawn of capitalism to the Arab Spring), to give a few examples? Are these all the roundabout consequences and derivatives of the class struggle between productive workers and capitalists – or do we need to rethink the meaning of classes in capitalism?

The theory of capital as power helps us transcend the narrow confines of the so-called industrial class struggle. Capitalism, it argues, is a system of quantified power, synthesized and creordered through the ever more encompassing ritual of differential capitalization. The power of capitalists over production and labour certainly is a significant aspect of this system – but it is merely one aspect of many, and not necessarily the most important one at that. Every power process that affects expected earnings, risk or the normal rate of return can be capitalized, and whatever gets capitalized becomes a facet of capital. The importance of any of these power processes – be they in production, consumption, culture, public policy, religion, war, the natural environment, or genetic engineering, to name a few – should be determined not *a priori*, but based on their relative contribution to capitalization.

In Marx's theory, real capital – and the resistance to that capital – is to be found in the productive factories of the industrial sector. Finance in this framework is 'fictitious' capital, a distinct nominal realm that lives off, absorbs and distorts the surplus generated in production. The theory of capital as power is completely different. Finance, it argues, is not a separate addendum to capital, but the only capital. All capital – whether we call it General Electric, Omnicom, JPMorgan Chase, the Government

Pension Investment Fund of Japan, or the China Investment Corporation – is financial and only financial. Finance is the brain and nerve centre of the capitalist megamachine, a matrix whose *raison d'être* is to automate human beings and sacrifice humanity to the Moloch of power. Unlike Marx's capitalist mode of production, whose built-in kill switch ascertains not only the system's eventual demise but also its replacement by a better, socialist society, the capitalist mode of power does not have a pre-determined path. As we have tried to show in 'The Asymptotes of Power' (Bichler and Nitzan 2012a), capitalist power certainly has limits. But transcending those limits neither is automatic nor does it guarantee a better society. It can lead to socialism or barbarism – as well as to other forms of social existence, and even to the annihilation of society altogether.

In our view, the all-encompassing drive of capitalist power and the open-ended nature of its alternatives constitute a much deeper reason to abolish capitalism than mere exploitation does. These features mean, first, that the potential bearers of this radical transformation are not only industrial workers, but humanity as a whole; and second, that the outcome of this effort will depend not on historical laws of motion, but on understanding the concrete challenges of capital as power and on being able to negate them by creordering a humane, democratic alternative.

3.

Tim Di Muzio: In the annals of political economy, debates on the origins of 'wealth' loom large. How might the capital as power framework intervene in these debates, particularly given the gross disparity of compensation in the world and the right-wing justifications for the appropriation of income and wealth? Are investors and those charged with investing and managing their money really wealth and job creators and more productive than their counterparts in the working class?

Shimshon Bichler & Jonathan Nitzan: References to wealth are as ancient as class society. In every mode of power, the rulers command material resources that they use for various purposes, from self-glorification and conspicuous consumption to productive projects and destructive war-making. Throughout much of history, the possession of wealth was limited to a narrow stratum of society, and it is only with capitalism that the concept has gained wider appeal. Instead of the exclusive wealth of a few, political economists started to talk about the wider 'wealth of nations', a fuzzy concept that economists would subsequently replace by the seemingly more accurate 'gross domestic product' and the 'standard of living'.

The key to this liberal 'wealth' is the capital stock. In economic parlance, both mainstream and Marxist, capital denotes 'productive capacity'. This capacity can take different forms. It can appear as plant and equipment (for example, a GM factory); as structures (the head office of Mitsubishi); as natural resources (the oil of Saudi Arabia);

as human bodies (the workers of the United States); or as knowledge (the inventions and innovation of GE). But regardless of its form, the essence is always the same: an ability to create goods and services that generate utility (in the liberal version) or use value (in the Marxist one).

Our own view is very different. Capital, we argue, is not productive capacity but commodified power. As a legal ownership construct symbolized in financial terms, capital stands outside the process of production. It has no role in industry, broadly understood, and it therefore cannot create jobs or output, by definition. If anything, the impact of capital on these categories is entirely negative. In order for capital to accumulate, its owners have to strategically sabotage, restrict and inhibit the creative faculties of humanity below their full potential. This suppression serves to augment the wealth of those who administer it, but the increase is entirely redistributional; it is achieved by curtailing the wellbeing of others, as well as of society at large.

To understand the problem with the conventional view, we need to go back to the Europe of the eighteenth and nineteenth centuries. During that period, a totally new phenomenon appeared on the historical scene: growth. Until that time, the per-capita levels of production and consumption and the so-called standard of living (however measured) changed very slowly, if at all. There were occasional increases, but these were usually offset by subsequent decreases. Life expectancy, health, energy use and caloric intake, to mention a few key indicators, fluctuated within fairly narrow bounds. And for as long as this stable pattern persisted – which means for much of human history and prehistory – distribution was a matter of conflict and power: for some to have more, others had to have less.

This imperative was removed with the emergence of growth. The early signs of this growth appeared in the budding European bourgs in the first half of the second millennium CE. But for a few hundred years, little of this growth spread to the predominantly feudal landscape, where inertia and stagnation prevailed. It was only in the eighteenth century that growth started to gather momentum and gain the attention of theorists and ideologues; and it was only in the nineteenth century that it became a defining moment of human affairs – first in Europe and then in the world as a whole.

This change had a profound effect on the nature of redistribution. While society had previously moved in a closed loop, now the skies were the limit. It seemed that, for the first time ever, it was possible for everyone to have more – or at least for some to have more without others having less. And this possibility has kept theorists and ideologues debating the question ever since: who 'deserves' to get which piece of the growing 'pie'?

The answers, almost invariably, are anchored in production. Before the eighteenth century, the ruling classes justified distribution mostly by religion: different social groups were said to receive whatever the gods wanted them to have. But with the appearance of growth, the justification changed. The secular-scientific revolution introduced a new mechanical cosmology, and the classical political economists – the new theorists of society – fashioned their explanations along similar lines. Matter can

change its form but it always retains its mass, and the same law of conservation applies to society. The only way to increase output – or what Adam Smith called the 'wealth of nations' – the political economists argued, is for the different social classes to increase their 'productive' inputs. And with philosopher John Locke asserting that people have the right to own what they produce, the road was open to tying distribution to productivity.

During the eighteenth century, the struggle between the rising bourgeoisie and the declining nobility pit Adam Smith against the Physiocrats. The Physiocrats, who spoke for the nobility, argued that the source of all productivity lay in agriculture, whereas Smith, who represented the bourgeoisie, suggested that productivity was increasingly coming from manufacturing. The two theories helped explain rent and wages, but they got stuck when it came to profit. The difficulty arose because the early political economists thought that there were only two factors of production – labour and land – and that capital was merely an auxiliary that did not possess intrinsic productivity and therefore did not deserve an income. But if so, whence did profit come?

There were many attempts to answer this question. Some, like Nassau Senior (1836), argued that capitalists are compensated for their 'abstinence' while their capital is tied in production. Others, such as Alfred Marshall (1920), thought that profit compensates capitalists for the time they 'wait' until their capital returns. And still others, such as Herbert Spencer (1904), William Sumner (1920, 1963) and Ayn Rand (1966), took a more biological path, claiming that profit was due to the superior human traits of capitalists. But it was only in the early twentieth century that profit was put on the solid footing of productivity. The breakthrough came with J. B. Clark (1899), who declared that capital was not a mere accessory, but a full-fledged factor of production, on par with labour and land. Each factor of production, he maintained, has its own productivity; and under conditions of perfect competition, the owners of these factors – capitalists, workers and rentiers – each receive an income proportionate to the marginal productivity of the factor they own.

It should be mentioned that neither Clark nor his successors ever demonstrated this correspondence between productivity and income, and for a simple reason: productivity is not a knowable, let alone a quantifiable, attribute or trait. This failure, though, didn't bother the theorists in the least. On the contrary, it gave them a carte blanche to draw wherever conclusions they felt appropriate. Logically, the theorists should have proceeded from productivity to income. For example, to explain the very high profit-to-wage ratio, they should have first measured the relative marginal productivities of capitalists and workers and then demonstrated that the latter measure was equal to the former. But since productivity in general and marginal productivity in particular cannot be known, the theorists have made it a habit to go in reverse. Their practice, from day one, has been to claim that the high profit-to-wage ratio *proves* that capitalists contribute that much more than workers. . . .

And this reverse template has been exploited to the fullest. Whereas Clark spoke of three factors of production, his successors have extended the list significantly, if not infinitely. First they divided and subdivided each factor, so that we can have as many different *types* of 'capital', 'labour' and 'land' as we wish. Then, they invented brand new factors – from 'technology' to 'organization' to 'knowledge', 'symbols', 'culture', 'social networks', 'education', 'training', 'innovation, 'risk taking', 'entrepreneurship' and 'arbitrage'. Supposedly, these newly concocted factors are all endowed with their own distinct productivities, all accurately revealed – or so we are told – by the incomes of their alleged owners. We say 'alleged' because, in many cases, the identity of the owners is not entirely clear (who possesses 'knowledge', who owns 'organization' and who is the proprietor of 'culture'?) But these questions too haven't unsettled the income-by-productivity experts. On the contrary, they gave them additional room to manoeuvre. For example, when the earnings of a corporation, a group of workers or a even a whole country seem to 'exceed' (or 'fall short of') what is implied by the first-tier inputs of labour, land or capital, the pundits conjure up the contributions of second-tier inputs such 'technology' (Microsoft is said to be knowledge-rich, whereas Sears isn't, hence Microsoft's higher income), 'entrepreneurship' (software analysts take initiative while miners don't, hence the former's higher wages), or 'risk' (Germany was willing to take it while Italy wasn't, hence Germany's higher growth rate). Go prove otherwise.

And that isn't the end of the story. Having succeeded in elevating capital from an auxiliary to a full-fledged factor of production, economists have decided to take the next logical step and declare that *every* factor of production is capital. The idea was first floated by Irving Fisher more than a century ago (1896). Capital, he argued, is not a 'special' commodity. In fact, any commodity, observed as a 'stock' at a give point in time, is capital. Fisher was still thinking in traditional economic terms, so his examples were drawn mostly from the tangible process of production. But his successors were no longer so hindered, and they have gradually imposed the concept on more and more social entities. Consequently, we are now enriched by 'social capital' (Hanifan 1916) 'human capital' (Becker 1964), 'symbolic capital' (Bourdieu 1984) and 'cultural capital' (Bourdieu 1986), among other capitals – as well as by an endless list of derivatives, from 'academic capital', to 'intellectual capital', 'knowledge capital', 'innovation capital', 'public capital', 'religious capital', 'military capital' and 'risk capital'. Nowadays, there seems to be no entity that the word 'capital' cannot easily suffix. And by extension, everyone – from big billionaires and asset managers, to state officials and professionals, to unionized workers, day labours, scientists, artists, homemakers, retirees, the unemployed, criminals and the insane – is an 'investor'. These 'investors' all advance their capital, making it contribute to production in their quest for the highest possible return in income.

Now, in this fantasy world, the claim that capitalists 'create' our jobs and 'augment' our wealth is a tautology. Since everything is capital, everyone is a capitalist and productivity is equal to earnings, it follows that the capitalists who profit the most are

also those who 'contribute' the most. They 'generate' most of the jobs, 'produce' most of the innovations and 'add' most of the wealth. And the fascinating thing is that the bulk of humanity readily accepts this irrefutable dogma. In a recent global poll of 12,000 adults in 23 countries, roughly half the respondents thought that the rich 'deserve' their wealth, and only a quarter strongly disagreed with that statement (GlobeScan 2012). The distressing thing about these polls is not only the distribution of their answers, but the fact that the queries they pose are taken as self-explanatory. In order to agree or disagree that the rich deserve their income, one needs a prior benchmark of 'fair income'. And for most people, this benchmark, whether they know it or not, is J. B. Clark's productivity theory of distribution – the notion that everyone, rich or poor, should get in income what they 'contribute' in production – even when such contributions are unknowable and indeed indistinguishable in the first place.

Marxists avoid this tautological trap, but only superficially. As we have seen, they reject the mainstream theory of distribution and instead offer their own Marxist 'production function' in which the only productive agent is labour and in which all other income derives from the exploitation of productive workers. But this argument is still very much anchored in production – and as we have suggested earlier, it, too, runs into logical contradictions and empirical dead ends.[3]

The solution, we argue in our work, is to think of distribution not as a derivative of production, but as a manifestation of organized power. Society is like a giant hologram of conflicting impulses. The productive dimensions of this hologram are integrated, coordinated and cooperative. Every creative endeavour of humanity resonates with all others, and this systemic resonance makes it impossible to speak of separate 'factors of production', let alone of their distinct 'productive contributions'. Jobs, production and wellbeing are created not by this or that factor, but by the *resonating totality* of societal creativity. However, in capitalism, the productive dimension of the hologram is subjugated to the logic of capital as power. Capitalist owners manifest their power by imposing – or threatening to impose – dissonance on the resonating structure of production. And it is this strategic sabotage, rather than capitalists' alleged contribution, that is measured by their differential income and assets.

[3] For the application of this production function to the distribution of income in the Soviet Bloc, see Djilas' *The New Class* (1957). In his *Cancer Ward* (1968), Solzhenitsyn describes how this production function was used to justify the inequality of income and privileges between the Soviet nomenklatura and the country's productive workers.

9

Capitalism as a Mode of Power: Shimshon Bichler and Jonathan Nitzan Interviews by Piotr Dutkiewicz [1]

Piotr Dutkiewicz: In a unique two-pronged dovetailing discussion, frequent collaborators and coauthors Jonathan Nitzan and Shimshon Bichler discuss the nature of contemporary capitalism. Their central argument is that the dominant approaches to studying the market – liberalism and Marxism – are as flawed as the market itself. Offering a historically rich and analytically incisive critique of the recent history of capitalism and crisis, they suggest that instead of studying the relations of capital to power we must conceptualize capital *as* power if we are to understand the dynamics of the market system. This approach allows us to examine the seemingly paradoxical workings of the capitalist mechanism, whereby profit and capitalization are divorced from productivity and machines in the so-called real economy. Indeed Nitzan and Bichler paint a picture of a strained system whose component parts exist in an antagonistic relationship. In their opinion, the current crisis is a systemic one afflicting a fatally flawed system. However, it is not one that seems to be giving birth to a unified opposition movement or to a new mode of thinking. The two political economists call for nothing short of a new mode of imagining the market, our political system, and our very world.

[1] A shorter version of this interview was first published in *22 Ideas to Fix the World: Conversations with the World's Foremost Thinkers*, edited by Piotr Dutkiewicz and Richard Sakwa (Bichler, Nitzan, and Dutkiewicz 2013).

1.

Piotr Dutkiewicz: Let's start from a fairly general big picture of the economic system. Please look around and tell me what you see as the key features of the current market system.

Shimshon Bichler: Although it may not seem so at first sight, your question is highly loaded. For me to describe the current 'economic system' and 'market system' is to accept these terms as objective entities, or at least as useful concepts. But are they?

Piotr Dutkiewicz: So what terms would you use? Is there an alternative approach?

Shimshon Bichler: Yes, there is an alternative approach; but before getting to that approach, we need to sort out the problem with the conventional one.

In my view, terms such as the 'economic system' and the 'market system' are misnomers. They are irrelevant and misleading. Nowadays, they are employed more as ideological slogans than scientific concepts. Those who use them often end up concealing rather than revealing the capitalist reality.

Of course, this wasn't always the case. In the seventeenth and eighteenth centuries, when capitalism was just taking hold, there was nothing apologetic about the market. On the contrary. The market was seen as the harbinger of progress – a powerful institution that heralded liberty, equality and tolerance. 'Go into the London Exchange', wrote Voltaire, 'a place more dignified than many a royal court. There you will find representatives of every nation quietly assembled to promote human welfare. There the Jew, the Mahometan and the Christian deal with each other as though they were all of the same religion. They call no man Infidel unless he be bankrupt'.[2]

The market has had a dramatic impact on European history, partly because it emerged in a seemingly unlikely setting. After the nomadic invasions and the fall of the imperial civilization of the first millennium AD, Europe developed a highly fractured social regime we now call feudalism. This regime was based on self-sufficient rural estates, cultivated by peasant-serfs and ruled by a violent aristocracy. Technical knowhow during that period was limited, the agricultural yield meagre and trade almost non-existent. The power relations were legitimized by the sanctified notion of a 'triangular society', comprising prayers, warriors and tillers (or, in a more political lingo, priests, nobles and peasants). Merchants and financiers had no place in that scheme.

But not for long. The feudal order began to disintegrate during the first half of the second millennium AD, and this decline was accompanied – and to some extent accelerated – by the revival of trade and the growth of merchant cities such as Bruges,

[2] Quoted in Amos Elon, *Founder: A Portrait of the First Rothschild and His Time* (1996: 109).

Venice and Florence. These developments signalled the beginning of a totally new social order: an urban civilization that gave rise to a new ruling class known as the 'bourgeoisie', an unprecedented civilian-scientific revolution and a novel culture we now call 'liberal'.

Because of the specifically European features of this process, the market came to symbolize the negation of the *ancien régime*: in contrast to the feudal order which was seen as collective, stagnant, austere, ignorant and violent, the market promised individualism, growth, well-being, enlightenment and peace. And it was this early conflict between the rule of feudalism and the aspirations of capitalism that later galvanized into what most people today take as a self-evident duality: the contrast between the state, or 'politics', and the market, or the 'economy'.

According to this conventional bifurcation, the economy and politics are orthogonal realms, one horizontal and the other vertical. The economy is the site of independence, productivity and well-being. It is the clearing house for individual wants and desires, the voluntary arena where autonomous agents engage in production and exchange in order to better their lives and augment their utility. By contrast, the political system of state organizations and institutions is the locus of control and power. Unlike the flat structure of the free economy, politics is hierarchical. It is concerned with coercion and oppression and driven by command and obedience.

In this scheme, the economy – or more precisely, the 'market economy' – is considered productive (generating wealth), efficient (minimizing cost) and harmonious (tending toward equilibrium). It is competitive (and therefore free). It seeks to increase well-being (by maximizing utility). And if left to its own device (*laissez faire*), it augments the welfare of society (by sustaining economic growth and increasing the wealth of nations). The political system, by contrast, is wasteful and parasitical. Its purpose is not production, but redistribution. Its members – the politicians, state officials and bureaucrats – seek power and prestige. They eagerly 'intervene' in and 'monopolize' the economy. They tax, borrow and spend – and in the process stifle the economy and 'distort' its efficiency. Sometimes, 'externalities' and other forms of 'market failure' make state intervention necessary. But such intervention, the argument goes, should be minimal, transitory and subjugated to the overarching logic of the economy.

Piotr Dutkiewicz: So the 'market' serves the role of a new ideology for the bourgeoisie?

Shimshn Bichler: Exactly. The portrayal I've just painted owes much to Adam Smith, the eighteenth-century Scotsman who turned the idea of 'the market' into the key political institution of capitalism. Smith's invention helped the bourgeoisie undermine and eventually topple the royal-princely state, and that was just for starters. Soon enough, the market became the chief ideology of the triumphant capitalist regime. It helped spread capitalism around the world, and it assisted in the fight against competing regimes, such as fascism and communism. In the Soviet Union, where production

was besieged by chaotic planning and accompanied by tyrannical rule, organized violence, open corruption and restricted consumption, the market symbolized the 'other life'. It was the alternative world of freedom and abundance. And this perception is still hammered home by the ideologues of capitalism. In the final analysis, we are told, there are only two options: the market or the Gosplan. If we don't choose egocentrism and liberty, we end up with planning and tyranny. And that is it. There is no other alternative, or so goes the dogma.

The ideological basis of these arguments was bolstered in the late nineteenth century by the official split of classical political economy into two distinct academic disciplines – political science and economics. The term 'economics' was invented by Alfred Marshall, the Cambridge University don who coined it to denote the new 'marginalist', or *neo*-classical, doctrine of political economy. Marshall, who wanted economics to be a real science, gave it the same suffix as that of phys*ics* and mathemat*ics*. He also wrote the first economics textbook (the definitive edition of which was issued in 1890), where he set the rigid boundaries of the discipline, elaborated its deductive format and articulated many of the examples that are still being used today.

Despite its aspirations, though, economics never became a real science, and for a simple reason: it couldn't. Science is sceptical. Unlike organized religion, which is infinitely confident, science thrives on doubt. It relies not on static ritual and unchanging dogma, but on seeking novel explanations for ever-expanding horizons. It tries to understand, not to justify. Now, none of this could be said about economics. If anything, we can say the very opposite: the latent role of economics was not to explain capitalism, but to justify it. When economics first emerged in the late nineteenth century, capitalism was already victorious. But it was also highly turbulent and increasingly contested by critiques and revolutionaries, so it had to be defended; and the ideological part of that defence was delegated to the new priests of liberalism: the economists. In order to perform their role, the economists have elaborated an intricate system of mathematical models. This system, they claim, proves that a free, totally unregulated economy – if we could ever have one – would yield the best of all possible worlds, by definition.

The conventional counterclaim, marshalled by many heterodox critiques, is that neoclassical models may be elegant, but they have little or nothing to do with the actual world we live in. And there is certainly much truth in this observation. But the 'science of economics' is besieged by a far deeper problem that rarely if ever gets mentioned: it relies on *fictitious quantities*.

Every science rests on one or more fundamental quantities in which all other magnitudes are denominated. Physics, for example, has five fundamental quantities – length, time, mass, electrical charge and heat – and every other measure is derived from those quantities. For instance, velocity is length divided by time; acceleration is the time derivative of velocity; and gravity is mass multiplied by acceleration. Now, as a science, economics too has to have fundamental quantities – and the economists

claim it does. The fundamental quantity of the neoclassical universe is the unit of hedonic pleasure, or 'util'.

Piotr Dutkiewicz : Can you explain this idea in more detail? How does the 'util' form the basis of the neoclassical economic universe?

Shimshon Bichler: The answer begins with the conventional bifurcation of the economy itself into two quantitative spheres: 'real' and 'nominal'. According to the economists, the key is the real sphere. This is the material engine of society, the realm of tangible assets and technical know-how, the locus of production and consumption, the fountain of well-being. The nominal side of the economy is secondary. This is the sphere of money, prices and finance, of inflation and deflation, of speculative bubbles and stock market crashes. Although highly dynamic, the nominal sphere doesn't have a life of its own. Its money magnitudes are merely reflections – sometimes accurate sometimes inaccurate – of what happens in the real sphere. And the reflection is *quantitative*: the price quantities of the 'nominal' spheres mirror the substantive quantities of the 'real' sphere.

Now, in the final analysis, *all economic quantities are reducible to utils*. The util is the elementary particle of economic science. It is the fundamental quantity, the basic building block everything economic is made of. The utils themselves, like Greek atoms, are identical everywhere, but their combination yields infinitely complex forms that economists call 'goods and services'. Every composite of the 'real economy' – from the aggregate quantities of production, consumption and investment, to the size of GDP, to the magnitude of military spending and the scale of technology – is the sum total of the utils it generates. And the price magnitudes of the 'nominal' economy – for instance, the dollar prices of an industrial robot (say $5 million) and a trendy iPhone ($500) – merely represent and reflect the util-denominated quantities of their respective 'real' quantities (whose ratio, assuming the reflection is accurate, is 10,000:1).

And, yet, and here we come to the crux of the matter, this util – this basic quantum that everything economic is supposedly derived from – is *immeasurable* and in fact *unknowable*!

Nobody has been able to identify the quantum of a util, and I very much doubt that anyone ever will. It is a pure fiction. And since all 'real' economic quantities are denominated in this fictitious unit, it follows that their own quantities are fictitious as well. To measure 'real GDP' or the 'standard of living' without utils is like measuring velocity without time, or gravity without mass. (I should note here that a similar critique can be levelled against classical Marxism. The elementary particle of the Marxist universe is socially necessary abstract labour. This is the fundamental quantity that all 'real' magnitudes are made of and which the nominal spheres (should) reflect – and yet no Marxist has ever measured it.)

So, just like in Andersen's *The Emperor's New Clothes*, everyone pretends. The students, dazed by the endless drill of 'practical' assignments, do not even suspect that their 'computations' are practically meaningless. Most professors, having graduated from the meat grinder of neoclassical training, have had all traces of the problem safely erased from their memory (assuming they were aware of it in the first place). And the statisticians, whose job is to measure the economy, have no choice but to concoct numbers based on arbitrary assumptions that nobody can either validate or refute. The entire edifice hangs in thin air, and everyone keeps quite lest it collapse.

Piotr Dutkiewicz: So what you are saying is that one of the very few supposedly solid foundations of our life – the notion that something 'economic' is measurable and thus 'objective' – is a fiction?

Shimshon Bichler: Yes. And this, mind you, is the dominant ideology that rules the world.

Every cog in the corporate-government-military megamachine – from business managers and state planners, through army officers and central bankers, to financial analysts, accountants and tax experts – is hardwired to the conventions and rituals of this doctrine. They are all conditioned by the same never-to-be-questioned mantras of the capitalist matrix: that the economy is productive and politics parasitic; that the market is equilibrating and the state destabilizing; and, of course, that we constantly need to check the excesses of government, deregulate the economy and increase competition.

So if we come back to your original question, I cannot characterize contemporary reality in terms of its 'economy' and the 'market system'. These are misleading categories to begin with. They force us into a rigid neoclassical template, block our vision and stifle our imagination. They make creative thinking all but impossible. If we want to transcend these barriers and think openly, the first thing we need to do is dispense with these categories altogether.

And this is the time to do so. We live in a deep crisis, and deep crises can sometime lead to an intellectual renaissance. They tend to foster critical thinking, generate novel methods of inquiry and help us devise alternative forms of action. The Great Depression of the 1930s triggered such a revival. That crisis transformed the way we understand and critique society: it gave birth to liberal 'macro' economics and anti-cyclical government policy; it rejuvenated Marxist and other streams of radical thinking in areas ranging from political economy to philosophy to literature; and, by shattering many of the prevailing dogmas, it allowed the mutual insemination of ideologically opposing approaches.

Piotr Dutkiewicz: Some say that the 2007-2009 crisis was indeed a trigger for such a reevaluation, but are we actually seeing any real change in the way the economy is perceived?

Shimshon Bichler: I don't think so. One would have expected a revival similar to that which followed the Great Depression in the current crisis, but so far the signs of such a revival are nowhere to be seen. A small chorus of mainstream economists such as Nouriel Rubini, Joseph Stilglitz and Paul Krugman have criticized their discipline. But besides moral indignation and contrarian predictions, their critiques offer nothing that is fundamentally new. The real disappointment, though, is the theoretical weakness of the left. During the 1930s, radical movements and organizations were energized by novel theories of capitalism and detailed platforms for its replacement. That isn't the case today. The anti-globalization, ecology and Occupy movements lack this source of energy. They don't have a new theoretical foundation to build on – and without such a foundation, they find it hard to develop an effective critique of capitalism, let alone a clear alternative that would come in its stead.

This weakness creates a vacuum that is increasingly filled by religious and radical right movements. And with the global crisis ongoing and the ruling class tittering on the verge of panic, there is a real possibility of a massive shift to the right, not unlike that of the 1930s. I think that such a shift will be difficult to prevent, let alone counteract and reverse, without a totally new theoretical alternative.

2.

Piotr Dutkiewicz: In light of Shimshon Bichler's insights into the ideological role of economic theory, is it still relevant to talk about capital, capitalism, and capitalist culture? It sounds as if we are back in the nineteenth century.

Jonathan Nitzan: I think these terms remain relevant. Our world, of course, is rather different from that of the nineteenth century, but it is still very much capitalistic. In fact, it is more capitalistic that it ever was.

When we were growing up in the 1950s, we rarely heard words such as 'capitalist', 'capitalism' and the 'capitalist regime'. They sounded like anachronistic remnants of a bygone era. They might have been relevant to the cruel reality of Victorian England that Marx experienced and analysed, or to old communist propaganda banners, but not to the middle of the twentieth century. By the 1950s, Victorian England was a very distant memory, and communist parties seemed to be losing their proletarian appeal to the tide of rising wages. The terminology of classical political economy, having become useless, sank into oblivion.

This was the heyday of the Cold War, and the dominant ideology emphasized the wonders of 'modernization'. The old colonial system was disintegrating, the Western welfare-warfare state was expanding, and many workers no longer lived at subsistence levels. Instead of the 'class struggle', the pundits started talking about an 'affluent so-

ciety'. There was no longer any need, they argued, for the dialectics of Marx's historical materialism. The positivist path of Auguste Comte offered a much more efficient and just method of managing industrial society.

It was therefore surprising to witness the recent revival of 'capital' and 'capitalism'. The terms first reappeared in mainstream lingo after the collapse of communism in the late 1980s, and within less than a decade they were already commonplace in academic writings and popular discourse. This time around, though, they were used not as ideologically contestable concepts, but as part of the natural order of things. As Michel Houellebecq observes in *The Possibility of an Island* (2005), for most of those born into the neoliberal order, protesting layoffs or economic policy, let alone the regime itself, seems as absurd as protesting weather changes or locust infestations. The contemporary global natives can imagine no meaningful alternative to the capitalist order, and the rulers know it. Their oppressive tolerance has helped assimilate the critique of capitalism into its own mass culture, as Herbert Marcuse so eloquently anticipated in his *One-Dimensional Man* (1964).

Piotr Dutkiewicz: So does that mean that *capitalism* has somehow become a misleading slogan?

Jonathan Nitzan: Not at all. The term still represents the world we live in. When Marx invented the notion of the 'capitalist regime', he referred not to the narrow economic domain or even to liberal ideology more broadly. For him, the capitalist regime denoted a new *totalizing logic*, a material-ideal system that dominates society and governs its historical trajectory. Individuals in this scheme, whether they are workers or capitalists, are secondary. Regardless of where they are situated in society, they all obey the same supreme subject: capital itself. The logic of capital affects everything. It dictates the nature of ownership, power and authority, it influences the technological process and it shapes human consciousness. It seems to me that this broad description of the rule of capital, a condition that Marx was the first to identify and describe, is more valid today than it ever was.

Piotr Dutkiewicz: So is capitalism a constant, making evolution a frivolous concept? In the dynamic picture of European politico-social systems you have written about with Bichler, is capitalism the only 'unchangeable element'?

Jonathan Nitzan: What has changed, I think, and dramatically so, is the *specific nature* of capitalism. Marx's science and the bourgeois political economy he criticized were creatures of their time. Both were informed by the apparent separation of the sweatshops, factories and 'civil society' of merchants and industrialists on the one hand from the ancient statist-political regime on the other. Both were impressed by the atomistic nature of capitalism, its anarchic competition, the disciplinary role of technology and the apparent automaticity of the system's cyclical gyrations and long-term tendencies.

And both were marked by the scientific revolution from which they emerged: the demand and supply of the liberals reproduced Newton's forces of attraction and repulsion, while Marx's historical laws of motion paralleled the new cosmology of the heavenly bodies; their equilibrium and disequilibrium tendencies replicated Newton's duality of inertia and force; and their analytical methods employed the new techniques of calculus, probability and statistics.

However, by the late nineteenth and early twentieth centuries, the classical portrayal and analysis of capitalism no longer seemed valid. There were several reasons for this growing mismatch. First, the rise and expansion of large organizational units – from big business to big government to big unions – made it difficult to speak of an atomistic society, let alone of its automatic regulation. Second, there emerged a whole slew of new processes – from total war and the permanent war economy, through large-scale government policies, to the growth of a 'labour aristocracy' and leisure time, corporate management, inflation and large-scale financial intermediation – that the classical political economists were completely unfamiliar with and that their old theoretical schemes could not accommodate. Third, with the rise of fascism and Nazism, the primacy of class and production was challenged by a new emphasis on masses, power, state, bureaucracy, elites and systems. And fourth, the objective/mechanical cosmology of the first political-scientific revolution was undermined by uncertainty, relativity and the entanglement of subject and object. Science, including the science of society, was increasingly challenged by anti-scientific vitalism and postism.

These developments resulted in a deep rupture: while capitalism has become ever more universal, the unified theory that once explained it has disintegrated. Bourgeois political economy has been divided and subdivided. Instead of a single study of capitalism, we now have a multitude of distinct disciplines – economics, politics, sociology, psychology, anthropology, international relations, management, finance, culture, gender, communication and what not – all trying to barricade their own turf and protect their proprietary categories. The same has happened with classical Marxism: what once stood as a totalizing critique of capitalism has been fractured into a tripod of neo-Marxian economics, a neo-Marxian critique of culture and neo-Marxian theories of the state. And if this wasn't bad enough, in between all the cracks emerged the rapidly multiplying anti-science dogmas of 'post-modernity' that deny the possibility of a universal logic altogether.

Piotr Dutkiewicz: What would your solution be to these fragmented approaches toward something that governs the very way we live, earn, spend, and accumulate?

Jonathan Nitzan. I think we can no longer rely on the prevailing theories and dogmas. They are fractured and exhausted. If we wish to change society, we ought to embark on a totally new path. And the first step in that path is to revolutionize the way we understand capitalism. The grip of capital is *universalizing*, and so should our attempt to comprehend and counteract it be. We need theories and research methods that are

not disjoined and fractured, but encompassing and totalizing. And in devising these theories and methods, we should focus not on the world of yesterday, but on the capitalist reality of today and, indeed, tomorrow.

3.

Piotr Dutkiewicz: Even neoliberals agree that we need to reinvent or reinforce political economy, as we have lost a vital link between politics and the market. So what should be the centrepiece of today's political economy?

Shimshon Bichler: The centrepiece is still capital, but we have to think about it in a totally new way. Capital is not means of production that generate hedonic pleasure as the liberals argue, and it is not a quantum of abstract labour as the Marxists claim. Rather, capital is power, and only power.

Note the emphasis on the word 'is'. Capital, Jonathan Nitzan and I claim, should be understood not in *relation* to or in *association* with power, but *as* power. This figurative identity is very different from the conventional creed. Marxist and mainstream analysts often connect capital with power. They say that capital 'affects' power, or that it is 'influenced' by power; that power can help 'augment' capital, or that capital can 'increase' power, etc. But these are all *external* relations between *distinct* entities. They speak of capital *and* power, whereas we talk about capital *as* power.

Further, and more broadly, we argue that capitalism is best viewed not as a mode of production or consumption, but as a *mode of power*. Machines, production and consumption of course are part of capitalism, and they certainly feature heavily in accumulation. But the role of these entities in the process of accumulation, whatever it may be, is significant only insofar as it bears on power.

To explain our argument, let me start with two basic entities: prices and capitalization. Capitalism – as both liberals and Marxists recognize – is organized as a numerical commodity system denominated in prices. The capitalist regime is particularly conducive to numerical organization because it is based on private ownership, and anything that can be privately owned can be priced. This basic feature means that, as private ownership spreads spatially and socially, price becomes the universal numerical unit with which the capitalist order is organized.

Now, the actual pattern of this numerical order is created through capitalization. Capitalization, to paraphrase physicist David Bohm, is the 'generative order' of capitalism. It is the flexible, all-inclusive algorithm that continuously *creorders* – or creates the order of – capitalism.

Piotr Dutkiewicz: What exactly is capitalization?

Shimshon Bichler: Considered most broadly, capitalization is a symbolic financial entity; it is the ritual that capitalists use to discount risk-adjusted expected future earnings to their present value. This ritual has a very long history. It was first invented in the proto-capitalist bourgs of Europe during the fourteenth century, if not earlier. It overcame religious opposition to usury in the seventeenth century to become conventional practice among bankers. Its mathematical formulae were first articulated by German foresters in the mid-nineteenth century. Its ideological and theoretical foundations were laid out at the turn of the twentieth century. It started to appear in textbooks around the 1950s, giving rise to a process that contemporary experts refer to as 'financialization'. And by the early twenty-first century, it has grown into the most powerful faith of all, with more followers than of all the world's religions combined.

Nowadays, capitalists – as well as everyone else – are conditioned to think of capital as capitalization, and nothing but capitalization. The ultimate question here is not the particular entity that the capitalist owns, but the universal worth of this entity defined as a capitalized asset.

Piotr Dutkiewicz: And how does this mechanism of capitalization actually work?

Shimshon Bichler: Take the example of a capitalist who considers buying (or selling) an Exxon share with expected annual earnings of $100. If the discount rate is 10%, or 0.1, the capitalist will capitalize the asset at $1,000 (to verify, expected earnings of $100 on a $1,000 investment represent an expected return of 10%, or 0.1). The expected earnings themselves are partly objective, partly subjective. The objective part is the actual earnings that will become known in the future, say $50. But the capitalist in our example expects $100, meaning that he or she is overly optimistic. We call this over-optimism 'hype', and this hype has a quantity – in this case, 2 (=$100/$50). If the capitalist were overly pessimistic, with a hype of say ½, the expected earnings would be only $25. The discount rate is also made of two components: the normal rate of return – say the yield on relatively safe Swiss governments bonds – and a risk assessment. In our case, the normal rate of return may be 5%, but if Exxon is assessed to be twice as risky as Swiss government bonds, the discount rate will be twice as high, at 10% (=2 x 5%).

Neoclassicists and Marxists recognize the existence of capitalization – but given their view that capital is a 'real' economic entity, they don't quite know what to do with its symbolic appearance. The neoclassicists bypass the impasse by saying that, in principle, capitalization is merely the mirror image of real capital – although, in practice, this image gets distorted by unfortunate market imperfections. The Marxists approach the problem from the opposite direction. They begin by assuming that capitalization is entirely fictitious – and therefore unrelated to the actual, or real capital. But, then, in order to sustain their labour theory of value, they also insist that, occasionally, this fiction must either inflate or crash into equality with real capital.

It seems to me that these attempts to make capitalization fit the box of real capital are an exercise in futility. First, as I already noted, 'real' capital lacks an objective quantity. And, second, the very separation of economics from politics – a separation that is necessary to make such objectivity possible in the first place – has become defunct. And, indeed, capitalization is hardly limited to the so-called economic sphere.

Every stream of expected income is a candidate for capitalization. And since income streams are generated by social entities, processes, organizations and institutions, we end up with capitalization discounting not the so-called sphere of economics, but potentially every aspect of society. Human life, including its social habits and its genetic code, is routinely capitalized. Institutions – from education and entertainment to religion and the law – are habitually capitalized. Voluntary social networks, urban violence, civil war and international conflict are regularly capitalized. Even the environmental future of humanity is capitalized. Nothing escapes the eyes of the discounters. If it generates expected future income, it can be capitalized, and whatever can be capitalized sooner or later *is* capitalized.

The encompassing nature of capitalization calls for an encompassing theory, and the unifying basis for such a theory is power. The primacy of power is built right into the definition of private ownership. Note that the English word 'private' comes from the Latin *privatus*, which means 'restricted'. In this sense, private ownership is wholly and only an institution of exclusion, and institutionalized exclusion is a matter of organized power.

Of course, exclusion does not have to be exercised. What matters here are the right to exclude and the ability to exact pecuniary terms for not exercising that right. This right and ability are the foundations of accumulation.

Capital, then, is nothing other than organized power. This power has two sides: one qualitative, the other quantitative. The qualitative side comprises the institutions, processes and conflicts through which capitalists constantly *creorder* society, shaping and restricting its trajectory in order to achieve their redistributive ends. The quantitative side is the process that integrates, reduces and distils these numerous qualitative processes down to the universal magnitude of capitalization.

4.

Piotr Dutkiewicz: Let me raise a very broad question: What is power? Can power be an economic force? What is the link between power and capital? We are used to thinking about capital as an exclusively economic category, but you seem to understand it differently. How exactly do you understand it? What are the more practical consequences of your approach to understanding current economic-cum-political systems?

Jonathan Nitzan. As Hegel tells us in *The Phenomenology of Mind* (1807) and elsewhere, and as Max Jammer shows in his *Concepts of Force* (1957), power is not a thing in itself.

It is a relationship between things. Consequently, power cannot be observed as such. We know it only indirectly, through its effects. In religion, the power of the gods is revealed through their alleged deeds and miracles, while in science power is revealed through its measureable consequences. We know of gravity not by observing it directly, but by measuring the quantitative relationship between mass and acceleration. Similarly with capital as power: we know the power of owners indirectly, by the numerical magnitude of their capitalization and the way in which it *creorders* society.

Piotr Dutkiewicz: And how does capitalist power *creorder* society?

Jonathan Nitzan: To answer this question, we first need to make a distinction between the creative/productive potential of society – the sphere that the American political economist Thorstein Veblen called industry – and the realm of power that, in the capitalist epoch, increasingly takes the form of business. This distinction is crucial not least because it goes counter to the conventional creed: in common parlance, industry and business are synonyms, whereas for Veblen they were antonyms.

Using as a metaphor the concept of physicist Denis Gabor, we can think of the social process as a giant hologram, a space crisscrossed with incidental waves. Each social action – whether an act of industry or of business – is an event, an occurrence that generates vibrations throughout the social space. However, there is a fundamental difference between the vibrations of industry and the vibrations of business. Industry, understood as the collective knowledge and creative effort of humanity, is inherently cooperative, integrated and synchronized. It operates best when its various events resonate with each other. Business, in contrast, isn't collective; it's private. Its goals are achieved through the threat and exercise of systemic prevention and restriction – that is, through what Veblen called strategic sabotage. The key object of this sabotage is the resonating pulses of industry – a resonance that business constantly upsets through built-in dissonance.

Business sabotage affects both the direction and pace of industry. The impact on the direction of industry is so prevalent that we often don't see it. The most obvious effect is the progressive subjugation of billions of minds and bodies to the single-minded Moloch of profit-making and the consequent stifling of individual and societal creativity. And that is just the beginning. Consider the following examples: the systematic destruction of public transportation in the United States and elsewhere in favour of the ecologically disastrous private automobile; the development by pharmaceutical companies of expensive remedies for concocted 'medical conditions' instead of drugs to cure real diseases that mostly afflict those who are too poor to pay for treatment; the promotion by global conglomerates of junk food in lieu of a healthy diet; the imposition of intellectual property rights on societal knowledge instead of the free diffusion of such knowledge; the invention by high-tech companies of weapon technologies instead of alternative clean and renewable energies; the development by chemical and bio-technology corporations of one-size-fits-all genetically modified plants and animals instead of bio-diversified ones; the forced expansion by governments and realtors of socially fractured suburban

sprawl instead of participatory and sustainable urbanization; the development by television networks of lowest-common-denominator programming that sedates the mind rather than stimulates its critical faculties; the list goes on.

These and similar diversions permeate the entire structure of capitalism. They can be seen everywhere – that is, provided we are willing take off our neoclassical blinkers. And if we accounted for them all, we would have to conclude that a significant proportion of business-driven 'growth' is wasteful, not to say destructive, and that the sabotage that underlies this waste and destruction is exactly what makes it so profitable.

The other form of business sabotage is the impact it has on the pace of industry. Conventional political economy, both neoclassical and Marxist, postulates a positive relationship between production and profit. Capitalists, the argument goes, benefit from industrial activity and, therefore, the more fully employed their equipment and workers, the greater their profit. But if we think of capital as power, exercised through the strategic sabotage of industry by business, the relationship should be nonlinear – positive under certain circumstances, negative under others.

And that is exactly what the historical data tell us. In the United States, Great Britain and Canada, for example, the share of capitalists in national income (measured by profit plus interest) has tended to rise as growth accelerated and the rate of unemployment declined – but only up to a point. After that point, rising growth and declining unemployment – in other words, less sabotage – have tended not to increase but to *reduce* the income share of capitalists!

The case of the United States is illustrative. In the 1930s, when the sabotage of industry by business was extreme and official unemployment hovered around 25%, the share of capitalists in national income stood at around 11%. Then came the Second World War, employment and production soared, and the income share of capitalists rose to nearly 16%. But that was the peak. As the war effort continued, business sabotage of industry was almost eliminated and unemployment fell to less than 2%. However, the share of capital in national income, instead of rising as conventional political economy would have predicted, dropped sharply, reaching a low of 12%, barely above its depression level. This situation was obviously unacceptable to capitalists; so after the war, sabotage was reinstated, unemployment rose to between 5 and 7%, and capitalists' share in national income soared to an all-time high of nearly 19%. It seems that 'business as usual' (high capitalist income) and the 'natural rate of unemployment' (the strategic level of industrial sabotage) are two sides of the same capitalist coin. Perhaps this combination is what economists have in mind when they speak about equilibrium.

Piotr Dutkiewicz: Can you further concretize the notion of capital as power? How is this concept related to what economists call 'profit maximization'? What does it tell us that standard economics and other social sciences do not?

Jonathan Nitzan: Power is never absolute; it's always relative. For this reason, Shimshon Bichler and I argue, both the quantitative and qualitative aspects of capital

accumulation have to be assessed differentially, relative to other capitals. Contrary to the claims of conventional economics, capitalists are driven not to maximize profit, but to 'beat the average' and 'exceed the normal rate of return'. Their entire existence is conditioned by the need to outperform, by the imperative to achieve not absolute accumulation, but *differential accumulation*. And this differential drive is crucial: to beat the average means to accumulate faster than others; and since the relative magnitude of capital represents power, capitalists who accumulate differentially increase their power – that is, their broad strategic capacity to inflict sabotage.

The centrality of differential accumulation, we claim, means that in analyzing accumulation we should focus not only on capital in general, but also – and perhaps more so – on *dominant capital* in particular: that is, on the leading corporate-governmental alliances whose differential accumulation has gradually been placed at the center of the political economy.

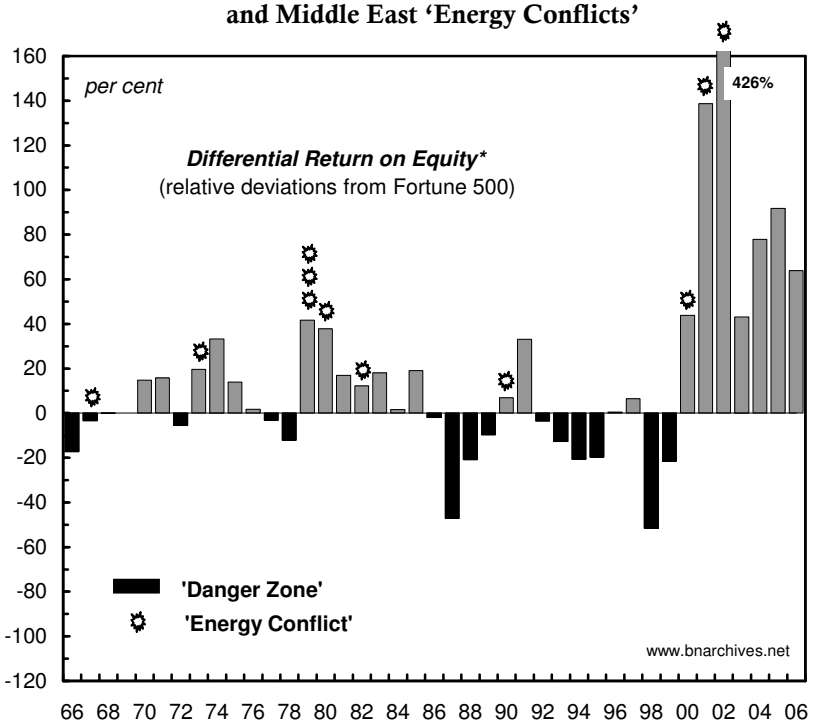
The importance of this process can be illustrated by the recent history of the United States. Over the past half century or so, differential accumulation by U.S. dominant capital has advanced in leaps and bounds. In 1950, the average net profit per firm among the top 100 U.S.-incorporated companies was roughly 1,600 times larger than the average net profit per firm in the U.S. business sector as a whole; by 2010, this multiple was fourteen-fold larger, at over 23,000!

This massive increase in differential accumulation quantifies the growing power of U.S. dominant capital; the other side of this trend is the qualitative power processes that differential accumulation quantifies and distils into a single magnitude. Much of our work over the past three decades has been devoted to examining this quantitative-qualitative underpinning of power, in the United States and elsewhere.

Piotr Dutkiewicz: Can you illustrate this type of analysis? How do its conclusions differ from those of conventional social science?

Jonathan Nitzan: Let me take an example from the work Shimshon Bichler and I did on the global political economy of the Middle East. Figure 1 depicts the differential performance of the world's six leading privately owned oil companies relative to the Fortune 500 benchmark. Each bar in the figure shows the extent to which the oil companies' rate of return on equity exceeded or fell short of the Fortune 500 average. The gray bars show positive differential accumulation – i.e. the percent by which the oil companies exceeded the Fortune 500 average. The black bars show negative differential accumulation; that is, the percent by which the oil companies trailed the average. Finally, the explosion signs in the chart show the occurrences of 'energy conflicts' – a term we use to denote regional energy-related wars.

Figure 1
The Petro-Core's Differential Accumulation and Middle East 'Energy Conflicts'



* Return on equity is the ratio of net profit to owners' equity. Differential return on equity is the difference between the return on equity of the Petro-Core and the Fortune 500, expressed as a per cent of the return on equity of the Fortune 500. For 1992-3, data for Fortune 500 companies are reported without SFAS 106 special charges.

NOTE. The Petro-Core consists of British Petroleum (BP-Amoco since 1998), Chevron (with Texaco since 2001), Exxon (ExxonMobil since 1999), Mobil (till 1998), Royal-Dutch/Shell and Texaco (till 2000). Company changes are due to merger. The Energy Conflicts include: the 1967 Arab-Israel war, the 1973 Arab-Israel war, the 1979 Iranian Revolution, the 1979 first Israeli invasion of Lebanon, the 1979 Soviet invasion of Afghanistan, the 1980 Iran-Iraq war, the 1982 second Israeli invasion of Lebanon, the 1990-1 first Gulf War, the 2000 second Palestinian Intifada, the 2001-2 U.S. invasion of Afghanistan and the launching of the 'War on Terror' and the 2002-3 second Gulf War.

SOURCE: *Fortune*; Standard & Poor's *Compustat*.

Now, conventional economics has no interest in the differential profits of the oil companies, and it certainly has nothing to say about the relationship between these differential profits and regional wars. Differential profit is perhaps of some interest to financial analysts. Middle East wars, in contrast, are the business of international relations experts and security analysts. And since each of these phenomena belongs to a completely separate sphere of society, no one has ever considered linking them in the

first place. And yet, as it turns out, these phenomena are not simply linked. In fact, they could be thought of as two sides of the very same process – namely, the *global accumulation of capital as power*.

To get a sense of this process, consider the following relationships evident in the chart. First, every energy conflict was preceded by the large oil companies trailing the average. In other words, for an energy conflict to erupt, the oil companies first had to differentially *decumulate* – a most unusual prerequisite from the viewpoint of any social science.

Second, every energy conflict was followed by the oil companies beating the average. In other words, war and conflict in the region – processes that social scientists customarily blame for 'distorting' the aggregate economy – have served the differential interest of certain key firms at the expense of other key firms.

Third and finally, with one exception, in 1996-7, the oil companies never managed to beat the average without there first being an energy conflict in the region. In other words, the differential performance of the oil companies depended not on production, but on the most extreme form of sabotage: war.

It seems to me that these relationships, and the conclusions they give rise to, are nothing short of remarkable. First, the likelihood that all three patterns are the consequence of a statistical fluke is negligible; there must be something very substantive behind the connection of Middle East wars and global differential profits. Second, these relationships seamlessly fuse quality and quantity. In our research on the subject, we have shown how the qualitative aspects of international relations, superpower confrontation, regional conflicts and the activity of the oil companies on the one hand, can both explain and be explained by the quantitative global process of capital accumulation on the other. And, third, all three relationships have remained stable for half a century, allowing us to predict, in writing and before the events, both the first and second Gulf Wars.[3] This stability tells us that the patterns of capital as power – although subject to historical change from within society – are anything but haphazard.

5.

Piotr Dutkiewicz: Let's turn to the economic downturn of 2008–9. We used to hear that it is natural, after the boom like the one we had in the past twenty years, to have a downturn. Given the supposedly cyclical nature of the market system, we should theoretically not worry. But from consumers to bankers, we are all worried. So what is different now?

[3] The first Gulf War (1990-91) was predicted in Bichler, Rowley and Nitzan (1989: Section 2.3). The second Gulf War (2002-) was predicted in Bichler and Nitzan (1996: Section 8).

Shimshon Bichler: In light of what was said so far, I think that what we are experiencing now is not an 'economic downturn', or even an 'economic crisis', but a *systemic* crisis: a crisis that threatens the very existence of the capitalist mode of power. This crisis has been lingering for more than a decade. It started not in 2008, as most observers argue, but in 2000, and it shows no sign of abating.

Piotr Dutkiewicz: Can you further clarify what you mean by 'systemic crisis'?

Shimshon Bichler: Let me take for a moment the viewpoint of the capitalists. As they see it, the key barometer of success and failure is not the growth of production or the level of employment, but the movements of the stock market. The stock market capitalizes their expected future earnings – and by so doing distils and reduces their collective view on the future of capitalism down to a single number.

Now, if we examine the history of the U.S. stock market, measured by the S&P 500 price index, we see that, over the past century or so, capitalists were besieged by four 'major bear markets'. Each of these major bear markets was characterized by a massive drop in prices, ranging between 50% and 70% in 'constant dollars'. Note, however, that these declines, although roughly similar in quantity, were very different in quality. Each of them signalled a major – and unique – *creordering* of capitalist power:

1. The crisis of 1906-1920 (–70%) marked the closing of the American frontier, the shift from robber-baron capitalism to large-scale business enterprise and the beginning of synchronized finance.

2. The crisis of 1929–1948 (–56%) signaled the end of 'unregulated' capitalism and the emergence of large governments and the welfare-warfare state.

3. The crisis of 1969–1981 (–55%) marked the closing of the Keynesian era, the resumption of worldwide capital flows and the onset of neoliberal globalization.

4. And the current crisis – which, as I noted, began not in 2008, but in 2000, and is still ongoing (–50% from 2000 to 2009) – seems to mark yet another shift toward a different form of capitalist power, or perhaps a shift away from capitalist power altogether.

The current crisis is marked by *systemic fear*. Capitalists today are not just uncertain or worried; they are scared. Their apprehension is not about this or that aspect of capitalism, but about capitalism's very existence. Many of them now fear that the capitalist order itself may not survive, at least not in its current form.

Piotr Dutkiewicz: What indication do we have that capitalists suffer from 'systemic fear'?

Shimshon Bichler: A key gauge of this systemic fear is the way in which capitalists price their equities. The capitalization ritual is unambiguous: it instructs capitalists to discount not the current level of profit, but its estimated *long-term* trajectory. So, under normal circumstances, changes in stock prices should show little or no direct correlation with changes in current profit – and, indeed, they usually don't. But periods of systemic fear are anything *but* normal. During such periods, capitalists doubt the survival of their system, and that doubt makes them lose sight of its future; with the capitalist future having become opaque, the 'long-term profit trend' loses its meaning; and with no estimates of long-term profits, capitalists are left with nothing to discount.

In a capitalized world, the inability to capitalize is a mortal threat. So capitalists, desperate for something to hang on to, abandon their sanctified reliance on the expected future and latch onto the present. Numbed by systemic fear, they discount not the eternal long-term trend of profit, but its day-to-day variations. And that is exactly what we observe in the current crisis: since 2000, equity prices, instead of moving independently of current profits, have tracked those profits remarkably closely.

This type of panic-driven breakdown is not unprecedented, though. It also happened in the 1930s. Much like today, capitalists in the 1930s were struck by systemic fear; and much like today, they abandoned the capitalization ritual. Moreover, and crucially, the reason for the breakdown was pretty much the same: in both periods, capitalist power had become so great that capitalists lost confidence that they could retain that power, let alone increase it.

Piotr Dutkiewicz: This claim seems counterintuitive: shouldn't capitalists be more confident the more powerful they become?

Shimshon Bichler. Only up to a point. Capitalist power is distributional, measured by relative capitalization, so a capitalist group with $300 billion in net assets is three times as powerful as a group with only $100 billion. Now, in beating the average and exceeding the normal rate of return, dominant capital accumulates differentially; and since capital is distributional power, differential accumulation is the augmentation of distributional power. Distributional power, though, is clearly bounded. No group of capitalists, no matter how sophisticated and ruthless, can ever own more than everything there is to own in society. Moreover, in practice, capitalist power is likely to stall long before it reaches this upper limit.

The reason is rooted in the conflictual dynamics of power. Capitalists cannot stop seeking more power: since capital *is* power, the drive to accumulate is a drive for more power, by definition. But that very quest for power generates its own barriers. Power hinges on the use of force and sabotage, so the closer capitalist power gets to its limit, the greater the resistance this force and sabotage elicit; the greater that resistance, the

more difficult it is for those who hold power to increase it further; the more difficult it is to increase power, the greater the need for even more force and sabotage; and the more force and sabotage, the higher the likelihood of a serious backlash, followed by a decline or even disintegration of power.

It is at this latter point, when power approaches its societal 'asymptotes', that capitalists are likely to be struck by systemic fear – the fear that the power structure, having become top heavy, is about to cave in. And it is at this critical moment, when capitalists fear for the very survival of their system, that their forward-looking capitalization is most prone to collapse.

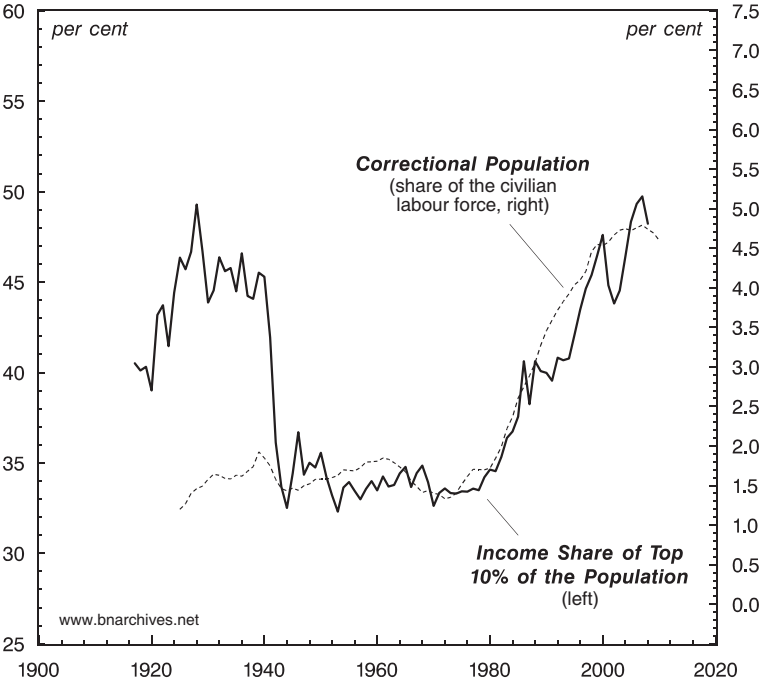
In the United States, this type of collapse was trigged first in 1929, and then again in 2000. As we've shown in our work, in both cases the period preceding the collapse was marked by distributional extremes: both in the late 1920s and in the 2000s, the top 10% of the U.S. population controlled nearly half the income. However, it is worth noting that the underlying inequalities today are probably greater than they were during the 1920s. To illustrate, by 2010, the national income share of capitalists (interest and profit), of after-tax profit, and of the net profits of the top 0.1% of all corporations (a proxy for dominant capital) were all at record highs, exceeding anything recorded since 1929, the first year for which full national income data are available.

In order to increase and sustain this type of differential accumulation-cum-power, dominant capital has had to inflict more and more threats, sabotage and anguish on the underlying population. This damage has taken numerous forms, one of the most striking of which is shown in Figure 2.

The solid line, plotted against the left scale, depicts the income share of the top 10% of the U.S. population. The dashed line, plotted against the right scale, measures the ratio between the adult 'correctional population' and the labour force (the correctional population includes the number of adults in prison, in jail, on probation and on parole).

Although there are no hard and fast rules here, it is doubtful that this massive punishment can be increased much further without highly destabilizing consequences. And yet, the logic of differential accumulation dictates that redistribution and the accompanied increase in sabotage must continue. This clash between the imperatives of capital as power and the instability it engenders explains why leading capitalists have been struck by systemic fear. Peering into the future, they realize that the only way to further increase their distributional power is to apply an even greater dose of violence. Yet, given the high level of force already being exerted, and given that the exertion of even greater force may bring about heightened resistance, they are increasingly fearful of the backlash they are about to unleash. The closer they get to the asymptote, the bleaker the future they see.

Figure 2
The Underlying Magma:
Income Share of the Top 10% of the U.S. Population *vs.* the Correctional Population as a Share of the Labour Force



NOTE: The correctional population consists of adults in prison, in jail, on probation and on parole. For years prior to 1980, systematic data are available only for adults in prison and jail. For those earlier years, the total correctional population is estimated in two steps: first, by computing the average ratio between the total correctional population and the number of adults in prison and jail during the period 1980-1989 (=5.98); and second, by multiplying for each year the number of adults in prison and jail by this average ratio. The last data points are 2008 for the Income Share of the Top 10% of the Population and 2010 for the Correctional Population.

SOURCE: The income share of the top 10% of the population is from Thomas Piketty and Emmanuel Saez, 'Income Inequality in the United States, 1913-2002', Monograph, 2004, pp. 1-92. Updated till 2008 from http://www.econ.berkeley.edu/~saez/TabFig2008.xls; data sheet: data-Figure1 (retrieved on February 7, 2011). Data on the correctional population are from Sourcebook of Criminal Justice Statistics Online (till 1979: Table 6.28.2009 (http://www.albany.edu/sourcebook/csv/t6282009.csv); from 1980 onward: Table 6.1.2010 (http://www.albany.edu/sourcebook/csv/t612010.csv). Civilian labor-force data till 1947 are from the *Historical Statistics of the United States: Earliest Times to the Present, Millennial Edition* (online) (series code: Ba470); from 1948 onward, the data are from the U.S. Department of Commerce through Global Insight (series code: LFC).

6.

Piotr Dutkiewicz: What next for power, capital and the market?

Jonathan Nitzan: To answer this question, we need a new – and very different – research institute.

To *re*-search means to search again, and that is exactly what the current theoretical-ideological impasse calls for. As we have reiterated throughout this interview, the existing approaches to capitalism – liberal and Marxist – have run their course. They rely on the wrong assumptions; they use fictitious building blocks; they employ misleading categories, concepts and research methods; and most importantly, they often ask the wrong questions. They lead us to a dead end.

Capitalism is not a mode of production and consumption. It is a mode of power. And in order for us to transcend this mode of power, we first need to properly understand its structure, development and crises. In short, we need a cosmology of capitalist power.

Such a cosmology, though, cannot be concocted out of thin air. A new cosmology emerges not from the self-organization of Platonic ideas, but from the relentless *empirical* inquiries of flesh-and-blood researchers. The detailed empirical investigations of these researchers yield new evidence and novel regularities; the new evidence and regularities undermine and eventually shatter the old dogma; and with the old dogma having been debunked, the door is open for a new system of assumptions, concepts, questions and theories.

This is how modern science was born in the sixteenth century. It emerged not from re-idealizing religion or revamping moral theory, but from empirical research. It was the celestial observations of Copernicus, Tyco Brahe, Johannes Kepler and Galileo Galilei, the hands-on surgical procedures of Andreas Vesalius, the discovery of systemic circulation by William Harvey, the chemical experiments of Richard Boyle and the detailed analysis of magnetism by William Gilbert, among others, that helped undermine the old dogma. And it was this empirical research that eventually gave birth to a novel method of inquiry we now call science. 'There is no empirical method without speculative concepts and systems', says Albert Einstein, but also, 'there is no speculative thinking whose concepts do not reveal, on closer investigation, the empirical methods from which they stem'.[4]

Piotr Dutkiewicz: Can you illustrate this theoretical-empirical duality in the study of political economy?

[4] Albert Einstein, Foreword to Galileo Galilei, *Dialogue Concerning the Two Chief World Systems – Ptolemaic & Copernican* (1632: xxviii).

Jonathan Nitzan. Certainly. Take the Keynesian Revolution of the late 1930s. Although Keynes and his followers retained the Newtonian determinism of neoclassical economics (utility-maximizing agents, individual rationality, perfect competition, etc.), their framework nonetheless undermined basic tenets of bourgeois orthodoxy. It separated the macro sphere of government and state from the micro world of consumers and producers, it offered different ethics for private and public management, and it allowed – and indeed called for – stabilizing fiscal and monetary policies by governments.

However, even this limited bourgeois revolution would have been impossible, indeed inconceivable, without a prior empirical-statistical basis – in this case, the prior development of systematic national accounting. The first steps in that direction were taken at the end of the nineteenth century in Europe, the United States and other countries, and they culminated in the 1920 foundation of the U.S. National Bureau of Economic Research (NBER) and the official publication of the country's first national accounts in 1934. Without this emergent empirical picture of national aggregates, it is doubtful that Keynes could have imagined a distinct 'macro' perspective, let alone a theory that related its underlying flows and stocks.

Piotr Dutkiewicz: What does that mean for radical students of society in general and for the study of the capitalist mode of power in particular?

Jonathan Nitzan. In order for us to develop – and negate – the cosmology of capitalist power, we too need an empirical infrastructure; and that infrastructure is yet to be created. The importance of such infrastructure for radical undertakings can be gleaned from the evolution of twentieth-century Marxism. When Lenin wrote his book *Imperialism* (1917), the data on which he based his argument were meagre and fractured. There were no organized statistics, no time series and no aggregate facts to speak of. Much of his evidence was drawn from works published twenty years earlier by the left-liberal political economist John Hobson. The situation was quite different half a century later. In 1966, when American Marxists Paul Baran and Paul Sweezy published their *Monopoly Capital* (1966), systems of national accounts had already been implemented, primarily in the developed countries, and aggregate data analysis had become increasingly commonplace. This new infrastructure enabled Baran and Sweezy to enlist the help of Joseph D. Phillips, a statistical expert who subjected their thesis to systematic empirical examination. The result, published in the famous appendix to their book, was an empirical feat that Lenin could not even have fathomed. And yet, even Baran and Sweezy had to restrict their analysis to the United States, and particularly to its macro economy: national accounting was still far less developed in the rest of the world; organized statistics for corporations and financial intermediation were still in their infancy; and global databases were not yet on the radar screen. It was only in the 1980s, with the transnationalization of capital and the advent of cheap computing, that a global statistical picture, however imperfect, became a practical possibility.

These new data and the relative ease with which they can be accessed through the internet offer research opportunities that earlier critical thinkers could only dream of. However, I think we need to bear in mind that these databases have been conceived and developed to serve the capitalist mode of power, not to undermine it. They are geared toward the interests of accumulation, and, as such, they reflect the assumptions, categories, methods and theories of neoclassical economics – the ruling ideology of the accumulators. This fact serves to explain why Marxists have found it increasingly difficult to distance their empirical analyses from those of their class enemy. Having failed to develop their own statistical methods and corresponding data, they have gradually been forced to use those of the neoclassicists. And by using these methods and data, they ended up, often without noticing that they were doing so, validating the very approach they seek to reject.

We need to get rid of all this baggage. To be radical means to go to the root, to start from scratch. We need to develop new questions, new method, new categories, new data and, finally, an entirely new mode of accounting. We need to *re*-draw the capitalist map in a manner that will uncover and depict the logic and reality of capitalist power. We need to measure the aggregate and differential manifestations of this power in different regions, countries and sectors and at different levels of analysis. We need to identify the specific strengths and weaknesses of that power, so that we can know how to resist and overturn it. And to do all of that, we need to revolutionize the way we think, interrogate and investigate.

This kind of revolution demands an organizational Ctrl-Alt-Del. It requires a *new, autonomous research institute* – a non-academic scientific organization that will be independent of neoclassicism, Marxism and postism. The purpose of this research formation will be to lay the empirical-theoretical groundwork for a new cosmology of the capitalist mode of power, as well as a counter cosmology to help us *creorder* a humane alternative.

The Scientist and the Church

10

Aki and Friends [1]

[1] This eulogy was first posted on *The Bichler and Nitzan Archives* in Hebrew (Bichler and Nitzan 2013a) and English (Bichler and Nitzan 2013b).

It is ***recommended*** to copy, duplicate, photograph, record, translate, store in a knowledge base and distribute this eulogy, in whole or in part, in any form and by any means, electronic, optic or mechanical, without permission from the authors, on condition that the publication not be for profit and that its title and authors be mentioned in the citation.

In the spirit of Akiva (Aki) Orr, 1931–2013

Aki, a man enamoured with life and enchanted by animals – including humans of different varieties – pays a visit to his friend, the veterinarian. The vet tells him of two seniors who suffer from depression, and Aki is quick to raise their low spirits and warm up their aching bodies. He hangs the boa constrictor on his neck and places the hairy tarantula on his head. There is no need to worry, he assures us. After all, why would two elderly creatures hurt an empathetic being so eager to help them?

This view was typical of Aki. That is how he viewed the world, its history and conflicts – as well as the solutions for those conflicts.

'Just think about it logically', he says. 'Why would a Palestinian suddenly turn into a "terrorist"? What reason does he have to oppose "peace"? Why should he be eager to fight the "only democracy in the Middle East"? Is it his culture, religion or race? Is it "in his nature", as the Zionist propaganda machine reiterates?'

Of course not, he answers.

For more than a century, the Palestinians have confronted a Zionist movement whose colonial policies have gradually deprived them of their life, land and autonomy. As often happens with occupiers, the Israelis have preferred to blame their victim. Their fancy academic theories, spiced up with ideologies of culture, religion and race, prove, at least to themselves, that there can be no 'political solution'. The 'Arabs', they say, cannot be trusted. Like the boa constrictor and tarantula, it is 'their nature' to bite and strangle.[2]

Nowadays, these explanations have no traction. Most sensible observers around the world have come to accept Aki's logic and reject the official Israeli line as self-serving, if not ludicrous. But that wasn't always the case.

Half a century ago, when Aki and his friends started their hazardous journey to explore the underlying logic of the conflict, they were considered illogical, if not weird, and branded as 'traitors' (although it was never clear exactly what or who they had 'betrayed').

[2] *Alternative to a Psychotic State* (Orr 2010).

The Other Logic

One day, Aki had his new car hijacked by two Palestinian teenagers. He was backing up into his parking spot, when one of the teens pretended to have been hurt by the automobile's back bumper. Aki hurried out to assist the 'injured' boy – and as he stepped out of the car, the two thieves jumped into the vehicle, racing it toward the 'slaughter houses' of the nearby Palestinian town of Taibe to be dismembered and sold for parts.

Aki didn't seem particularly worried about his stolen car (which, incidentally, he had just bought and hadn't yet insured). His real concern was the two juvenile robbers. The Zionist occupation, he said, had left them out of the loop. It limited their land and restricted their access to water. It undermined their education. It barred them from the formal labour market and made it difficult for them to secure legal employment. They existed on the slippery margins of the food chain. What options, other than high-risk petty theft, did they have?

For Aki, the world seemed straightforward. Nature and society, he thought, are logically ordered, usually in a fairly simple way. The rulers constantly try to conceal this simplicity. By manipulating knowledge, controlling the prevailing ideologies and dominating mass communications, they trick human consciousness and distort reality. But they can do so only for a while. Over the longer haul, the human quest for clarity, consistency and meaning is much stronger. Manipulation collapses and enlightenment prevails.

Aki was firmly wedded to this view. Contemporary postists dismiss this view as antiquated, but Aki wouldn't even dream of changing it. He was an 'enlightened modernist': rationalist, humane, without a shred of cynicism or a trace of hypocrisy. In this sense, his approach resembled Leibnitz's – although one could also see it as a variation on *Candide*.

As an enlightened rationalist, he was keenly interested in the history of ideas, both cosmological and political. One of his preoccupations was the Russian Revolution: why did it fail? He delved into Communist Party minutes from the 1920s, along with other discussions and debates, hoping to find in them clues to the riddle.[3]

The conventional explanations didn't satisfy him. According to one prevailing view, the revolution is best seen as a glorified gang war. The Stalin gang happened to be more focused and ruthless than its opponents, and it was this practical superiority – and not any ideological advantage – that helped it win the spoils and mislead Western intellectuals for years to come.

Aki considered such views simplistic and partial. He didn't fancy one-sided accounts. These may be appropriate for TV series or Hollywood movies whose individual heroes are never allowed political goals other than wealth and power. But in history, said Aki, especially over the longer haul, it is the ideas that matter. When

[3] *Revolution, the D.I.Y Version (20th Century World Politics – and Their Consequences)* (Orr n.d.-b: Chs. 7-8).

you examine history logically, you see a never-ending clash between the forces of reason and the forces of chaos. Even what we normally think of as 'conflicts of interest' and 'struggles for power' eventually manifest themselves as opposing theories, ideologies and doctrines.

Aki's analysis of the Cultural Revolution in China was no different. In his eyes, it was not a gang war between Mao and the established oligarchies, but an ideological struggle over the future of Chinese socialism. And the same was true for U.S. foreign policy in the twentieth century. For Aki, this policy was much more than a simple reflection of capital accumulation and the shifting strategies of domestic and multinational corporations.

A few years ago, we noticed that he had started reading books on American politics in the 1950s. In the beginning, we couldn't figure out this new obsession. He devoured scores of strange manuscripts, all packed with archaic details. And then it dawned on us: he wanted to convince himself that the Stalinist version of 'historical materialism', a doctrine he absorbed in the 1950s as a member of MAKI (the Israeli Communist Party), was in fact shallow and flawed. He tried to endow American political culture with a measure of autonomy, to show that it was not completely subservient to 'economic interests' and the 'dictates of capital'. The political functionaries, military officials, ideologues and managers who conducted the Cold War, he said, were not economic automatons. They were driven by prejudice, influenced by ideologies and hamstrung by intellectual blindness. More often than not, their political activity had little or nothing to do with the so-called 'objective-material' reality of production and accumulation.

The same logic was applied to the emergence of the Greek polis, a socio-political order that emerged together with and fused philosophy, mathematics and democracy.[4] Aki didn't like the conventional explanations of this fusion. For him, the polis was something else. It was radically different from any of the monarchies, oligarchies, dictatorship and tyrannies that dominated the ancient East. And that radical difference could not easily be accounted for by the so-called 'objective circumstances'. Academic sociologists and historians often point to Greece's mountainous terrain, its geopolitical setting and special technological conditions as factors that presumably helped it escape the oppression, violence and religious intolerance of so-called oriental despotism.

Aki rejected this view. In his opinion, the Greek polis was like the square root of two: something that emerges, suddenly and without warning, to defy and crack the all-encompassing logic around it.[5] There was no 'external determinism' here. Taken together, the evolution of logical dialogue and collective decision-making, and the discussions and debates on the good life and the encompassing participation, enabled democratic forms of thinking. They gave rise to pure mathematics, logic, philosophy,

[4] Aki's views on this subject were inspired by his mentor and friend Cornelius Castoriadis, a former Trotskyite, philosopher, political economist and psychoalnalyst who lived in Paris.
[5] On the creative role of discontinuities and leaps in cosmology and society, see *From Protest to Revolution* (Orr 2004: 27-29) and *Enlightening Disillusionment* (Orr 2011: 49-51).

history, theatre, academia and humane public education. And these democratic forms of thinking in turn nourished, sustained and gave meaning to a self-conscious social order – the Greek polis.[6]

The Hidden Factor

These were not mere metaphysical protestations, but engagements with a practical problem. Often it seemed to us that Aki was trying to develop an alternative conception of history, a theory that would be simple, logical and – most importantly – useful. This was the purpose of Marxism-Leninism, he said. Its goal was not merely to decipher exploitation and alienation, but to provide a way out, to help us *plan* the good life. If a political theory offers no solutions, he asked, why have it in the first place?

This is also how he saw the 1962 foundation of MATZPEN (The Socialist Organization in Israel): the purpose of the organization was not protestation, but revolution. In the 1960s, MATZPEN's radical politics were a complete novelty in the otherwise tightly controlled Israeli 'consensus'. Most treated the organization as an oddity, but for its members MATZPEN was a movement with a solution to a problem: the problem was the intensifying Arab-Israeli conflict, and the solution was socialism in Israel and the region.

But in order to bring about this solution, Aki and his friends told themselves and others, we must first explore, fearlessly and without inhibition, the root causes of our reality. We need to study the historical underpinnings of Zionism and imperialism in the region, to rethink the official story, to search for what the dominant ideology seeks to hide.

And sure enough, they found it. Their inquiry led to the introduction of a totally new factor into the political equation: the *Palestinians*.

Until then, the Palestinians were a non-entity. Having been marginalized and concealed by the official Zionist historiography, they were entirely absent from the Israeli consensus. MATZPEN was the first to make them part of the equation. And the initial step in that direction was made in *Peace, Peace and No Peace*, a book that Aki co-authored with Moshé Machover in 1961.[7]

For Aki, the discovery of the Palestinians was a logical solution to a political puzzle: Why had Israel assisted the declining powers of France and Britain in their 1956 attack on the Suez Canal? The difficulty was that, only a decade earlier, Britain was still being accused by the Israeli government of fomenting conflicts in the region

[6] See *The Original Philosophy and the True Democracy* (Orr n.d.-a). This book offers Hebrew translations from and commentary on the writings of Cornelius Castoriadis by Aki and friends.
[7] The second Hebrew edition was issued in 1999; the English version of the second edition, translated by Mark Marshall, appeared in 2009.

and was considered, even by leading Zionist officials, as the country's archenemy. So why had the tables suddenly turned to make Israel Britain's allay?

> Originally Machover and I thought that Zionism's foreign policy stemmed from its support for the capitalist system. . . . As Communists, we thought that it was Zionism's opposition to socialism and its support for capitalism and colonialism that placed it on the path of conflict with the peoples of the countries colonized by the colonial powers. That explained Israel's participation [in the 1956 Suez War], and Israel's support for the United States in the Korean War (1950-1953), and Israeli support for French rule in Algeria and Vietnam, and many other Israeli policies. . . . (Orr 2011: 41)

But the puzzle didn't fit. No matter how they rearranged it, there were always historical bits that didn't sit well with the theory. Finally, they realized what nobody had previously noticed: there was a piece missing.

> . . . Palestine was populated by Arabs who wanted to establish their own state there (from 1936 to 1939 they rebelled against British rule). The Zionist aim conflicted with the Palestinian one. That conflict dictated Israel's foreign policy [which sided with that of the colonial powers, including Britain]. *It was not the Zionist foreign policy that dictated the Zionist settlement and military policy* (as the Communist Party claimed); *it was the other way round: Zionist settlement and military policy dictated Zionist foreign policy*. [The expropriation of] the Palestinians (from 1900) and building of Jewish settlements on their land caused Zionism to oppose Palestinian supporters (mostly anti-colonialists) [such as Egypt] and to support their colonialist rulers [like Britain and France].
>
> In 2005 that seems self-evident, but in 1962 all Israelis responded with wonderment *'Palestinians'? 'Who are they?'*
>
> Until the 'Intifada of the Stones' (1987-1993) no Israeli politician, academic, orientalist, political analyst or journalist saw the Palestinians as a *political* factor. At the most they were seen as a social factor – miserable refugees who needed to be housed and fed. . . . [In 1962] It looked like the 'absurd' idea of two mathematics students who had no expertise on the Middle East. . . . (*ibid*.: 44, original emphases)

Half a century later, we can safely say that MATZPEN's new equation transformed Israeli politics and, in some sense, changed the world. The socialist-Zionist consensus has been cracked beyond repair. It is true that the world now is different from what it was in the 1960s, and that the postist newspeak has gained the high

ground. But the critique that Aki and his friends presented back then still echoes, and their questions still resonate.[8]

A tiny group of people, surrounded by suspicion and hate, lacking any resources, with no support and against all odds, had managed to shake our perception and create a new reality.

And the solution? Only time will tell.

Autonarchy

MATZPEN was also the logical answer to the Stalinist debasement of Marxism. As Aki described it, he and his friends grew sick and tired of playing gatekeepers for Soviet imperial interests. They didn't wish to end up like the Israeli Communist parties – from MAKI (Israeli Communist Party) to RAKACH (New Communist List) to HADASH (The Democratic Front for Peace and Equality) – whose functionaries kept silent on Khrushchev's (secret) confessions of Stalin's crimes and remained silent (while silencing others) when the Soviet Union abandoned the Communist revolutionaries of Egypt, Iraq and Syria.

Aki and his friends were not interested in the realpolitik of the Communist superpower. They wanted a revolution. Their thinking, politics and spirit were close to the Fourth (Trotskyite) International, and they maintained close ties with Trotskyite and Marxist revolutionaries among the popular Palestinian liberation movements.

But even the Trotskyite ideas, which Aki was first exposed to while in Britain, proved problematic. They were unable to address the basic problem of Marxism: the absence of democracy.

This problem haunted every Communist country, and Aki, inspired by Cornelius Castoriadis, offered a solution: *autonarchy*. Autonarchy for him meant a political system of self-rule, a regime of 'direct democracy' in which every member of society actively participates in the management of that society.[9]

This was no flash in the pan. For Aki, 'direct democracy' was not some utopian impracticality to be scribbled on a placard. It was a concrete answer to a fundamental problem. Over the years, defenders of socialism and Communism have blamed the regime's authoritarianism on assorted 'externalities' – from the 'ideological betrayal' of political functionaries, to the gradual 'corruption of the leadership', to the debilitating process of 'bureaucratization'. Aki rejected these excuses. The failure of socialism and Communism, he said, was not circumstantial, but foundational. These regimes were undermined not by their 'special conditions', but by the very theory that informed them. Their problem was not the 'distortions' introduced by Leninism, Stalinism or Maoism, but the original logic of Marx's thesis.

---

[8] See 'To the New Reader Innocent of the Undeconstructed Past: On the Second Edition of *Peace, Peace, and No Peace*' (Bichler and Nitzan 2010c).
[9] See 'Autonarchy = Direct Democracy' (Orr 2000a).

Logic, though, is not a static concept, he noted. It develops dialectically, together with the changing historical context. In order for us to assess the merits of Marxism, we need some retrospect. And it is only now, more than a century after Marx, that we can begin to appreciate the contradictory manifestations of his theory.

Aki saw Marxism as a theory focused on private property, which, in our epoch, appears as capital. Capital controls and stirs industrial production for the purpose of accumulation. The accumulation process creates a class conflict between capitalists and productive workers. The capitalists leverage the political regime in order to legitimize exploitation and sanctify accumulation, while their workers, who witness their own exploited labour accumulating against them, organize and resist. For Marxists, the solution to this conflict is the abolition of private property and the socialization of the means of production. But this solution, said Aki, creates a new problem.

Regimes that 'socialized the means of production' did not liberate the workers; instead, they placed them under the control of state managers, technical experts, planners and public officials. Whereas labourers in capitalist countries submitted to the market and the associated institutions of the capitalist state, their counterparts in Communist countries were made to obey the Party, bureaucracy and military. The former surrendered their autonomy to capitalist exploitation, the latter to bureaucratic oppression.

It took Aki some time to reach this conclusion. His political awakening began in 1951, as a sailor on one of the striking ships in the Haifa Seamen Revolt. On that ship, he witnessed, first hand, the security forces attacking the strikers. He realized that the police and the army exist to protect not the subjects, but the political regime that rules those subjects. In the wake of this experience, he joined the leftist group of Moshe Sneh and later MAKI – where he was soon introduced to the other side of oppression.

His political transformation continued with the 1953 workers' revolt in East Germany and the 1956 popular uprising in Hungary. Both movements were put down by a Soviet bloodbath of violence and mass arrests. And in both cases, the Communist parties kept silent.

The final wakeup call came with the 1968 Paris revolution. It was then that he realized the problem is not one of choosing between 'private' and 'public' property, but of attaining autonomy. Neither the greed-driven regime of private property nor the power-driven regime of public property is able to emancipate human beings, and for a simple reason: both are *premised* on excluding the vast majority of their subjects from running their own society.

Capitalist theories are produced and imposed by a sect of know-it-all experts and analysts with proprietary insight into the mysteries of the 'economy' and the secrets of the 'market'. The role of this sect is to protect the regime and its inner core of big capitalists and top managers. The latter group controls and directs everything of importance in the capitalist order – from technology and production, through desires and ideology, to the planetary ecology and the fate of the human race. The members of this

group are convinced that they serve the interests of society (conveniently equated with their own).

Marxist theories, although very different from their capitalist counterparts, lead to a similar result. They give rise to a small cadre of omniscient political functionaries and pundits with superior insight into history's 'laws of motion'. These theoreticians reputedly know the needs of humanity and how to fulfil them; they can identify the required technologies and how to invent them; they cognize what constitutes proper education and how the masses should live; they decide what infrastructure will be used and whether to care for or ignore the natural environment. Moreover, they are convinced that this insight is best imposed through violence, brainwashing and deceit.

The only solution, said Aki, is a revolution. We need an entirely new regime, one that will be managed not by a narrow group of 'free marketeers' or 'Gosplanners', but by society as a whole. It was this conclusion that eventually led him to Castoriadis' historical philosophy of direct democracy.

The 1968 revolution in France showcased the practical potential of autonarchy. There was no need for brainwashing or mass re-education, Aki observed. The idea seemed almost natural. It spread rapidly and was accepted enthusiastically, as if it were part of humanity's 'practical reason'. Methods of self-rule were tried with varying degrees of success in many different settings. They were implemented in industrial factories and government offices, schools and universities, regional assemblies and city halls. They were even introduced into military units.

Eventually, the revolution fizzled out and died. Relieved by its demise, orthodox historians and mouthpiece journalists were quick to dismiss it as 'student riots' and statistical 'disturbances' that occasionally flare up on the margins of the established order. But this depiction, said Aki, merely revealed the defensive mode of the powers that be. The rulers of the world, both capitalist and socialist, know that they must keep their grip over the masses, and in 1968 they came close to losing it.

The events of that year, said Aki, were truly revolutionary: they marked the first modern manifestation of autonarchy. In this sense, the Paris uprising of 1968 was more important than the Russian Revolution of 1917. It represented an entirely new logic that threatens both capitalism and socialism and that will forerun the struggles of the twenty-first century.

The Wandering Circus

Of course, none of this will happen automatically. Revolutionary ideas, said Aki, no matter how logical and ripe for their time, do not suddenly pop up into the heads of human beings. Not even in the era of 'market forces'. Autonarcy imperils the regime, and that means it will be fiercely resisted. The rulers, regardless of their gender, race

and culture, will fight it tooth and nail. They will refuse to give up their private property, profits and perks, and they will certainly be unwilling to allow their subjects more than a token say in organizing society.

The war will be long and drawn out. There will be plenty of surprising twists, unexpected turns and disappointing setbacks. But the struggle has already started, said Aki, and it will not stop. It will continue, because, in the final analysis, human beings fight for logic and reason – precisely what direct democracy gives them.[10]

And so, soon enough, Aki found himself in the ideational trenches, fighting for autonarchy.

***Shimshon Bichler*:** During the 1990s, I taught political economy at the Law Faculty of Haifa University. In every course, I would devote at least one session to a one-man show by Aki. Later, I also taught at various colleges, which gave Aki the opportunity to expand his performances to other locales.

We called these performances the 'wandering circus'. Aki was the star, Eran Turbiner was the director/cameraman/producer, and I was the organizer. The performer, dressed in open sandals, a sailors' coat and a knit cap (regardless of the weather), showed no inhibition. Quick to his feet, he immediately dominated the stage with his booming voice.

Eran and I knew the text by heart. We also knew the gestures, jokes and dramatic pauses. Yet we were always mesmerized. Even after ten years on the road, we still felt as if we were listening to him for the first time.

He usually talked about his own life, told as a political autobiography. The audience would be taken through the ups and downs of world history and learn how they shaped the narrator's opinions and influenced his political consciousness.

The stories were wonderful. They started in Berlin in the early 1930s, where Aki's mother, pushing her two-year old son in his stroller, noticed to her horror the toddler returning the 'Heil Hitler' salute of a smiling S.S. officer. The mother could not fathom

[10] Interestingly, Aki's view on this subject resembles Michel Houellebecq's. In general, the two hold very different opinions, but there is one thing that both agree on: the strongest transformative force in history is *revolutionary ideas*. In his book *The Elementary Particles* (2000), Houellebecq speaks about a 'metaphysical mutation', a radical global transformation in social values that tend to come at the hubris stage of a civilization. Such mutations, he argues, do not happen often. But once started, they are unstoppable. This is what happened with the rise of Christianity at the zenith of the Roman Empire and, again, with the emergence of scientific thinking at the apex of European feudalism.

Houellebecq, like Aki, considers the current wave of religious and ethnic movements as temporary. Aki often said that human consciousness, like nature, abhors a vacuum. The crisis of socialism and capitalism, he argued, creates an ideational emptiness, and this emptiness is quickly filled with religious mantras and postmodern slogans. But in the background there emerges a new metaphysical mutation – autonarchy. According to Houellebecq, science caught on because it offered something that the trickery and omens of religious dogma could never match: 'rational certainty'. Science, he says, imposes logic and makes sense of the physical universe. And autonarchy, argued Aki, does the same for society: it offers a reasoned way to make sense of and organize the social universe.

her sole offspring becoming a Nazi, and the family soon moved to Palestine. Aki would then describe how, during the great Palestinian Revolt of 1937, he and his mother found refuge in the (now-ruined) Arab village of Lifta near Jerusalem; how, in 1946, he competed against and lost to the excellent Egyptian swimming team; how, in 1951, he found himself participating in a violent strike against the Israeli ruling class; how, while studying mathematics and physics at the Hebrew University, he became head of the Communist student cell; how he was expelled from the Communist Party, and how his newly founded MATZPEN movement rattled the Zionist foreign propaganda machine; how he stopped being a Marxist (at least according to the conventional definitions); and how he joined the movement for autonarchy in the glorious days of the 1968 revolution in Paris.

At that point, the spectacle would climax. To dramatize the moment, Aki would slow down to recite, with a touch of pathos, the French strikers' demands for self-management. The strikers, he said, dismissed the 'generous' offers of the Gaullist regime and the Communist Party. They had no interest in what was on offer:

'We don't want more bread; we want to run the bakery. . . .'

From here onwards, the emphasis would shift from stories to analysis, from an alternative political history to the logic of direct democracy: 'How can a society of autonomous human beings', he would ask, 'collectively manage its social life for the good of its members?'

Despite his Marxist mannerisms, Aki was a 'technological determinist'. Human history for him was driven, first and foremost, by scientific and technological developments; class wars, cultural revolutions and political changes were mostly the consequences.

To make his point, he would search the many pockets of his old sailor's coat, eventually producing the victory gadget of autonarchy: a magnetic plastic card.

In Paris in 1968, he explained, the democratic logic of autonarchy was still hamstrung by technological limitations. The many action committees, spread all over France, lacked an effective communications infrastructure. They came up with many different ideas, demands and goals, but they had no means of communicating them, let alone putting them into collective practice.

'But now', his voice boomed, 'the time has come!'

Waving the little plastic card, he would explain how instant interactive communications and reliable electronic encoding make autonarchy feasible – nationally and perhaps even globally. We can now engage in long-distance mass discussion, debate and secure voting – and that ability enables us to finally dispense with all functionaries and go-betweens. There is no longer any need for dictators, ruling gangs, exploitative oligarchies or four-year 'representatives'. There is no reason to remain submissive for years on end in exchange for a one-day holiday called 'elections'.

The age of reason has arrived.

When his listeners expressed doubt and skepticism, Aki was endlessly patient. There are no ready-made solutions, he would say – none 'from above', and certainly none from self-appointed 'experts'. Reasoned solutions can emerge only through interactive social experimentation – and even then there are no guarantees. There are always mistakes and mishaps, with good solutions invariably accompanied by bad ones. But autonarchic decisions, whether good or bad, have one important advantage: they can be *changed*. Even if the majority errs – for example, in deciding to bring in the death penalty, or to hold onto occupied territories – it can always reverse its own decision.

Not so with 'representative governments' (as the rulers and their servants like to call their organizations). Once elected, the 'representatives', seeking their own ends, can wreak havoc on the underlying population, with the only recourse being the next election, when the 'voters' are allowed to 'choose' a different set of 'representatives'. This method brings despair. It causes people to lose hope and mistrust democracy, to look inward instead of outward. They become alienated individuals, isolated atoms that no longer try to alter their collective fate.

Although his logic seemed compelling, Aki found it difficult to answer the question posed by Professor Philip Philipovich, the transfigurating surgeon in Bulgakov's novel *The Heart of a Dog* (1968):

> . . . if I begin to sing in chorus in my apartment every evening instead of operating, it will lead to ruin. . . . It is impossible to serve two gods! It is impossible at one and the same time to sweep the streetcar tracks and settle the fate of Spanish beggars! (37)

Aki's idea of autonarchy seems to take for granted the nature of technology and production, as if they were objectively 'given' to society. But this is hardly the case. Every invention, innovation, production line and labour process, not to mention 'entrepreneurship' and 'investment', is deeply embedded in the logic of capital and its mode of power. A PG&E utility plant, a JPMorgan Chase office building or a Google data centre are not stand-alone entities, separate from the social context in which they operate. Their design and construction, their employees' education and training, the way they are used and abused are all intertwined with the gist and purpose of the regime. It seems to us an illusion to think that this inherently capitalist infrastructure can somehow be taken over, 'as is', by direct democracy.

At the end of the show, students would line up to speak with Aki and buy his books. Many of them were women, and a fair number of those women were Arab. Minority groups, especially those seeking change, found Aki easy to connect with.

A Chain of Stories

Over the past decade, Aki produced his books and articles on his own, without a publisher. He would print them at Beit Hanina in East Jerusalem and 'distribute' them in person. His design and layout left much to be desired. The footnotes were often larger than the text, the font would suddenly change, the pages were not always centred and some editorial markings were left uncorrected. When we drew his attention to the aesthetic drawbacks, he seemed perplexed. 'The important thing is the content, not the form', he said. 'Those who recycle dogmas need snappy designs to catch the eye; I don't'. Sometimes he used approximate rather than definitive numbers. At others, the evidence he marshalled would be imprecise. His critics used these oversights to attack his underlying ideas, but Aki remained unfazed: '. . . history is not a random collection of dates, events and numbers; it's the understanding of processes. . . .' It was obvious he couldn't connect with the postists.

During the 2000s, his war effort for autonarchy intensified. There were more and more anarchist groups in Israel, and Aki would eagerly address them in abandoned warehouses, worn-out cafés and street demonstrations. His talks covered a wide range of subjects and catered to different audiences. He would lecture to retired Yekkes (Jews of German descent) on the history of modern physics and speak to high school students on cosmology. No invitation was refused, and no audience was ever disappointed. Aki's creative fusion of autobiographical stories, history and theory kept them at the edge of their seats.

There was, however, another set of stories – equally fascinating and politically spicy, yet more personal – that Aki never shared in public. Over the years, we tried to persuade him to put his tales into writing, and eventually he was swayed. In 2000 he issued *Hevzekim* (*Flashes*) , followed in 2011 by its English version, *Enlightening Disillusionment*.

As a youngster, Aki taught mathematics at Alliance Jerusalem, and he remained a teacher at heart for ever afterwards. His *Enlightening Disillusionment*, written as a chain of stories, is sparkling, funny, enchanting and hopeful. It encourages you to rethink history, to examine it in a different way. The book recounts memories, thoughts and deeds from his days in Palestine, Israel, Britain and France – and again in Israel. Reading it, you can feel the real, humane story of the twentieth century bubbling up, the historical logic, so often concealed and destroyed, emerging from the depth of a forgotten memory.

It was like an anamnesis to us.

When we first read it, though, we noticed to our surprise that half of the stories he had told us – and often the more juicy ones – were missing. We pressed him on this point, and he finally confessed: he couldn't write with malice about people – especially not about his comrades, even if their roads had parted. His book does not retell the splits within MATZPEN and his disputes with some of his friends (including his break with Machover after Aki had abandoned Marxism). There is nothing on hard drugs.

There is no mention of difficult political experiences and disappointments. There is no reference to mistakes and regrets, and there are no personal or intimate tales. Even the 'bad' stories – for example, the bitter disappointment with and expulsion from MAKI, or the confrontation with the Zionist-Israeli establishment at home and abroad – are told without bile or ill will. There is no sabre rattling with former enemies, no settling of accounts, no gloat.

On Simplicity and Proportions

***Jonathan Nitzan*:** To be with Aki was to be immersed in stories. It was so from the very moment I met him. We had barely exchanged a few sentences before he asked me: 'What turning point in your life made you a Marxist? Was it a political event? Something you participated in or witnessed? Was it a book you had read or a story you had heard? Was it a movie, or maybe a play?' He was eager to hear my story.

But usually it was the other way around: Aki would be the storyteller and I the listener. I was not used to this ancient art of communication. The assertive telescreen and know-all internet have destroyed this art, and very few people engage in it nowadays. I was therefore amazed to see it practiced so charmingly and creatively by this vibrant elder.

In his own democratic bubble, Aki became my Socrates. His stories encouraged me to ask questions, to seek different paths, to look for what the Greeks called a 'method'.

My work with Shimshon has carried us into many uncharted territories. We explored the evolution of the Israeli ruling class and its accumulation through crisis; studied the political economy of Israeli inflation; traced the connections between the 'Weapondollar-Petrodollar Coalition' and Middle East 'energy conflicts'; and examined the transnational capitalization of Israel and the region. Recently, we began to sketch an alternative history of the capitalist mode of power, going back to its origins in fourteenth-century Europe. Aki often disagreed with our theoretical claims and historical writings, but he enthusiastically encouraged us to pursue them. He was always eager to engage new hypotheses, to hear of new research trajectories, to learn of new facts.

The thing that impressed me most about him, though, was his quest for simplicity. A short story is very much like a scientific claim or a mathematical equation: it is an effective way of making a point. Until the appearance of science and the emergence of formal logic, stories were the main venue through which people shared their thoughts and feelings. They told their stories not for utility or profit, but for beauty and enlightenment. And as Aki demonstrated so beautifully, the most enlightening stories are often the simplest.

My visits to Israel always included meetings with him. In one of those trips, on the day of my departure back to Canada, he called me to ask if he could come over. 'I want to bring you a present', he said. I was staying nearby, less than ten minutes by

car from his home; but Aki, known for his philosophical driving, took a full hour to arrive. When he finally emerged from his beat-up vehicle, he had a huge envelope in his hand and a mischievous smile on his face. Slowly, he pulled out from the envelope an equally large photograph and presented it to me. It was entirely black – save for tiny white dots spread here and there. 'Do you remember the spacecraft *Voyager*, the one propelled in 1977 out of the solar system?' he asked. 'Well, this is one of the pictures taken from the *Voyager*, and this tiny white dot – right here – is planet Earth! I want you to take this photograph with you, for the future. It will help you keep things in proportion. . . .'

That picture still hangs over my desk.

But even proportions have to be kept in proportion. And that lesson, too, Aki managed to convey with typical simplicity.

The Pythagoreans, he said to us one afternoon as we were sitting in a Jaffa beach café watching the sunset, saw every magnitude in the universe as a 'rational number': a *ratio* – or 'proportion' – of two integers. Their approach seemed totalizing and encompassing, applicable everywhere in the cosmos. According to their logic, the distance between any two numbers – say 1 and 2 – is 'populated' by an infinite number of rational numbers. To see that this is the case, divide the distance by two to obtain another rational number (in this case, 1½). Repeating this division again and again will produce more and more rational numbers. Eventually, after an infinite number of divisions, there will be 'no more room' left to squeeze in anything else.

It turns out, though, that this seemingly all-embracing logic is rather partial. The distance between 1 and 2 indeed contains an infinite number of rational numbers. But as the Pythagoreans themselves came to realize, regardless of how tightly we 'pack' these rational numbers together, there exists in the interstices between them a parallel world, equally infinite in size yet entirely different in logic – the universe of *irrational* numbers.

In other words, we can think of the same space as constituted, simultaneously, by two or more distinct 'realities', each with its own valid principles. This ability to imagine multiple co-existing logics is as beautiful as it is emboldening. It gives courage to break the envelope, to negate the dogma, to come up with a different way of thinking.

That ability allowed Democritus to invent the atom as a way of reconciling the frozen universe of Parmenides with the fluid world of Heraclitus. It enabled Hegel and Marx to contest rationalism and positivism with dialectical thinking. It opened the door for David Bohm to conceive the infinite 'enfoldments' of physical reality and for Cornelius Castoriadis to invent the 'magmas' of signification.

And it had a similar effect on us. It led us to think of capitalism as operating with two separate logics and therefore in need of two separate languages. The liberals offer a language based on utility, profit and capitalization, while the Marxists impose the language of labour and surplus. But each of these languages is all-encompassing, and

that singularity is potentially misleading. We need to think not of one, but two intertwined logics: the logic of power and conflict pitted against the logic of creativity and cooperation; the dominant in-your-face world of profit and accumulation versus the underlying hidden world of resistance and transformation; the language of order against the language of *creorder*.

Is this not the anamnesis that Aki helped us rekindle?

The Scientist and the Church

***Shimshon Bichler*:** Aki loved to read and talk about books. He read everything – from science and history to literature and mysteries. Good books, of any kind, exited him. Innovative books set him on fire. He discussed them with great passion and often with much originality.

A conversation with Aki was a dialogue in the Greek sense of the term. It had nothing combative or acrimonious about it. Contrary to the 'discursive' fashion of the postists, Aki never tried to confuse, manipulate or humiliate his 'opponent', to trick in order to 'win'. He conversed in order to foster understanding, to shed light, to help create something new. A dialogue with him was always open-ended. You never knew what you were going to get. Although old and half-deaf, he was more intellectually alert than most young people I know. It was a pleasure to visit him, and we dropped by as often as we could. His welcome was always joyous. There was never a hint of reservation. We would be invited to sip exotic coffee, to enjoy a box of dried dates, to try some homegrown grass.

He was the antithesis of an academic.

Conversations with academics are usually empty and boring. They tend to revolve around power relations, nominations, backstabbing and intrigue. They thrive on bad laughter. I have never had an academic provide me with a clear outline of a book he had read, let alone with what he had learned from it. I am yet to meet a single academic who would eagerly engage me with his research or hypotheses. What I usually hear is smearing, gossip, personal anecdotes and nasty commentary on theorists (but not their theories) – along with upbeat stories about vacations tied to conferences and other perks of the trade.

Aki engaged in none of these banalities. He was a true scientist. Original and creative, he knew to appreciate novelty and was quick to endorse it. He was excited by new technological inventions and loved to play with new gadgets.

But, above all, he was humble. He never demanded intellectual copyright – or, in fact, any rights at all. His position on this issue (which predated the Creative Commons movement) excited us. It suggested a way to undo the sabotage on knowledge. His books were preambled by an open challenge, a declaration of the creative-scientific spirit:

It is permitted to copy, duplicate, photograph, record, translate, store in a knowledge base and distribute this book, in whole or in part, in any form and by any means . . . without written permission from anyone, on condition that the reproduction not be for profit and not distort the spirit of the text. . . .

Note that Aki wrote 'permitted', but what he really meant was 'recommended'.

I was deeply embarrassed one day in 2004 to see him standing outside a subsidized academic conference, selling/giving away his self-published books.

The conference was pompously titled 'Against the Current'. Organized by slick Hebrew and Arab academics, it spoke highly of the Palestinian protests and the need for a different kind of democracy.

I queried one of the organizers on why they hadn't invited Aki to give a talk. The professor looked at me with pity: '. . . Aki knows little about Greek democracy, and he has limited familiarity with Palestinian history. His books are simplistic and full of inaccuracies. This conference is for experts. . . .'

The inventor was facing the Golem. . . .

And Aki? He couldn't care less. He was perfectly content to have young students buying his books. Those who were unable to pay received them for free. In fact, the way I know Aki, if it weren't for the embarrassment, he would have gladly paid the students to read his books. He was like Pythagoras, the first scientist, who bribed his pupil to love mathematics.

Self-Consciousness and Autonomy

During the 1960s, Aki read cosmology for a PhD at King's College in London (where his classmates included future mathematical physicist Roger Penrose and cosmologist Stephen Hawking). Later, he enrolled in the first computer science course in the world. Both fields contributed to his life-long interest in 'artificial intelligence'. Usually, this field is subsidized by the rulers in the hope of tightening their control over their subjects and substituting obedient machines for unpredictable workers. Aki's approach was the very opposite. He thought that studying 'artificial intelligence' might shed light on self-consciousness, and that such an understanding could lead to autonomy and help emancipate human beings from their rulers. He once told us that, fifty years ago, he had started working on an algorithm to make a machine recognize itself. 'I'm still working on it', he added.

The last story in *Enlightening Disillusionment*, titled 'Suicide?' deals with this issue. The year is 1953, and Aki is sailing to Africa aboard a cargo vessel. In one of the ports, the crew members buy rhesus monkeys. Most are infants and die within days. But one adult female survives. Her owner ties her to a long rope on the deck, but she bites

through the leash and runs way. The sailors chase and quickly corner the monkey at the rear end of the ship:

> She stood on the railing looking at us and then at the sea below. She did this again, and again. We realized she was contemplating whether to jump into the sea – or not. No one made a move – or a sound. We didn't want her to jump. Finally she took one last look at us, and jumped into the sea. We were shocked. Her repeated looking at the sea below and then back at us indicated she realized that jumping into the sea meant death and was contemplating whether to live as a captive or to die. We were all deeply moved and depressed by her death. Did she really know that she would die if she jumped? Did she knowingly commit suicide? None of us had an answer but the possibility that she knowingly committed suicide tormented us. It still torments me. (Orr 2011: 157)

***Jonathan Nitzan*:** In some sense, Aki reminds us of the physicist Michael Beard, the protagonist of Ian McEwan's *Solar* (2010).

Like Beard (though without the latter's nihilism), Aki always had a solid reference point, a stable locus to stand on – the scientific method. The world around him may have seemed in turmoil, full of unrelated events, surprises and disasters. But for Aki, there was logic behind the chaos: 'Let the philosophers of science delude themselves to the contrary', contemplates Beard, but 'physics was free of human taint; it describes a world that would still exist if men and women and all their sorrows did not. . . .' (McEwan 2010: 8-9).

Aki's commitment to the scientific method blinded him to the rise of postism since the 1980s. Like McEwan's Beard, he found it difficult to understand the new, non-ontological physics. And like Beard, he stood helpless when the new enemies of enlightenment unleashed their 'black rhetoric' against science and reason. Their trickery, duplicity and avid ignorance left him baffled. Their protestations against 'hegemonic arrogance', 'reductionism' 'essentialism' and the 'crude objectivism that seeks to maintain and advance the social dominance of the white male elite' seemed to him innocent of any logic or system. Like Beard, he couldn't understand what they were talking about (and, between us, who can?).

Although Aki never said so explicitly, it seems that these developments were responsible, at least in part, for his return from England. Postism gradually took over the discourse, sending the advocates of enlightenment and progress into retreat. Religious zealots, culturalists and racists of various colours, ethnicities and genders were now front and centre. They peeled off the radical calls for reason, autonomy and change and spitefully discarded the ideas that generations of revolutionaries like Aki had struggled to create. Aki had little to look for in this 'like-reality'.

Aki and Friends

Aki loved animals, perhaps because he found in them the simplest, most aesthetic logic. More than anything, he liked cats. His house was full of them. Some were very close and allowed onto his bed. Others were just fans who dropped by for a quick bite in the yard. When we came to visit, we often found him in his favourite position – lying on his back in bed, one hand holding a book and the other caressing a purring cat. The cats were everywhere – stretching, yawning, gazing at us with their dreamy eyes. Aki made it a point never to name them.

Human beings need names and titles, he explained. The political regime makes them indistinguishable, like standardized commodities. Haunted by fear of losing their 'identity', they are desperate for labels. They fight to be unique, to accentuate their differences, to protect their special culture. They would turn into serial killers for a whiff of immortality.

Cats need none of these signs and symbols. They are *already* special. They are untrainable and forever different. Some are woolgathering while others quick-witted. There are edgy cats and calm ones, curious and conservative, skinny and plump, thorny and velvety, ugly and beautiful. Some are aggressive while others are timid. But *evil* cats? There is no such thing. There will be the occasional skirmish over fast food and quick sex. But to organize a world war? To have millions of cats marching to slaughter and be slaughtered? And for what? For a flag, religion or nationality? Or worse still – for 'leaders' who wave flags, religions and nationalities? No my friend. You won't find this oddity among the animals.

Aki's house in Kfar Shmaryahu had a large yard where he would feed his cats. One day we noticed him throwing pieces of meat into the distant shrubs. Strangely, the cats stayed away from the freshly served food. 'I'm feeding the mongooses', he explained triumphantly.

Mongooses . . . ?!

A new asphalt road had severed the mongooses from their habitat, so they landed at Aki's. They must have known, back from their days in London, that marginalized minorities and political refugees are always welcome in his quarters.

The mongoose is a small, beautiful carnivore with a delicate face, but as readers of Jack London's *White Fang* (1905) will know, its teeth and claws can be deadly. The mongoose is generally shy. It doesn't trust animals, especially humans.

It was therefore an impressive sight to watch Aki's acolytes gather for their daily meal: the noisy cats would swarm around him and brush against his legs, while the stealthy mongooses would wait tensely under the bushes.

In the beginning, we didn't actually see the mongooses. But in subsequent visits, we could sometimes spot them, threading carefully on the outer perimeter of the yard. And then came the big day. Aki was beaming with pride: that afternoon he was woken up from his siesta by a mongoose pup! The pup, which had snuck in through the open

door, climbed onto the bed among the squatting cats and gently caressed Aki's cheek with his paw: he was hungry and demanded that his meal be promptly served.

Upon our arrival, Aki was already busy feeding his flock. The animals were still in two groups, but they were no longer afraid to approach each other. There were occasional grumbles over disputed pieces of meat, but Aki easily silenced them with additional slices.

Looking at us with a broad smile, he said: 'See, if cats and mongooses can live peacefully in my yard, there should be no reason why Palestinians and Israelis cannot live together in one democratic society . . . We can always start from two states, but in the end it will become obvious that one is better. . . .'[11]

Aki befriended animals and human beings alike. It was difficult not to like him – and as a single child, he needed and craved warmth and attention. But underneath the extroverted empathy was a solitary, impenetrable core. One time he confided to us that, more than anything, he liked being 'with himself'.

He always tried to get the most out of life. He never complained – about anything. Not even when his health deteriorated and the nasty reality of Netanyhu's privatized healthcare system hit him. He remained eternally optimistic. 'The situation is only getting better', he would say. 'Another small heart cath, a new valve and a replaced hip, and I'm like new'.

His financial situation was getting worse. His debts ballooned, and excess interest charges made them impossible to 'service'. Eventually, he was forced to sell his modest home in Kfar Shmaryahu and buy a cheaper one in Tnuvot. His hope was that, after paying his bank loans, there would be enough left for him to live on. But his accounting was never as good as his mathematics, and he rarely tracked his bills. Eventually, he had to remortgage his house, and the deprivation started to weigh on him. In his last few weeks, he was visibly depressed. No one cared for him at home, and he was too proud to seek help. For the first time in his life, he looked old. He would stay in bed for days, eating very little. The spark in eyes was gone.

He died alone, surrounded by his cats.

Akiva Orr's free books: http://www.akivaorrbooks.org/
Akiva Orr's free videos: http://tinyurl.com/d3tqufr/

[11] Aki's animal metaphor resembles Aldous Huxley's suggestion, made in his novel *Island* (1962), on how to educate children to be tolerant.

11

The Scientist and the Church [1]

The April 21, 2005 issue of the *London Review of Books* carried a lead article titled 'Blood for Oil?' (Boal *et al.* 2005). The paper is attributed to a group of writers and activists – Iain Boal, T.J. Clark, Joseph Matthews and Michael Watts – who identify themselves by the collective name 'Retort'. In their article, the authors advance a supposedly new explanation for the wars in the Middle East.

Much of their explanation – including both theory and fact – is plagiarized. It is cut and pasted, almost 'as is', from our own work. The primary source is 'The Weapondollar-Petrodollar Coalition', a 71-page chapter in our book *The Global Political Economy of Israel* (Nitzan and Bichler 2002). The authors also seem inspired, incognito, by our more recent papers, including 'It's All About Oil' (Nitzan and Bichler 2003), 'Clash of Civilization, or Capital Accumulation?' (Nitzan and Bichler 2004), 'Beyond Neoliberalism' (Bichler and Nitzan 2004a) and 'Dominant Capital and the New Wars' (Bichler and Nitzan 2004b).

In their paper, the Retort group credits us for having coined the term 'Weapondollar-Petrodollar Coalition' – but dismiss our 'precise calibration of the oil/war nexus' as 'perfunctory'. This dismissal does not prevent them from freely appropriating, wholesale fashion, our concepts, ideas and theories – including, among others, the 'era of free flow', the 'era of limited flow', 'energy conflicts', the 'commercialization

[1] This monograph was first posted on *The Bichler and Nitzan Archives* in 2005. It was never formally published.

of arms exports', the 'politicization of oil' and the critique of the 'scarcity thesis'. Nowhere in their article do the authors mention the source of these concepts, ideas and theories; occasionally, they even introduce them with the prefix 'Our view is. . . '. Their treatment of facts is not very different. They freely use (sometimes without understanding) research methods, statistics and data that took us years to conceive, estimate and measure – again, never mentioning the source.

These concepts, theories and facts are far from trivial. Until recently, they were greeted with strategic silence, from both right and left. Their publication has been repeatedly denied and censored by mainstream as well as progressive journals (including, it must be said, by the *London Review of Books*, that turned down our paper on the subject). They cannot be found anywhere else in the literature, conservative or radical. To treat them as 'common knowledge' is deceitful. To cut and paste them without due attribution is blatant plagiarism. The first part of our paper illustrates this process of 'intellectual accumulation-by-dispossession' with selected examples.

The issue, though, goes well beyond personal vanity and self-aggrandizement. At the core, we are dealing here with the clash of science and church, with the constant attempt of organized faith – whether religious or academic – to disable, block and, if necessary, appropriate creativity and novelty. Creativity and novelty are dangerous. They defy dogma and undermine the conventional creed; they challenge the dominant ideology and threaten those in power; occasionally, they cause the entire edifice of power to crumble.

For these reasons, the latent purpose of intellectual accumulation-by-dispossession – like the accumulation of private property – is primarily *negative*. The word 'private' comes from the Latin *privatus*, meaning 'restricted', and from *privare*, which means 'to deprive'. And, indeed, the most important feature of private ownership is not to *enable those who own*, but to *disable those who do not*. It is only through the threat of prevention – or 'strategic sabotage' as Thorstein Veblen called it – that accumulation can take place. It is only by restricting the free creativity of society that society itself can be controlled. The second section of the paper explains how the appropriators of 'Blood for Oil?' fit this pattern.

The final section of the paper is an epilogue. It describes our failed attempts to get this paper published with the *London Review of Books*; Retort's efforts to mislead us; and some additional insight from their *Afflicted Powers* (Retort 2005), a Verso book that contains the same plagiarism and more. The epilogue concludes with a few observations on the nature of academic dialectics.

PART I: INTELLECTUAL ACCUMULATION BY DISPOSSESSION

The Retort authors open their article with a customary tribute to Karl Marx, the prophet of the dispossessed. They talk about the process of commodification and emphasize the primacy of prices. Their words ring familiar, declaring both loyalty and

intent. The reader is prepared for the standard line of contemporary Marxist reasoning. According to this line, the 'capitalist system' is built on 'expanded reproduction'; expanded reproduction requires 'economic growth'; economic growth necessitates 'access to plentiful raw materials' and 'cheap oil'; these requirements mandate the continuation of 'primitive accumulation', often in foreign lands, hence the never-ending 'imperialism'.

These concepts are particularly popular among 'cultural Marxists'. The most fashionable is the old-new mantra of 'primitive accumulation', recently re-issued as 'accumulation by dispossession'. No one seems to know precisely what this mantra means and few dare to ask. But as a battle cry, it certainly fills a void. It helps keep Lenin's imperialism 'relevant' despite the absence of an imminent world war. It covers up the theoretical crisis of Marxism by citing the Holy Scriptures without committing to them. And it relieves the anti-science expert from having to deal with the nitty-gritty of the 'economy' (in which, as we all know, nothing important has changed since Luxemburg, Lenin and Marx).

And sure enough, 'imperialism', 'primitive accumulation' and 'dispossession' – along with the other catchphrases – are sprinkled throughout the text. But the plot itself seems to have changed. It is no longer Marx's, or even Lenin's. It is the plot of Nitzan and Bichler, dressed in the prophets' clothes.

The Politicization of Oil and Commercialization of Arms Exports

In our research, beginning with a series of working papers on 'The Political Economy of Armament and Oil' (Bichler, Nitzan, and Rowley 1989; Bichler, Rowley, and Nitzan 1989; Nitzan, Rowley, and Bichler 1989; Rowley, Bichler, and Nitzan 1989), we have invented, theorized and analysed a twin historical process: a process that intertwines what we call the *politicization of oil* on the one hand and the *commercialization of arms exports* on the other.

Our analysis is very different from both the mainstream and 'macro-Marxist' literatures. It is built on a new theory of modern capitalist development driven by *differential accumulation*; it focuses not on the aggregate categories of the balance of payments, the 'national interest' and the 'interest of the capitalist system', but on the disaggregated interests of what we call *dominant capital* and on the underlying movements of differential profits; it debunks the conventional creed on the insignificance of arms exports for the U.S. arms contractors; it articulates and deflates the so-called *demise thesis* of the oil companies; it creates new concepts, develops new research methods and offers a new history.

The Retort authors freely appropriate these broad concepts and ideas, down to the smallest details. The following quote from their paper describes the historical background for the politicization of oil. It attributes the cause of this politicization to the inability of the state (in this case, the American state) to prop up the profits of the oil

companies. Alongside, we quote the source – in this case, *The Global Political Economy of Israel.*

Retort #1: 'US oil companies had turned, not unexpectedly, to the state for support: they were duly provided with foreign tax credits to compensate for rising royalty payments in the world at large, with tariffs on the importation of cheap overseas oil, with exemptions from anti-trust prosecution, and, most dramatically, with a CIA-backed coup to topple the Mosadeq government in Iran. But all this, in a sense, proved futile. The new geography of oil cartels, and the founding of OPEC in 1960, marked a historic politicisation – and ultimately a global restructuring – of the oil business'.

Nitzan and Bichler: '. . . .the [oil] companies turned to their governments for help. Government assistance, particularly in the United States, assumed a variety of forms, including foreign tax-credits to offset royalty payments, restrictions on the importation of cheap oil into the United States, exemptions from antitrust prosecution, and a CIA-backed coup against the Mossadeq government in Iran, to name a few. . . . Such blunt services, however, were too crude and certainly insufficient for the post-colonial era. . . . [There was a need for] a *new political realignment*. . . . With the nationalisation of crude oil, production decisions now moved to the offices of OPEC, opening the way to a new, "limited-flow" regime' (*The Global Political Economy of Israel*, 2002: 225-226).

From 'Free Flow' to 'Limited Flow'

In 'The Armadollar-Petrodollar Coalition and the Middle East' (Rowley, Bichler, and Nitzan 1989), we argue that a central feature of the politicization of oil had been the shift from what we call the era of *free flow* to the era of *limited flow*. In a section of *The Global Political Economy of Israel* (Nitzan and Bichler 2002) titled 'Politicizing Oil: From "Free Flow" to "Limited Flow"', we write that during the free flow era, up until the early 1970s, the control of oil was exercised through private ownership, with state interference assuming only a secondary role. This logic was reversed during the subsequent limited flow period. We argue that, toward the late 1960s, there emerged a need to 'limit' the flow of oil, and that this limitation could have been achieved only through the politicization of the oil business. The consequence of that process was a huge surge in both the oil revenues of OPEC and the profits of the large petroleum companies. Within this framework, we then investigate the concrete relationship between the profits of the leading oil companies on the one hand and the revenues of OPEC from oil exports on the other.

Now, it is of course true that many researchers have examined the oil companies and OPEC – but they have rarely analysed both together, hardly ever analysed them in relation to Middle-East conflicts and, to our knowledge, never analysed them as integral elements of a broader political economy of accumulation.

This omission has been perpetuated by rigid academic bifurcation. Essentially, there are two distinct groups of oil researchers. The first group consists of international relationists. Their main focus is oil policy, the superpowers and OPEC. The second group is made up of economists. These are concerned mainly with oil prices, the flow of output, the imbalances of international payments, the condemnation of monopolistic inefficiency and the damage of cartels.

Occasionally, the oil companies are factored into their research, sometimes quantitatively. But the focus is almost always on sales, prices and output. Few researchers have dealt specifically with *profit* – and of those few, most have based their conclusions on the data and analyses provided by others. There are only a handful of works that offer *original empirical research* on this subject. To the best of our knowledge, of these later works, ours is the only one to have examined the *relationship* between the profits of the leading oil companies and the export earnings of OPEC and to have situated this relationship at the *centre* of the global political economy.

We have examined this relationship in great detail, both analytically and historically. We have developed for this purpose our own categories. We have painstakingly collated and estimated data from various sources. And we have carefully adapted them to our specific needs.

Much of this work, it should be noted, was done in the 1980s and early 1990s, well before the 'download age'. There was no Internet and no Google. Computerized databases were limited and costly. They demanded considerable programming expertise that we had to acquire. Print sources were highly heterogeneous and had to be standardized. It was an enormously difficult and thankless process, carried out with no research assistance and no research budgets.

When we eventually managed to get some of this research published in journal articles – for example, in 'Bringing Capital Accumulation Back In' (Nitzan and Bichler 1995: 512-515) – we insisted on including a special data appendix. This appendix consisted of some of our raw time series – including sales, net profits, owners' equity and defence contracts – data that we collated for the leading oil and armament corporations.

This insistence may seem puzzling. In an era of intellectual property rights, giving your data away is considered unusual, not to say silly. We think otherwise. We believe that knowledge is social, not private. We think it should not be protected and should not be made exclusive. And we consider empirical research crucial – and, unfortunately, at risk of extinction. Providing the raw data, along with explanations of how

they were conceived and collated, was our modest contribution toward reversing that trend.[2]

For the Retort authors all of these layers are trivial stuff. They simply engross the final text *en masse*, including the words we quote from other creative researchers. Unfortunately, they try to decorate the pasted material, and in the process introduce some embarrassing mistakes. But then again, who cares; nobody will check anyway:

Retort #2. 'None of this, of course, meant the collapse of profitability for the likes of Shell and Amoco. Quite the reverse: the new 'limited flow' arrangement was predicated, as Sheikh Yamani, the Saudi oil minister and one-time head of OPEC, put it, on not wanting 'the majors to lose their power'. For every dollar that the price of crude increased during the 1970s, the majors increased their net profits by 7 per cent. Nevertheless, they were now compelled to live with a new international oil system, accepting 'upstream' nationalisation and an effective Third World cartel as unpleasant facts of life. In response, the majors moved 'downstream', operating joint ventures with national oil firms, and consolidating their power at other points in the supply chain to compensate for the loss of direct control of reserves. Between 1953 and 1972 their share of concession areas fell from 64 per cent to 24 per cent'.

Nitzan and Bichler: 'But the bonanza hardly came at the expense of the Petro-Core. On the contrary, OPEC, by working closely if tacitly with the companies, was instrumental in boosting their relative performance. . . . Interestingly, the rationale for this new alliance was delineated already in 1969 by the Saudi petroleum minister, Sheik Yamani. 'For our part', he stated, 'we do not want the majors to lose their power. . . '. (cited in Barnet 1980: 61). . . . [F]or every one dollar increase or decrease in export, there was a corresponding 6.7 cents change in the companies' net profit. . . . At the 'upstream' part of the industry, the oil companies succumbed to the relentless nationalistic pressure of their host countries, and after a quarter-century of eroding autonomy eventually surrendered most of their crude oil concessions. . . . Between 1953 and 1972, the share of the 'Seven Sisters' in the oil industry outside the United States fell from 64 per cent to 24 per cent of all concession areas. . . . (Jacoby 1974: Table 9.12, p. 211)' (*The Global Political Economy of Israel*, 2002: 226, 227, 219).

[2] These days few political economists bother to publish their raw data. Most do no empirical research at all and therefore have nothing to hide. Those who do use data usually rely on the statistics of others; they also tend to keep their sources vague in order to shield their conclusions from unwelcome scrutiny. A small minority collate their own data, but they usually view them as 'proprietary'. And the select few who think that publishing their raw statistics is important have to squabble with cost-conscious editors and publishers who insist on keeping their journal volumes slim.

As noted, the above cutting and pasting is skilful, but not perfect. The Retort authors erroneously associate the 7 per cent ratio with a change in the *price* of oil, rather then with a change in the *total value of oil exports* as computed in our work. They also erroneously refer to the 'majors', which are U.S.-based companies, rather than to the 'Petro-Core' of six *global* oil companies on which our calculations were based.

This attitude toward facts, evident throughout the text, merits another illustration. Retort's explanation for the so-called 'OPEC revolution' climaxes in a factual crescendo. At the end of the plot, they state that 'In a ten-month period in 1974, the price of a barrel of oil rose 228 per cent'. Presumably, this dramatic price increase proves the success of the said revolution. Now, since there is no source given for this particular percentage, a reader would naturally conclude either that this is a well-known fact – or, otherwise, one computed by the authors.

But in fact, this fact is not really a fact. According to IMF monthly data of average global prices, there was no ten-month period in 1974 during which the price of oil rose by 228 per cent. So where does this number come from? We cannot know for sure, but one possible source is page 230 of *The Global Political Economy of Israel* (Nitzan and Bichler 2002) where it is said that 'the *real* price of oil soared, rising by 16 per cent in 1971, 4 per cent in 1972, 6 per cent in 1973 and 228 per cent in 1974' (our emphasis).

If this is indeed where the Retort authors copied their 'fact' from, they certainly did not understand what they copied. Note that the quote specifically refers to 'real' price changes. Unlike the *actual* price of oil, the so-called *real* price of oil cannot be observes from your neighbourhood gas station, nor can it be concocted out of thin air. The real price is a theoretical, highly ideological and, indeed, deeply problematic construct (see 'Price and Quantity Measurement', Nitzan 1989). It reflects the belief that one can measure the so-called 'purchasing power' of one commodity (in this case, crude oil) in terms of an aggregate basket of other commodities.

There is no one simple way of 'measuring' such purchasing power. You need to decide which price to use (the price of Brent oil, West Texas, Composite, etc.); you need to choose the particular currency (will you use U.S. dollars, pound sterling or Saudi Riyals?); you need to decide on the adequate 'deflation' method (using a current-based index, a fixed-based index, or a hybrid index); you have to choose the specific basket with which to deflate the price of oil (should it be the U.S. CPI, the global wholesale prices index, the investment deflator of Chechnya?); you need to get the data (which, as we know, is not always trivial); you need to decide on the relevant time period (would you use a month, a quarter, a year?); you need to determine the method of computation (adjacent periods, corresponding periods in adjacent years?); and, of course, you need to believe that 'purchasing power' can be objectively measured in the first place.

Now, to be fair, few political economists are bothered by these questions; for the most part, they just follow accepted procedures. But the Retort authors are not your run-of-the-mill political economists. These are self-proclaimed experts in the dialectics of value and price. They should know better. So how is it that these experts are unable

to compute even a simple rate of change, let alone to distinguish a 'real' from a 'nominal' one?

But, then, as they say, 'don't bother us with facts, we already have our "own view"'.

The Theoretical Predicament

In light of the present hype surrounding 'peak oil', the Retort writers devote a significant part of their paper to the issue of 'scarcity'. The 'end of oil' has become a profitable publishing bonanza, and the authors seem keen on reaping their share of the dividends. To minimize their cost, they take their entire argument from Nitzan and Bichler, gratis.

Being too greedy, however, they overextend their leverage. They appropriate our theory as if it were part of Marx's, and that cannot be done. The match won't hold because, in a certain crucial respect, the two theories are *incompatible*. By trying to have their cake and eat it too, the Retort authors demonstrate that they misunderstand not only our own argument, but also Marx's.

In order to understand this predicament, it is necessary first to outline the theoretical background. Central to our work on capital accumulation and capitalist development is a new theory of value. At issue here is the basic unit of analysis. In contrast to the neoclassical *utility* theory of value and the Marxist *labour* theory of value, we offer a *power* theory of value. In our view, the capitalist price system is not intrinsic to commodities. Prices have nothing to do with the 'utils' that commodities supposedly generate in consumption. They similarly have nothing to do with the 'abstract labour' that commodities presumably require for their production. Instead, we argue that, in capitalism, the structure of prices reflects the 'architecture of power'.

Our emphasis on the architecture of power follows the spirit of Marx. He, too, saw the price system as the code of capitalist power. It is only that his attempt to theorize this power *specifically* through labour time was partial and, in the final analysis, impossible.[3]

---

[3] Having witnessed the labour theory of value being hammered from within and without, many Marxists now claim that Marx never intended to produce a 'positive' price theory. His labour theory of value, they argue, was meant not to explain prices but to criticize bourgeois political economy.

This is an apologetic interpretation that does not do justice to Marx. His work was certainly a critique of capitalist ideology. But it was much more than that. Marx tried to create an *alternative science*, a framework that could replace both bourgeois political economy and the positivist social management of Auguste Comte. This scheme stood on two main foundations. One was a dialectical history that provided the basis for revolutionary consciousness. The other was a value theory that broke the front window of prices and offered a starting point for future democratic planning.

It is perhaps worth reminding ourselves that, unlike today, during the nineteenth century science was still highly rated. Marx followed Hegel in viewing the rise of science as part of the

Neoclassical and Marxist value theories carry the unmistakable marks of Lavoisier's Law of Conservation of Matter. In both, the supposed 'conversion' of utils and abstract labour into prices is a conversion of equivalents, a transformation from one quantitative ratio to another quantitative ratio. To illustrate: if a software programme generates, at the margins, 100 times the utility of a loaf of bread, or requires, on average, 100 times the abstract labour to produce, then, if nothing else intervenes, their corresponding price ratio will be 100:1. But that conversion doesn't really work.

The problem is easily exposed. Well-meaning economists repeatedly interpret the short-term rise of a certain price ratio as 'proof' of a corresponding increase in the underlying ratios of marginal utilities; or the long-term decline in another price ratio as 'evidence' for a parallel drop in the ratio of abstract labour. But that is going in *reverse*. The real task is to move from utility and abstract labour to prices; that is, to use changes in utility or abstract labour to explain changes in prices. Unfortunately, so far, nobody has been able to do so – simply because no one has ever been able to define, let alone measure, the basic particle called 'util' or the elementary unit called 'abstract labour'.

Our own *power* theory of value is fundamentally different. The price system, we argue, is a quantitative map. It describes, in the language of capital, the relative power of owners to shape the social process. According to this logic, Bill Gates, with assets worth $25 billion, has 25 times the power of a capitalist whose assets are worth $1 billion, and 2.5 million times the power of a worker whose assets are worth $10,000.

Of course, this *quantitative* 'architecture of power' stands on *qualitative* social foundations. And here lies a fundamental difference between the utility and labour theories of value on the one hand and our own power theory of value on the other. The former theories are similar in claiming that there is an 'intrinsic equivalence', an equivalence that enables the conversion of one quantitative ratio to another; they are also similar in that both fail to show that this equivalence exists. By contrast, our own power theory of value argues that there is no intrinsic equivalence in the first place. Power relations are qualitative, not quantitative. Under capitalism, these qualitative power relations

---

broader development of history. But that view never led him to treat science merely as a matter of fashion and power. He truly believed he could create a new science, one that would both debunk conventional political economy and explain the reality of capitalism.

Now, that reality could not possibly be understood without understanding prices. To argue that Marx was not concerned with prices is to argue that his key theses about capitalist development – including the tendency of the rate of profit to fall, the immiseration of the proletariat, and the tendency of capitalism to generate recurrent profitability crises – were meaningless gibberish. These tendencies can be expressed *only* in terms of price ratios. To theorize them is to theorize prices, and that is precisely what Marx did.

The fact that he erred in trying to 'mechanically' anchor prices in labour value is secondary. It certainly requires no cover-up or apology. Many eighteenth and nineteenth century physicists now seem dated, if not irrelevant. Yet, without their breakthroughs physics would not have been where it is today. The same is true for Marx's labour theory of value. This was the first theory to put the study of society on a *systematic* footing. If it were not for the stifling influence of the Soviet Union, the spirit of that theory would likely have kept Marxism a vibrant science.

do 'take' the quantitative form of relative prices; but the 'conversion' occurs not numerically, as the neoclassicists and Marxists suggest, but *speculatively*.

Because neoclassicists and Marxists separate the qualitative world of power from the quantitative world of value, their logic is inherently dualistic: an 'economic' sphere distorted or supported by a sphere of 'politics/ideology'; a 'real' world of production and consumption reflected in or delinked from the 'fictitious' world of finance; an ideal 'equilibrium' versus the earthly deviations of 'disequilibrium'.

The neoclassicists imagine an 'economic' world ('the market') whose equilibrium is constantly upset by the external intervention and distortions of 'political' forces. With the Marxists, the bifurcation is between a productive 'base' on the one hand and a 'superstructure' of state, politics, the law and ideology on the other. The base and superstructure are causally connected, with the precise nature of that connection depending on the specific version of Marxism (orthodox, neo-Hegelian, neo-Marxist, structuralist, culturalist, etc.). In all versions, however, the two spheres are merely *connected*, and therefore inherently *distinct*.

For the neoclassicists, under conditions of general equilibrium the 'real' world of production and consumption is accurately reflected by the 'nominal' world of money and finance. For the Marxists, the correspondence is far from perfect. 'Real' value is created only by productive labour under the auspices of productive capital. But this value, when converted into prices, gets partly re-distributed to the other fractions of land owners, commercial enterprises and particularly 'fictitious-financial' capital (as well as to unproductive workers). This conversion and redistribution in turn enables the speculative 'delinking' of finance from production, accentuating the already imperfect association of the 'nominal' and 'real' spheres.

In the neoclassical scheme, forceful expansion, conquest and war are statist-political processes, with only spurious connection to markets. In Marxist theory, particularly in its neo-Marxist variants, expansionism, conflict and imperialism are intimately related to the 'economic' process and, specifically, to the production and realization of the economic surplus.

This latter notion of 'economic surplus' is fundamental to the Marxist duality of politics/economics. All Marxists, regardless of their particular inclination, seem to believe in its existence. Surplus is the basis of class society and the origin of all capitalist sins. As such, the surplus is essentially a deviation, a negation of a 'natural state' of no surplus. In the absence of surplus there is obviously no conflict over its distribution, and therefore no politics. If there is no surplus, there is no need to 'absorb' it; there is no need for a state to legitimise it; no point of having capitalist fractions and shifting political alliances squabble over its appropriation; no reason for imperialism and war to broaden its extraction; no necessity to regulate and deregulate its production; no imperative to alter fashion and brainwash consumers; no reason for race discrimination and gender hierarchies.

The attempt to overcome these dualities has gradually fractured Marxism into numerous schools and sects, each with its own founding father, proprietary vocabulary

and off-limits. Each group offers its own solution to these dualities. There are the Marxist-Leninsts, the neo-Ricardians, the Gramscians, Kaleckians and Althusserians. Some swear by Poulantzas, while others believe in Minsky or take their cue from Braudel. There are those who wander further, hanging their faith on more fashionable fusions such as Foucault, Lacaan, Deluse & Guattari and Hardt & Negri. And, of course, there are the eclectic, such as Retort, who take whatever 'link' they can get.

Our power theory of value is different. Instead of *linking* the dualities, it *breaks* them from the start. We do away with 'surplus versus harmony', with 'politics versus economics', 'real versus nominal', 'equilibrium versus disequilibrium'. Instead, we argue that, at any point in time, the conversion of qualitative power into quantitative accumulation reflects the consensus of the ruling capitalist class – formed against opposition – regarding the structure of power and its expected future trajectory. The quantitative price system provides the language through which capitalists think about and express their power. It is the language with which they calculate success, failure and action. It is the language that they impose upon the rest of us. The way to analyse this 'conversion' is to describe changes in the *qualitative processes and institutions of power* on the one hand, and to contrast these changes with the *quantitative process of differential accumulation and relative price movements* on the other.

This methodology underlines much of our research on capital accumulation; it underlies our theory of inflation and stagflation; and it forms the basis of our specific analysis of oil prices and how these fit into the broader global political economy.

The Scarcity Thesis: Prices and Power

Starting from our power theory of value, we argue in our work that oil prices cannot have anything to do with 'scarcity' (i.e., with a difference between supply and demand denominated in utils). We similarly reject the possibility that such prices can have anything to do with labour values. Instead, we claim that oil prices – like all other prices – are a reflection of the 'architecture of power', and that their dynamic movements represent changes in power.

Our work on oil, which was first published in the late 1980s, articulates these processes in considerable detail. It demonstrates – rather persuasively in our view – the speculative conversion of qualitative power processes and institutions into relative movements of oil prices and differential oil profits. It shows how the appearance of 'scarcity' was institutionally created through Middle East conflict and war; it analyses how such 'scarcity' was destroyed through peace between countries and strife among OPEC members and the oil companies. To the best of our knowledge, no one has written anything similar on the subject.

And yet, for the Retort authors this is all their analysis. '*Our* view', they say with little hesitation, 'is that scarcity and price – the twin sisters of Malthusian pessimism –

don't provide a basis on which the Iraq war can or should be understood'. The real basis, they maintain, lies in the history of oil (i.e., in Nitzan and Bichler's work):

Retort #3: The history of oil in the 20th century is not a history of shortfall and inflation, but of the constant menace – for the industry and the oil states – of excess capacity and falling prices, of surplus and glut'.	Nitzan and Bichler : 'The relentless search for new reserves, along with the incessant proliferation of new technology created a constant menace of excess capacity and falling prices' (*The Global Political Economy of Israel*, 2002: 228).

The Retort authors then turn to the details. In our work, we examine the 'scarcity thesis' inside out. First, we assume, for the sake of argument, that 'scarcity' – or in the economist's jargon, 'excess demand' – can indeed be observed. We interpret the ratio of proven reserves to current annual production as a proxy for long-term scarcity and examine the historical development of that ratio in relation to the so-called real price of oil (the dollar price deflated by the U.S. price index). For the short term, we look at the relative difference between global consumption and global production (i.e. the difference divided by the average of consumption and production). We then take this index as a proxy for short term 'scarcity' and compare its annual movements to the movement of the real price of oil. In both cases – the long run and the short run – we find that, over the past half-century, the relative price of oil has been either unrelated or inversely related to our proxy of scarcity – exactly the opposite of what standard theory would have us believe. Here too, we are unaware of any similar analysis in the literature – and certainly not of any analysis that uses these specific proxies and reaches the same conclusions. The Retort writers, however, take all of this to be common knowledge; below we illustrate how they cut and paste it, almost verbatim.

Before we turn to their appropriation, however, we should mention that to our analysis goes much further. It claims that 'scarcity' cannot be measured in the first place. Oil is a globally traded commodity. To measure the scarcity of oil (or any other commodity for that matter), we need to know not the relationship between actual consumption and actual production, but the extent to which the global 'desire' to buy it exceeds the global 'desire' to sell it. In other words, we need to know, first, the exact shape of the global demand and supply curves for oil; and, second, whether or not the oil market is in equilibrium. But supply and demand are what economists call 'notional' functions. They cannot be known, ever. The same holds for equilibrium. Nobody has ever been able to identify it. And since demand and supply are unknown and equilibrium invisible, the scarcity thesis turns out to be irrefutable, by definition.

Given this predicament, we are careful in our work to use excess consumption and excess production, rather than 'excess demand' and 'excess supply' (which we always denote in inverted commas).

Of course, for the Retort writers, all of this is theoretical nit-picking. Who cares about the difference between consumption and demand? Everyone knows they are the

same thing. And, so, in cutting and pasting our words below, they freely substitute 'excess demand' and 'economic expansion' for excess consumption. It just sounds so much better:

Retort #4: 'Over the past three decades, the ratio of proven reserves to current production has risen by a quarter, yet in real terms prices have doubled. During the 1970s prices soared, but the oil crisis of 1973-74 had nothing to do with shortage: there was no shortage. By the 1980s, excess consumption had taken hold, yet prices fell by 71 per cent between 1980 and 1986. Over the last fifteen years, the fluctuations of price in relation to excess demand (in other words, to economic expansion) are utterly baffling. Since 1960, world consumption has typically been 2 to 3 per cent above or below world output. How can such relatively insignificant discrepancies explain dramatic real-price fluctuations of tens or sometimes hundreds of per cent a year? And why are prices sometimes so sensitive to the discrepancies, and at other times completely resistant to them?'

Nitzan and Bichler: 'Over the past three decades, due to extensive exploration, this ratio [of proven reserves to current production] rose by a quarter – from about 30 production years in the mid-1960s, to over 40 production years during the 1990s. . . . Now, according to the scarcity thesis, the increase should have brought crude oil prices down. And yet the exact opposite has happened. As Figure 5.5 shows, during the 1990s the real price of oil was not lower than in the 1960s, but *twice as high*. . . . During the first half of the 1980s, excess production gave way to excess consumption, and yet the real price of oil again refused to cooperate. Instead of rising, it fell by 71 per cent between 1980 and 1986. Even over the past 15 years, with the oil market presumably becoming more 'competitive' (notwithstanding the Gulf War of 1990–91), it is hard to see any clear relationship between excess demand and real price movements. . . . Over the past 40 years, world consumption was usually 2-3 per cent above or below world output. But then could such relatively insignificant discrepancies explain dramatic real-price fluctuations of tens or sometimes hundreds of per cent a year? And why are prices sometimes hyper sensitive to the mismatch, while at other times they hardly budge?' (*The Global Political Economy of Israel*, 2002: 229, 231).

The Trappings of Power

If supply, demand and the holy equilibrium are to be ruled out, what else can cause the violent ups and downs in the price of oil? According to our power theory of value, it is the *appearance* of scarcity. This appearance is created and destroyed not by physical production and consumption, but by the institutions and processes of power. And in the Middle East, the chief mechanism underlying this process is the militarization of the region and the ebb and flow of conflict and war. The Retort authors could not agree more:

Retort #5: 'The answer to these questions is that oil is a key item of market currency, and therefore subject to constantly shifting expectations and perceptions, speculation and gambling – as well as the pressure of "external circumstances". However plentiful supplies have been, since 1960 continual wars and rearmament in the Middle East have generated an atmosphere of crisis. Prices magically return to "acceptable levels" as the conflicts dissipate. Although wars and regional instability produce high prices, the link is in no simple sense causal. The oil industry has long built such things into its business calculus: the so-called price consensus typically incorporates a "peacetime base", an "embargo effect" and "war premiums"'.

Nitzan and Bichler: 'The solution for these perplexities is to broaden the notion of "scarcity". As a speculative commodity, the price of crude petroleum depends [among other things] on *future* expectations . . . [and] on the nature of *perceived* scarcity associated with "external" circumstances. . . . the region's ongoing militarisation since the late 1960s [helped] maintain high prices even in the absence of tight producer coordination, [while] the occasional outbreak of a major conflict tended to trigger an atmosphere of immediate "energy crisis". . . . The industry's "price consensus", for example, now customarily incorporates, in addition to its "peacetime" base, also such items as "embargo effects" and "war premiums" (*Fortune*, 5 November 1990)' (*The Global Political Economy of Israel*, 2002: 231-232).

Our power theory of value leads to a view of capital that is radically different from both neoclassical and Marxist interpretations.

The latter theories see capital as a 'materialistic-economic' entity, related to but nonetheless *distinct* from the realm of 'ideology-culture-politics'. In the neoclassical case, politics, culture and ideology serve to 'distort' the economic accumulation of capital. Accumulation, according to this view, is a technological process that combines productive input to produce useful output; it is driven by utility-maximizing agents; it

occurs under competitive conditions; and its outcome is optimal, by definition. Therefore, any additional force – whether political, cultural or ideological – is by definition 'exogenous' and by extension superfluous and damaging.

In the Marxist case, the state – and the sphere of politics, ideology and culture more generally – provides the institutional, organizational and intellectual support for the economic base of accumulation. But, in and of itself, this support is limited to defending and sometimes 'regulating' accumulation. It is not 'productive' of value and therefore cannot create new surplus and add new capital. In that sense, it remains *inherently separate* from the economic category of capital.

We see it differently. Since capital is a form of power, it is, by its very definition, a *political* institution. Capital is not *affected* by politics; it *is*, in itself, the dominant –and increasingly encompassing – form of politics.

This viewpoint underlies our analysis of the oil arena. Profit and accumulation, we argue, are premised on the existence of what Veblen called 'strategic sabotage'. They presuppose the creation and institutionalization of 'scarcity'. They are the quantitative manifestation of the qualitative politics of power.

Of course, the 'making of scarcity' and the concomitant accumulation are not always easy to achieve (and 'scarcity' itself is not an eternal 'law of nature' but a historical/political institution). During much of the 1950s and 1960s, the oil companies watched oil become more and more 'abundant'. The reason was not that oil had become more available physically; it was rather that the centrifugal political forces of rivalry among the key actors proved stronger than the centripetal political forces of cooperation. If the accumulation of oil profit was to be revived, the entire political structure of accumulation had to be transformed. This requirement was the backdrop for what we call the *politicization of oil*.

As noted, this logic, based on a notion of *capital as power*, is orthogonal to both the Marxist and liberal views where capital is merely *affected* by power. For the neoclassicists, the relative profits of the oil companies represent the utils generated by oil but *distorted* by regional politics and production monopolies; for the Marxists, they are counted in units of abstract labour socially necessary to extract this oil, *boosted* by the very same politics and structure of production. In our own work, these differential profits are the *manifestation* of politics; they are the *quantitative representation of the qualitative politicization of oil*.

To reiterate, this latter view can be reconciled with neither the neoclassical nor the Marxist theories. But the Retort authors, oblivious to the fine theoretical differences, continue to dispossess and absorb this view into their infinitely elastic 'Marxist tradition':

Retort #6: 'Oil prices declined throughout the 1960s, as the unrelenting search for reserves, new upstream technologies, and fresh infusions of oil from

Nitzan and Bichler: 'The relentless search for new reserves, along with the incessant proliferation of new technology created a constant menace of excess

Russia combined to create massive excess capacity. With new actors on the scene, old-style collusion was less and less feasible. Against this backdrop, OPEC's politicisation of the oil market can be understood not as a threat to the major oil-consuming states, but as a new and more sophisticated convergence of interest between companies, the US government and suppliers. A higher price regime was good for the majors (their profits soared during the 1970s, and their ability to check the power of independents was enhanced), good for Washington (it promised a slowdown in the Japanese and European economies), good for Britain (because of North Sea oil and its majors), and good for the Cold War (since it boosted the US military presence in the Middle East). Sheikh Yamani articulated OPEC's mission rather well: "at all costs to avoid any disastrous clash of interests which would shake the foundations of the whole oil industry"'.

capacity and falling prices. At the same time, with the number of actors on the scene growing rapidly, counteracting this threat solely through corporate collusion was impractical. For the large companies, the way to overcome these challenges was to integrate their private interests into a broader political framework. . . . There emerged, then, a new and more sophisticated realignment. . . . In the words of Odell (1979: 216), the 1970s brought an 'unholy alliance' between the large international oil companies, the United States, and OPEC, which together sought to use higher prices as a way of boosting company profits, undermining the growth of Japan and Europe, and fortifying the American position in the Middle East. To these, Sampson (1977: 307) also added the eventual support of the British government, the Texas oil lobby, the independents, investors in alternative sources of energy, and the conservationists – all with a clear stake in more expensive oil. . . . [in the words of Saudi petroleum minister, Sheik Yamani] "We want the present setup to continue as long as possible and at all costs to avoid any disastrous clash of interests which would shake the foundations of the whole oil industry'' (cited in Barnet 1980: 61)' (*The Global Political Economy of Israel*, 2002: 227-228).

The Commercialisation of Arms Exports

During the 1980s, analysts of the U.S. military sector viewed arms exports as relatively unimportant for the profit of the large defence contractors and virtually insignificant for the profit of big business as a whole. These exports were simply too small relative to domestic military spending and minuscule when compared to the aggregate sales of

the largest U.S. corporations. Partly for this reason, most students of the subject concentrated on the foreign policy aspects of such exports – their political reasons and consequences at home and abroad.

Our work challenges this perception. It collates and analyses *disaggregate* corporate data on the leading armament contractors, including net earnings, sales, owners' equity, domestic military contracts and arms exports. The results, first reported in our paper series on 'The Political Economy of Armament and Oil' (Bichler, Nitzan, and Rowley 1989; Bichler, Rowley, and Nitzan 1989; Nitzan, Rowley, and Bichler 1989; Rowley, Bichler, and Nitzan 1989) and subsequently extended and elaborated in later publications, suggest a radically different picture. They indicate that arms exports were far more important to profit than they seemed, particularly during lulls in domestic spending.

This conclusion, we are not shy to re-emphasize, is based on years of strenuous empirical research. One key lesson from this research was that *purely aggregate analysis is inherently misleading*. You cannot understand broad processes of capitalism, such as inflation, superpower confrontation, militarization and national security, simply by relating them to other broad processes, like overall growth, changes in the average rate of profit, total government spending and shifts in ideology. You have to peer deeper, into the *disaggregate* structure of power and the processes of its restructuring.

The Retort authors treat this conclusion as if it were self-evident. It is not. It certainly cannot be deduced from 'high theory', no matter how dialectical. The only way to develop this conclusion is by empirically *re*-searching received theory, by re-theorizing the evidence, by creating new categories and constructing new facts – precisely the type of work that Retort knows nothing of.

One of the first scholars to empirically break the aggregate front was the great Marxist researcher, Michal Kalecki. In the mid-1960s, Kalecki (1964, 1967) predicted that military spending would become crucial for U.S. capital accumulation, and particularly for certain business segments. He was right. During the 1970s and 1980s, there emerged in the United States a group of leading military-dependent corporations. We call them the *Arma-Core*. Faced with mounting foreign competition, these firms have gradually retreated into the shelter of government contracts and subsidies, disguised under the aggregate fiscal policy of 'military Keynesianism', a term coined by David Gold (1977).

Initially, the Arma-Core was dependent mainly on domestic military contracts. However, with the end of the Vietnam conflict, the U.S. government was less and less able to underwrite these firms. The partial solution was arms exports. In the beginning, these exports were financed by the U.S. government through foreign loans and aid. But as the fiscal crisis deepened at home, more and more of these exports had to be paid for by the buyer, in cash. In our work, we argue that the change in export finance came hand in hand with a change in foreign policy. Armaments were no longer exported solely for 'political goals'. Increasingly, weapons were sold abroad to bolster

the bottom line of domestic contractors. We call this process the *commercialization of arms exports*.

The final piece in the puzzle was the new source of financing for the weapon trade: Middle-East oil. Until the early 1970s, the primary destination of global arms exports was South-East Asia. But the politicization of oil, the attendant 'energy conflicts' (fuelled by imported weapons), the resulting 'oil crisis' and the happy surge in OPEC's oil revenues conspired to shift the focus. Soon enough, the Middle East became the world's leading market for imported weapons.

The research, theorization and integration of these processes yield a highly contrarian picture. For the Retort authors, however, this is all common knowledge. They summarize it in their (our?) own words:

Retort #7: 'OPEC's politicisation of the oil sector took place in conjunction with the commercialisation of the arms industry. In the 1950s, 95 per cent of US armament exports had been provided as foreign aid. By 2000, the figure had fallen to a quarter. . . . Following a wave of mergers and consolidations in the 1990s (overseen and promoted by the Defense Department), the largest 20 US contractors had been reduced to four: Boeing, Northrop Grumman, Lockheed Martin and Raytheon. Their sales now account for $150 billion, and they control a vast proportion of state contracts. Net profit in the sector, as a share of the total net profit of the Fortune 500, doubled (to 10 per cent) between 1965 and 1985. This extraordinary growth could not be sustained even by US levels of military Keynesianism: it required foreign purchases and, specifically, Third World buyers'.

Nitzan and Bichler: The attendant *politicisation* of oil [came] together with the parallel *commercialisation* of arms exports. . . . During the 1950s, when arms exports were still seen as a matter of foreign policy, up to 95 per cent of U.S. foreign military deliveries were financed by government aid. Over time, though, with the line separating state from capital becoming less and less clear, the proportions changed, and by the 1990s only 30 per cent were given as aid. . . . During the 1990s [the Weapon-dollar–Petrodollar Coalition] spent much time and effort trying to regroup and consolidate through corporate amalgamation, usually with full government backing. . . . In 2000, there emerged a clear pack of five leaders: Lockheed Martin . . . Boeing . . . Raytheon . . . General Dynamics . . . and Northrop-Grumman. . . . Figure 5.2 presents the net profit share of the Arma-Core within dominant capital. The data show that, following the Vietnam War, this share had doubled to 10 per cent by the mid-1980s, up from 5 per cent in the mid-1960s. . . . Clearly, if these firms are to keep their production lines open, they can never rely

> solely on domestic procurement, and must constantly look for 'counter-cyclical' export markets' (*The Global Political Economy of Israel*, 2002: 201, 216, 268, 270, 210, 212).

Note that, once again, the Retort authors confuse the terms. It was arms *exports*, not the arms industry, that were commercialized. The authors also mix up the facts. The data they 'quote' on net profit as a share of the Fortune 500 are taken from Figure 5.2 on page 211 in *The Global Political Economy of Israel* (Nitzan and Bichler 2002). The authors erroneously relate these data to the defence 'sector' as a whole. In fact, these data are computed for an 'Arma-Core' of 16 leading defence contractors.

Methodology

Our power theory of capital accumulation turned out to be highly robust. It enabled us to explain, with great accuracy, the eruption of every 'energy conflict' in the Middle East up until the late 1980s. It also allowed us to predict, in writing and ahead of time, both Gulf wars. It helped us explain the pattern of differential profits of the leading petroleum companies. And it has done so nearly without fail. Anticipating critiques of 'over-determination' and 'mono-causation', we wrote in 1995:

> Given the complexity of Middle Eastern affairs, these regularities [linking the differential accumulation of the oil companies and 'Energy Conflicts'] appear almost too systematic to be true. Indeed, is it possible that the differential rate of return of six oil companies is all that one needed in order to predict such major upheavals as [the] June 1967 War, the Iraq-Iran conflict or the Iraqi invasion of Kuwait? And what should we make of the notion that Middle East conflicts were the main factor 'regulating' the differential accumulation of the Petro-Core? Finally, are lower-than-normal earnings for the oil majors indeed a necessary condition for Middle East energy wars? Maybe the picture emerging from the data . . . is more of a coincidence, a statistical mirage with little relevance to the underlying events? ('Bringing Capital Accumulation Back In', Nitzan and Bichler 1995: 500)

We answer these questions in considerable detail – in 'Bringing Capital Accumulation Back In' (Nitzan and Bichler 1995), in *The Global Political Economy of Israel* (Nitzan and Bichler 2002), and, more recently, in 'Dominant Capital and the New Wars' (Bichler and Nitzan 2004b). We examine the history of every 'energy conflict', assessing the extent to which these individual histories are consistent with explanations and theories other than our own. We conclude that these explanations, although

often persuasive, are inherently partial; they are able to explain individual conflicts, but not the more *general* processes at work. By focusing specifically on oil and armament, our own approach provides a unified way of understanding the modern global political economy of the Middle East. And by concentrating on differential profits we are able to embed the modern history of the Middle East within a broader theory of global capital accumulation. The Retort authors quickly adapt the gist of this argument to the invasion of Iraq:

Retort #8: 'This is not the same as saying that the Blood for Oil argument is crudely reductive. It is true that there are almost too many other plausible ways of framing the Iraq invasion. . . . But all (or most) human situations are overdetermined; it does not follow that the best we can do is settle for a plurality of causes, or a resigned plea for complexity. Some determinants are more important than others, and oil may be one of them. The problem with the Blood for Oil hypothesis is . . . that it has conspicuously failed to grasp that oil draws its power from a field of capitalist forces that must periodically reconstitute the conditions of its own profitability'.

Nitzan and Bichler: 'The hypotheses presented in this paper are neither deductive, nor rooted in a fictitious framework. . . . [Our approach] does not necessarily negate the significance of other material and ideal considerations, nor does it eliminate the role played by non-corporate actors and governments' ('Bringing Capital Accumulation Back In', 1995: 501). 'It is almost a cliché to say that conflict and war are never mono-causal. They always occur within a highly complex historical context, and that context can never be reduced to a 'functional' relationship between several 'variables'. But in the case of the Middle East, the context of conflict cannot be comprehended solely from the narrow perspective of the warring factions; it cannot be understood without reference to its own continuities and apparent 'regularities'; and it cannot be analyzed separately from broader world developments. Our own view is that Middle East conflicts were integral to the power processes of global accumulation' ('Dominant Capital and the New Wars', 2004b: 313).

The Weapondollar-Petrodollar Coalition: Too Perfunctory

Up to this point, the Retort authors are careful not to mention the source of their explanations and facts. But it would have been too dangerous to omit it altogether. So,

at the end of their paper, they give Nitzan and Bichler a paragraph. They credit us for 'coining' the term 'Weapondollar-Petrodollar Coalition', and for explaining how the fortunes of this coalition have been intertwined with the processes they so skilfully analyse earlier in their paper. But the buck stops here. Retort is unequivocal:

> The precise calibration of the oil/war nexus articulated by Nitzan and Bichler is, in the end, too perfunctory. They point in the right direction, but the dialectic of oil and armaments extends much further, embracing not only military and oil-service industries, but construction giants . . . the global engineering and industrial design sector, and financial services organisations and banks . . . [as well as] the 'black economy' . . . drugs, oil theft and money laundering. . . .

Translation: the two anonymous hands of the academic *maquiladora* have done their job. They sweated in the data mines, they spat blood trying to make sense of the facts, they laboured day and night to break the conventional categories and create a new, coherent picture. They have produced plenty of value and much surplus to boot. It is time to appropriate it.

The disengagement is simple. Nitzan and Bichler do provide some insights, the reader is being informed, but these merely 'point in the right direction'. The real task is to absorb these ephemeral insights into the eternal truth of Marxism. You have to re-calibrate. You need to extend and embrace. You must think 'dialectically' rather than 'perfunctorily'.

This task is best left to the experts of accumulation-by-dispossession. If the Retort authors had been the ones doing the research, their 'calibration' would have been much more extensive and far more nuanced. Of course, that calibration would not require any *actual* research. There would be no need to invent new categories (as we all know since Plato, categories simply float in the air; you just need to extend your hand and grab them). There would be no need to rethink political economy (as we all know, modern political economy is nothing but a footnote to Marx, who had already worked it out). And there would be no need to worry about the facts – from construction, to banks, drugs and money laundering (as we all know, these are simply fictitious creatures of the capitalist 'spectacle'). The only thing Retort would need is another text with sufficient surplus to 'deconstruct'. Perhaps they should use Marx's own analysis of 'The So-Called Primitive Accumulation'. He concludes it with the following words: 'The expropriators are expropriated' (1909, Vol. 1: 837).

PART II: NOVELTY AND DOGMA

Now, one must admit that, in a certain respect, Retort is right. It is misleading to examine only the superficial surface of phenomena. One has to look behind the perfunctory details of plagiarism, to delve deeper into the dialectics of cut and paste. After all, the really interesting thing here is not dispossession per se, but the reason behind it.

All organized religions abhor creative change. Catholic priests hated the new cosmology of Copernicus. Muslim Cadis and Mullahs detested the appearance of a contraceptive pill. Jewish rabbis loathed the arrival of television. Inventions represent creativity and novelty. They open up the horizon. They contest existing authority. Their *very possibility* challenges the church's exclusive hold over truth. And that challenge is a cause for panic – for without this exclusivity, organized religion becomes irrelevant.

The ultimate reason behind Retort's plagiarism is this very type of panic. It is the fear of an organized paradigm losing its grip, the dread of an academic religion witnessing its own decline.

Marxism in the early twenty-first century is very different from the work of Marx. Marx's research was novel, scientific and revolutionary; the texts of many Marxists today (although by no means all) are recycled, dogmatic and often anti-scientific. Marx was sure of his theory and confident of its political potential; many Marxists today doubt their theory and accept its political impotence. Marx continued, till his death, to develop his labour theory of value, to study the dialectical history of capitalism, to broaden his horizons; many of his followers, who already know it all, have given up on new research in favour of reproducing old-new slogans (witness the parody they made of his 'primitive accumulation'). Marx tried to understand reality in order to change his world; many Marxists today ignore reality in order to defend their faith. Unlike the Marxists, Marx was never a Marxist. He wouldn't force himself into a box. In contrast, many of his followers swear by an oxymoron: the 'Marxist tradition'.

We've Said it All Along

For these adherents, new *radical* theories and research – particularly if critical of Marx – are a threat to be neutralized. The standard practice is to first mock these ideas and findings, then belittle them, and finally, if that doesn't work – appropriate and internalize them into the dogma. This practice, of course, is well known and hardly unique to Marxism – or to the social sciences for that matter. It seems to be dogma's standard response to novelty. 'Every new truth', goes the saying, 'passes through three stages. In the beginning the experts ridicule it as *nonsense*. Then they dismiss it as *trivial*. And in the end we learn that they *said it all along*'.[4]

[4] Various versions of this quote are attributed to Arthur Schopenhauer, Arthur C. Clarke and Leo Szilard, among others.

One of the most striking examples of this pattern is the story of Cecilia Payne.[5] Payne's doctoral dissertation, submitted at Radcliffe in 1925, showed that the sun was composed of over 90 per cent hydrogen, the rest being mostly helium – contrary to the contemporary orthodoxy according to which it was composed of two-thirds iron. The finding was immensely important. It suggested that Einstein's famous equation, $E=MC^2$, could be universally applied. But it also meant that the old-boys network that dominated academic astrophysics at the time was entirely in the wrong. Payne being right jeopardized their reputation, careers, budgets and patronage. And so a contract was put on her head.

Her own supervisor, Harlow Shapley, declared her findings invalid, as did Henry Norris Russell, the all-powerful Don of East Coast astrophysics. Like Galileo, Payne was forced to denounce herself. In order for her thesis to pass, she had to write in it that, contrary to her discovery, 'the enormous abundance [of hydrogen]. . . . is almost certainly not real'.

Unlike Galileo's, her story ended badly. Her colleagues forced her to take on an exceptionally heavy teaching load, so that she could do no further research; they made sure that her courses were not listed in the official catalogue, so as to contain her ability to confuse younger minds; later on, she discovered that her salary was classified as 'equipment expenses'. 'There was literally no time for research', she said, 'a setback from which I have never fully recovered'.

Eventually, though, her science prevailed. She was right and her professors were all wrong. Of course, that did not make them apologize, nor did it make them give up their secure positions and honours. They offered no token of regret. After all, they had nothing to be ashamed of. The sun was indeed mostly hydrogen, but hadn't they been saying it all along?

At age 77, just before her death, Payne was awarded the 'Henry Norris Russell Prize' named after the man who did the most to destroy her science.

Free Thinking versus Doctrine

The clash between creative thinking and the dogmas of power, although hardly new, became overtly political during the mechanical-bourgeois revolution of the seventeenth century. Its most famous episode was the confrontation between Galileo Galilei and Pope Urban VIII. Their cosmological debate came to symbolize the conflict between science and the Church, between the progress and enlightenment of the new liberal order and the decay and oppression of the ancient regime.

The victory of capitalism during the eighteenth and nineteenth centuries altered this pattern. Liberalism developed its own structures of power, and as these structures

[5] Summarized and cited from David Bodanis, *$E=MC^2$. A Biography of the World's Most Famous Equation* (2000).

consolidated, they, too, grew intolerant to free thinking and creative criticism. The dialectical history of this transformation was first described and analysed by Karl Marx in his *German Ideology* (Marx and Engels 1970). Marx was the first to treat the 'capitalist system' as a political order and, indeed, as the subject of scientific inquiry. He criticized positivism with dialectical materialism. He used the laws of motion of history to debunk the 'natural' laws of political economy. He made his revolutionary science part of a wider political struggle against capitalism.

But by the end of the nineteenth century dogma started to creep in, and in the twentieth century 'classical' science was already in a full-scale retreat. In the capitalist countries, the encompassing classical approach was replaced by a fractured 'social science', a system of independent 'disciplines' subservient to the overarching logic of 'neo-positivism'. The ideology of neo-positivism combined the neoclassical economic belief in free markets and rational consumers on the one hand with the statist tenets of political science and international relations on the other. The glue that tied it together was the cardinal faith in 'optimizing behaviour' and 'systemic equilibrium'.

A parallel process took place in the Soviet Bloc. Marx's classical science was harnessed and eventually eviscerated by the Leninist-Stalinist church. Creativity and innovation gave way to squabbles over interpretations. Religious hostilities developed between the Soviet Order and the competing papacies of Mao and Tito, each claiming exclusivity for its own reading of the prophet's texts.

Marxism in Crisis

The twentieth century presented Western Marxists with significant challenges. Real wages in capitalist countries rose consistently and dramatically, instead of falling. Many types of labour became complex and skilled, rather than one-dimensional and simple. The profit rate trended sideways, not down. The anarchy of competition – the disciplinary engine of capitalism – gave way to big business coalitions and collusion. The capitalist state grew stronger, not weaker. After the 1930s, its policy interventions not only prevented serious depressions, but also helped mitigate the once-dreaded business cycle. Culture, media and consumerism became no less crucial for accumulation than production was. Inflation replaced cost-cutting as a key mechanism of redistribution, while finance took over the factory floor as the locus of power. Strict class divisions proved too crude a basis for dealing with the political, ideological and psychological complexities of the twentieth century. Traditional concepts of class provided only a partial – and often misleading – insight into human consciousness. Capitalism did not crumble. It has survived major upheavals and transformations – from totalitarianism, to Keynesianism, to postmodernism. It outlasted communism. It seems easily capable of internalizing religious fundamentalism.

The labour theory of value – the basic building block of Marxism – proved inadequate for dealing with these multiple challenges. On the one hand, its logical structure

and internal consistency came under repeated attack. On the other hand, its underlying assumptions about competition and its focus on production grew increasingly difficult to reconcile with new forms of politics, power, oligopoly, finance, inflation, big government and imperialism.

These difficulties brought a series of revisions to Marxism, the most important of which was a shift of emphasis from 'growth' to 'force', from expanded reproduction to accumulation through confiscation. The main trigger was a 1902 book, *Imperialism*, written by left-liberal John Hobson. Hobson accentuated the underlying tendency toward underconsumption, the inability of capitalism to generate enough demand for its ever-growing productive capacity. This tendency, rooted in the unequal distribution of income of wages and profits, was further amplified by monopoly, high finance and military adventurism that emerged during the latter part of the nineteenth century. The only solution was *foreign* investment, hence the imperial rush for colonies.

Marxists were quick to appropriate and internalize Hobson's liberal thesis, along with his painstaking empirical research (as did John Maynard Keynes several decades later). But in doing so they let in a Trojan horse. In retrospect, *Imperialism* helped derail Marxism from the scientific path originally charted by Marx, diverted it into statist and ethnic directions and ultimately hastened its dogmatic closure.

Following Adam Smith, Marx saw in capitalism the first political order capable of *internal* growth.[6] For the first time in history, there emerged a system that did not require *external* plunder. Capitalism thrived precisely because it was able to continuously reorganize the work process and exploit the ever-expanding productivity of workers. Furthermore, and crucially, inherent to this new system of internal growth was its own quantitative logic. According to Marx, capitalism was a system of expanded commodity production denominated in prices. Remarkably, this price system was itself a derivative of production: its underlying logic was rooted in *labour time*. Ultimately, then, any understanding of capitalism had to be based on a *labour theory of value*.

The new school of underconsumption, finance-monopoly capital, imperialism, uneven exchange and dependency abandoned this quest. Instead of internal growth, it emphasized chronic stagnation. Under mature capitalism, went the argument, the 'potential surplus' – namely the difference between what the society can produce and the necessary cost of producing it – had a tendency to rise. This rising surplus had to be 'absorbed' by wasteful spending or ploughed into foreign investment (intertwined with primitive accumulation, plunder and dispossession). In the absence of such 'offsets', the surplus remained unrealized, the consequences being recession, unemployment and underutilized capacity.

[6] On the contradictions between Marx's and the underconsumptionist views of capitalism, see Anwar Shaikh (1978).

Capitalism, many neo-Marxists started to believe, could not survive on its own; it *needed* military spending, imperialism, colonies, post-colonies and the development of underdevelopment.

Furthermore, and as a direct consequence of this conclusion, the neo-Marxists – although retaining the notion of 'surplus' – have practically abandoned the labour theory of value. They had to. The introduction of power, force and waste 'contaminated' the notion of 'intrinsic equivalence'; it undermined the disciplinary logic of competition and technical progress; it made labour values invisible, if not nonexistent. Prices no longer reflected the logic of labour time, not even approximately.

And, indeed, following Luxemburg, Lenin and Hilferding, many neo-Marxists were only too happy rid themselves of the theoretical burden. Marx was hesitant to develop a full-fledged theory of the state before coming to grips with the quantitative architecture of the labour theory of value. But with the latter theory discarded, it was now possible to venture into the analysis not only of state power, but also of culture, international relations, post-colonialism, race, gender and beyond.

This new direction was not necessarily misguided. But it was certainly incomplete. It is plausible to argue that modern capitalism is based on power and force as well as economic growth, that waste is as important as efficiency, that foreign investment, war and colonization are all crucial, that ethnic and gender divisions count, that culture and the media matter. But these claims come to naught without a *theory of value*.

In the absence of a theory of value, Marxists can say very little about the basic architecture of capitalism, namely the *commodity price system*. They can say very little about the key process of capitalism, namely the *accumulation of capital*. They can no longer claim to understand the specifically *capitalist* nature of society. They even lose the units with which to measure the *surplus*.

A small number of diehard 'orthodox' Marxists recognize this imperative. They have never given up on the labour theory of value and continue to seek solutions for its intractable problems. But for most of those who have abandoned the theory, this is no longer an issue. They have never tried to replace Marx's labour theory of value with another theory of value. They consequently have no theory of value at all. And, for the most part, they fail to realize how devastating that void is.[7]

---

[7] One of the few neo-Marxists who did understand the consequences was Paul Sweezy. In his 1991 assessment of *Monopoly Capital*, a deservedly influential book that he had co-authored with Paul Baran twenty-five years earlier, he wrote: 'Why did Monopoly Capital fail to anticipate the changes in the structure and functioning of the system that have taken place in the last twenty-five years? Basically, I think the answer is that *its conceptualization of the capital accumulation process is one-sided and incomplete*. In the established tradition of both mainstream and Marxian economics, we treated capital accumulation as being essentially a matter of adding to the stock of existing capital goods. But in reality this is only one aspect of the process. Accumulation is also a matter of adding to the stock of financial assets. The two aspects are of course interrelated, but the nature of this interrelation is problematic to say the least. The traditional way of handling the problem has been in effect to assume it away: for example, buying stocks and bonds (two of the simpler forms of financial assets) is assumed to be merely an indirect way of buying real capital goods. This is hardly ever true, and it can be totally misleading. This is not the place to

The consequences of that void are already evident. The past decade has offered an opening for change. The collapse of communism brought demands for democracy; the victory of capitalism was challenged by worldwide resistance to liberal globalization; the new wars in the Middle East triggered a seemingly unprecedented anti-war sentiment all over the world. And, yet, at that critical moment, Marxism has proven unable to provide a cohesive alternative, a worldview to unite the forces of progress. It is not surprising that, in this void, many radicals have drifted toward theories of power and dispossession fashioned by Nazis such as Martin Heidegger and Carl Schmitt and nihilists like Michel Foucault.

For Marxism to remain dogmatic is to risk a fate similar to that of the organized religions. Over the past three centuries the Rabbinate, Christian and Islamic churches have lost their exclusive right to explain the universe. Simply put, they have been pushed aside by the scientific process. It is true that they have reluctantly accepted, as practical 'narratives', various aspects of science, including Copernicus, Darwin and Freud. It is also true that they have all made extensive use of scientific technology (harnessing television to the conditioning the laity, exploiting the Internet and cellular communication to invest in the stock market, using electronic audio and video to preach against science, and so on). But these inclusions have gradually undermined their foundations, robbing them of their authentic voices. Their only remaining asset is fundamentalism. The best they can do is leverage ignorance in the interest of dominant capital.

Marxism in Retreat

Without its own theory of value, Marxism loses its encompassing universal view. It loses its scientific stature. Its claims become irrefutable. It falls back on mainstream economic categories. It accepts the capitalists' own data. It uses neoclassical research methods. Soon enough, it ends up drawing similar conclusions.

The 'new wars' of the twenty-first century illustrate this process. Marxists were quick to make these wars part of a 'new imperialism', as did the spokeswomen and men of capitalism. Both Marxists and mainstream analysts agreed that 'America' was an 'empire', and that 'states' and 'state officials' were the relevant units of analysis. Marxists argued that the wars were fought primarily over oil; their conservative counterparts couldn't agree more. Both sides believed that capitalism needed 'economic

---

try to point the way to a more satisfactory conceptualization of the capital accumulation process. It is at best an extremely complicated and difficult problem, and I am frank to say that I have no clues to its solution. But I can say with some confidence that *achieving a better understanding of the monopoly capitalist society of today will be possible only on the basis of a more adequate theory of capital accumulation*, with special emphasis on the interaction of its real and financial aspects, than we now possess' (Sweezy 1991, emphasis added).

growth', and both were convinced that such growth required 'cheap energy'. Both expected the invasion of Iraq to reclaim the oil fields and undermine OPEC, making petroleum plentiful and inexpensive. Both were very wrong.

There were of course also some uniquely Marxist claims. Some writers, such as David Harvey, asserted that the new imperialism represented 'accumulation-by-dispossession', a claim that many Marxists, including the Retort authors, echo with great conviction. But what does 'dispossession' really mean?

What exactly is being 'dispossessed'? Before the invasion of Iraq, there was a near-consensus that the purpose was to physically confiscate the oil fields in order to flood the world with oil. This confiscation has not happened. Furthermore, Iraqi oil production has dwindled to a trickle, with the blessing of its new U.S. administrators (who are now de facto members of OPEC).

Before the invasion, the experts were convinced that the war would be financed by dispossessed Iraqi oil. Now it is suddenly obvious that the dispossessed are mainly the U.S. taxpayers and foreign creditors who foot the bill.

Before the invasion, some argued that the war was motivated by the desire to stop the slide of the dollar, perpetrated by Iraq's threat to denominate its oil trade in euros. But if so, why has the U.S. administration formally abandoned its hard dollar policy?

Who are the 'dispossessors'? The usual suspects include big business, the oil companies and the Bush-Cheney Cabal. And, indeed, all have gained from the war – but mostly for the wrong reasons. Cheaper oil was supposed to make the world safer and more profitable for capitalists in general and U.S.-based companies in particular. It didn't work that way. By making oil significantly more expensive, the war is now threatening the world with revived stagflation (stagnation combined with inflation). Yet, instead of crying foul over an invasion gone awfully wrong, dominant capital seems rather happy to see the threat of deflation dissipated, pricing power restored and differential profit margins fattened.

A similar twist applies to the oil companies. Supposedly, their aim was to break OPEC and take over the Iraqi fields. They have done neither – yet their net profits have quadrupled (from roughly $30 billion globally in 1999, to an estimated $90 billion in 2005). And how did that happen? It happened because the war failed to archive its 'objective', causing the price of oil to soar rather than fall. This outcome may seem confusing – but only because 'dispossession theory' attributes to the oil companies goals they probably never had. The interest of the oil companies is profit, and in the oil business profit depends not on high output but on high prices. There is nothing better than an 'infinite war' to achieve that latter objective – particularly if the hostilities help invigorate the scapegoat OPEC.

Finally, we have the Halliburtons and Bechtels of the Bush-Cheney cabal. They certainly benefited from the latest cycle of destroying and rebuilding Iraq. But, then, if they were the sole cause of the Iraqi adventure, do we really need Marxist dialectics to explain it?

Le Dernier Cri: 'Overaccumulation Crisis'

The Retort authors inform us that '"Military neo-liberalism" is the formula appropriate to the current capitalist moment, and to the politics of oil'. We confess to not knowing what 'military neo-liberalism' means. We are also unsure why it is appropriate to the 'current capitalist moment' and to the 'politics of oil'. But we are willing to learn. Maybe these logos do have some historical-dialectical contents worth 'deconstructing'. So let's unpack these banners.

According to the Retort authors, 'military neo-liberalism' is capitalism's response to a 'crisis of *overaccumulation*' (our emphasis). The 'over' prefix in overaccumulation suggests the existence of a 'natural' state of accumulation, a benchmark of 'normal' accumulation that the 'actual' rate of accumulation can exceed or fall short of.

But what exactly is this 'normal' accumulation? Is there a single historical example of such accumulation? What type of accumulation qualifies as 'normal' in a capitalism riddled by 'power', 'force', 'dispossession', 'primitive accumulation' and 'imperialism'? Since this latter capitalism no longer obeys the labour theory of value, in what units should we count the accumulated capital – whether 'over' or 'normal'?

It is indeed ironic that, of all students of society, Marxists should be talking about 'normal' accumulation. Their own dialectical method should warn them that *there could be no such thing*. Only pre-class societies can be 'normal' and 'natural'. Perhaps California, where the Retort authors live, was once home to such societies. But since the arrival of Stanford and his Pacific Quartet, the main hallmark of normal accumulation has been precisely its *abnormality*. That, in any event, is what the scriptures would say.

The sad truth is that most present-day Marxists – although by no means all – have not the slightest clue as to what 'capital accumulation' means, theoretically or empirically. They have no idea how to separate 'primitive accumulation' from 'expanded reproduction', how to distinguish 'productive' from 'unproductive' labour, how to differentiate 'actual' from 'fictitious' capital, how to convert 'concrete' to 'abstract labour', or how to deal with 'depreciation'. Most do no empirical work at all. They are not familiar with even the basic data about accumulation, whether 'real' or 'financial'. They do not know how these data are computed, the assumptions that underlie their computation, or how these assumptions stack against the labour theory of value. Most of their empirical assertions are based on the research of mainstream academics, financial analysts or the business press – research that they are happy to convert, with a few strokes on the keyboard, into self-evident 'Marxist' conclusions. There are a select few who do empirical research – some of which is highly insightful – but even they rarely venture beyond the categories of mainstream macroeconomics and the data provided by the capitalist national accounts.

The 'New Imperialism'

The sudden bellicosity of the early 2000s caught most Marxists by surprise. During the 1990s, their attention focused mainly on 'globalization'. The key words were 'neoliberalism' and the 'new economy'. There were heated debates about the pros and cons of capital flows and emerging markets, about deregulation and the decline of the welfare state. Mainstream ideologues told us that these developments were best for humanity. Marxists, for the most part, took it upon themselves to argue the opposite.

When the new wars erupted, the old slogans had to be removed in haste. But with the dogma still the same, the only solution was to reword those very slogans, adapt them to the new, unpleasant reality, and hang them up again.

Since most liberals and Marxists agreed that the world was 'neoliberal', it followed that the new wars must be 'neoliberal wars' and the new path of rearmament simply part of 'military neoliberalism'. True, unlike in past imperialisms, the conquests of Afghanistan and Iraq were not followed by foreign investment; but, then, that was simply because we now lived in a '*new* imperialism'.

And why is there suddenly a need for a 'new imperialism'? Easy. According to Nitzan and Bichler, the invasion of Afghanistan and Iraq are part of a broader process of capitalist development, one in which dominant capital swings between relatively peaceful waves of corporate merger, globalization and liberal ideology on the one hand, and highly conflictual periods of stagflation, boosted by military conflict and statist rhetoric on the other. The new Middle East wars are part of this latter regime.[8]

It is true that Nitzan and Bichler do not equate this regime with 'imperialism'. In fact, they claim that the term 'imperialism' belongs to another era, and that it is highly misleading when applied to contemporary capitalism. But then, with so much noise coming from the war drums, who would ever notice? Just replace Nitzan and Bichler with 'our view', hang up the banner of 'new imperialism', and the explanation becomes Retort's:

> In *our view*, the [naive] Blood for Oil thesis loses sight of what oil ultimately stands for in the present moment: that is, neo-liberalism mutating from an epoch of 'agreements' and austerity programmes to one of outright war; the plural and unstable relations among specific forms of capital, always under the banner of some apparently dominant mass commodity; and those periodic waves of capitalist restructuring we call primitive accumulation. . . .

[8] For a broad analysis of differential accumulation regimes, see 'Regimes of Differential Accumulation' (Nitzan 2001) and *The Global Political Economy of Israel* (Nitzan and Bichler 2002: Ch. 2). The two papers, 'Dominant Capital and the New Wars' (Bichler and Nitzan 2004b) and 'Differential Accumulation and Middle East Wars: Beyond Neo-Liberalism' (Bichler and Nitzan 2004a), examine the present moment as part of these altering regimes.

> This is the proper frame [à la Retort] for understanding what has happened in Iraq. It is only as part of this neo-liberal firmament [we admit to not knowing what 'neo-liberal firmament' means], in which a dominant capitalist core has begun to find it harder and harder to benefit from 'consensual' market expansion or corporate mergers and asset transfers, that the preference for the military option makes sense.

And how exactly will the 'military option' compensate for the lost consensus? Through a new slogan: 'accumulation-by-dispossession'. And how does this dispossession function? Elementary: by making oil plentiful and cheap. But isn't oil now five times more expensive than it was in 1999? Yes, of course it is! In doublespeak 'cheap is always more expensive'. The dialectic of capitalist inner contradictions eventually creates the conditions for its own demise. So, does that mean that capitalism is about to collapse? Yes and No. War is Peace. Ignorance is Strength. . . .

New Imperialism or New Capitalism?

Since the late 1980s, we have published works that challenge Marxism on its own turf. Our claims are meant to elucidate rather than obfuscate; they are spelled out clearly, without foggy double meanings; they include concrete predictions. We argue that, over the past century, capitalism has fundamentally changed. To understand this transformation, we offer a new, power theory of value that contests both the utility and labour theories of value.

The theory emphasizes the primacy of *dis*aggregation, *re*distribution and *differential* accumulation; it focuses on the power processes that underlie overall social development; it offers a new logic of capital accumulation and capitalist development; it suggests new ways of studying the capitalist state and the inter-state arena.

Based on our power theory of capital, we have conceived of and analysed two basic regimes of differential accumulation – *breadth* and *depth*. The breadth regime is powered by corporate amalgamation and capital flow; it occurs in the context of proletarianization, green-field growth and relative political stability. The depth regime is fuelled by redistribution through stagflation; it occurs in the context of inflation, stagnation, political instability, crisis and military conflict.

We have studied how the cyclical pendulum of these two regimes emerged, developed and related to one another. We have dissected the empirical gyrations of these regimes in the United States and elsewhere. We have analysed their broader political-economic causes and consequences. We have examined how they pan out in relation to the more secular development and contradictions of state/capital, liberalism/militarism, growth/stagflation, corporate warfare/cooperation, peace and war and the global political economy of oil and armament.

Using this analysis, we predicted that the long breadth cycle that started in the 1980s was approaching an end. Global capitalism, we wrote in the late 1990s, was

ready to revert to a depth cycle, accompanied by stagflation, crisis and conflict. We further stated that stagflation and conflict, should they develop, would likely boost differential accumulation by the world's leading dominant capital groups.

At the time, these claims were largely ignored or simply treated as off-the-wall nonsense. It was well-known that the last thing capitalists wanted was inflation; that stagflation was an anomaly best forgotten; and that the world had long moved from war profits to peace dividends.

We further argued that, if and when it came, the *shift* from breadth to depth, or from mergers and acquisitions to stagflation, would likely centre on oil and the Middle East. This claim emerged from integrating our work on 'energy conflicts' and oil crises into our broader analysis of regimes of differential accumulation. In 1996, we predicted that the next 'energy conflict' would erupt following a drop in differential profitability of the oil companies. When the U.S. invaded Iraq in 2003, we wrote that, contrary to the prevailing consensus, the move was intended to destabilize the region and raise the price of oil, and that it would succeed on both counts.

Again, these claims were treated with a mixture of indifference and disdain. It was well-known that wars were made by 'policy makers', not petroleum companies; that the invasions of Afghanistan and Iraq were meant to tranquilize the fundamentalists and stabilize the Middle East; that the U.S. was keen on dismantling OPEC and flooding the world with cheap oil in order to invigorate 'growth' and boost 'accumulation'.

Our analyses were branded as 'economistic', 'mechanistic', 'deterministic', 'positivist' and 'perfunctory'. We were scolded for our 'arrogance', warned against 'cutting ourselves loose' from the protective embrace of the 'Marxist tradition'. Learned magazines and journals, some very much on the left, rejected our submissions as 'unsubtle' and insufficiently tuned to the 'complexities' and 'dialectics' of the situation. Only a few, mostly fringe publications, were willing to risk their reputation with our wild propositions and predictions.

But in the end, it is hard to argue with the facts (although perhaps not for Retort; they know how to convince the evidence). It is a fact that the new wars did come on the footsteps of differential *de*cumulation by the oil companies; it is a fact that these companies were very much involved in planning the coming conflicts; it is a fact that the price of oil has quadrupled and that the profits of the oil companies are in the stratosphere; it is a fact that the global merger wave has collapsed, deflation dissipated and stagflation resurfaced as a real threat. And, suddenly, it is also a fact that – *as of now* – the experts have 'said it all along'.

PART III: EPILOGUE

Correspondence

On May 15, 2005, we emailed a shorter version of this paper (roughly 11,000 words) to the *London Review of Book*. The paper was accompanied by the following cover letter:

> May 15, 2005
>
> Dear Mary-Kay Wilmers:
>
> We are writing to you concerning a serious matter.
>
> On April 21, 2005, *LRB* published an article titled 'Blood for Oil?' written by Boal, Clark, Matthews and Watts. Much of this article – including both theory and fact – is plagiarized from our own work, primarily *The Global Political Economy of Israel* (London: Pluto, 2002). Enclosed is a reply article, titled 'The Scientist and the Church'. The article illustrates the plagiarism. It also explains the broader reasons behind it. We trust you will publish it.
>
> Looking forward to your reply.
>
> Cordially,
>
> Jonathan Nitzan and Shimshon Bichler

To be honest, we didn't exactly 'trust' the *London Review of Books* to publish our paper. We have had enough experience to know better. *Le Monde*, for example, agreed to publish our short conference article titled 'The End of Liberalism?' (Bichler and Nitzan 2003) – but quickly reneged once its Editor in Chief, Serge Marti, got to read the text. Similarly, *Alternatives Internationales* commissioned a French version of our 'War Profits, Peace Dividends and the Israeli-Palestinian Conflict' (Bichler and Nitzan 2002) – only to reject it for being 'too economistic'. That latter paper, re-submitted to the *London Review of Books*, was politely turned down by the editor, Mary-Kay Wilmers, with no reason given.

There was of course no malice involved. We were simply ahead of our time and out of the loop. Recall that in the early 2000s, stagflation, dominant capital and accumulation-through-crisis were bizarre heresies. To be politically correct, you had to write about the imperatives of growth, cheap oil and American hegemonic stability.

But the times, they are a-changin'. The unpleasant reality demands 'revisions' to the theory. And, so, without much commotion, the lines are switched. What was ridiculous only a few years ago is now suddenly part of the dogma. Soon enough, it is posted on the front pages of the *London Review of Books.*

Obviously, no sensible editor would wish to expose such a racket, particularly one soaked in plagiarism. Within three days, we received a polite reply:

May 18, 2005

Dear Jonathan Nitzan and Shimshon Bichler,

I read 'The Scientist and the Church' with interest and would be very happy to publish a 1000-word letter setting out your argument in our next issue, which goes to press at the end of the month.

Best wishes,

Mary-Kay Wilmers

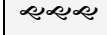
It was unwise to reject us outright (there was a potential legal matter here). But there was no need to try too hard, either. It was enough to offer us 'some' space. One thousand words in the Letters to the Editor section seemed more than sufficient to keep us contained.

To be on the safe side, the editor also passed on our cover letter and article to the Pacific Quartet. In no time they sent us an affidavit, full of pretentious modesty. You could almost sense the panic:

May 18, 2005

Dear Professor Nitzan: I am enclosing a letter from RETORT, the authors of the 'Blood for Oil?' article published in the London Review Books, written in response to your recent communication with the editor. I am afraid I have no email for Professor Bichler but I presume you can forward a copy to him. We all look forward to your response.

Michael Watts



Dear Jonathan Nitzan and Shimshon Bichler:

We received from the *London Review of Books* your long argument, which at least in some major respects concerns our piece 'Blood for Oil?' which appeared in the April 21st issue of the LRB. We are deeply distressed and dumbfounded at your response, in particular because the LRB piece was a heavily edited (by LRB) version of one chapter (the only chapter on oil) from our just-published book from Verso *Afflicted Powers: Capital and Spectacle in a New Age of War* in the full version of which we repeatedly feature, fully credit and highly praise your otherwise unjustly ignored work.

The main problem with the LRB piece is that in its extensive and rigorous edit of the original chapter, to fit the journal's length constraints and house style, LRB excised all our annotations, including the considerable recognition of and citation to your work which appears in our full 'Blood for Oil?' chapter. In the section of the book's chapter (pp. 67-72) which deals directly with your theses, we are explicit that we are rehearsing your work and endorsing the originality and power of your argument, directly citing you six times, and beginning the section with a reference that reads: 'We are deeply indebted to the brilliant analysis of the political economy of oil offered by Jonathan Nitzan and Shimshon Bichler in *The Global Political Economy of Israel*'. We begin the following section by saying 'We take our distance here from Nitzan and Bichler's analysis', once again announcing that what had preceded was a rehearsal of *your* work, not something we claimed as our own. Finally, in our bibliographic Endnote, we say flatly 'The best political economy of global oil is Jonathan Nitzan and Shimshon Bichler, *The Global Political Economy of Israel*'. It is terribly unfortunate that you had seen none of this when you read the LRB piece.

Moreover, nowhere in the book do we claim or even suggest that the Blood for Oil? chapter contains original research by us on the material conditions of oil, or purports to be a study of oil within academic or 'policy' social sciences. In other words, the book's chapter in no way 'competes' with your exhaustive empirical work or with your original analytical work. Instead, the book as a whole makes clear that it is intended as a political intervention concerning the current state of global politics, of which the commonly-held Blood for Oil thesis is an unavoidable piece. The 'Blood for Oil?' chapter is just one part of a much larger polemic, an argument about the state of the world, which inevitably must consider work done by many oil 'experts', prominently including you (in contradistinction to most writing on oil which conspicuously ignores your work). Again, because you only saw the edited version of the chapter in LRB, you missed, crucially, this contextual setting of the chapter.

Finally, we also understand your complaint about the LRB piece as part of a long-festering struggle you have been fighting within left academic/intellectual communi-

ties over recognition of your work. Although we strongly disagree, as the rest of *Afflicted Powers* makes patent, with what seems to be your inclusion of us in the world of Marxist orthodoxy which has excluded you from official circles of debate about oil and capital, it seems that your (mis)placing of us within that wider struggle has provided much of your animus here. The sad irony is that in 'Blood for Oil?' we were attempting to do our part to draw your tremendous work out of the shadows, not consign it deeper. (And ultimately we believe that *Afflicted Powers* will wind up sending many people to your work who would otherwise not have known of or been drawn to it.)

Of course, you may well disagree with our substantive arguments in the full 'Blood for Oil?' chapter, and indeed with the conclusions we draw from your work. We would welcome such commentary from you. But we hope that you will first read the full *Afflicted Powers* – we have asked Verso to get you a copy as soon as possible – before you make any assessment about its relationship to your work. We count ourselves among your great admirers, and are sure that this admiration and the extent of our debt to you is fully (almost fulsomely) acknowledged in the book. Regardless of whatever you will have to say by way of substantive criticism of our treatment of the Blood for Oil hypothesis, we very much doubt that, when you see *Afflicted Powers* as a whole, you'll go on believing us to be part of the extended claque of Marxist orthodoxy, and that you will then respond within the spirit of comradeship with which we drew upon your work. We are on the same side.

On behalf of Retort.

Leyland Stanford would have been proud of such sleek disciples. The Retort Quartet is utterly sincere ('deeply distressed and dumbfounded'). It was all one big misunderstanding, they insist ('sad irony', 'terribly unfortunate'). Regrettably, the editors of the *London Review of Books* weeded out the numerous credits ('excised all our annotations, including the considerable recognition of and citation to your work'). By contrast, the book overflows with recognition. It states clearly that Retort merely reproduces our work ('we are explicit that we are rehearsing your work and endorsing the originality and power of your argument'). Furthermore, when it comes to oil, *Afflicted Powers* has no claim for originality in the first place ('nowhere in the book do we claim or even suggest that the Blood for Oil? chapter contains original research by us on the material conditions of oil'). No doubt, 'we are on the same side'.

But, then, the story sounds a bit too compelling. Editors can certainly do nasty things to manuscripts. We know it from our own experience. In most cases, though, the authors have to approve the final galley proofs before the paper goes to print. Is it possible that the *London Review of Books* first 'excised' all of Retort's annotation and then published the truncated version *without Retort's approval*? The easiest way to find out is to ask:

May 20, 2005

Dear Mary-Kay Wilmers:

We received the enclosed letter from Michael Watts. In this letter, Mr. Watts claims that the LRB 'excised all our annotations, including the considerable recognition of and citation to your work'. We would appreciate if you could kindly clarify for us whether the final proofs of 'Blood for Oil?' were approved by the Retort authors.

Cordially,

Jonathan Nitzan and Shimshon Bichler

A few days later we received her unambiguous reply (our emphasis):

May 26, 2005

Dear Jonathan Nitzan,

Yes, the final proofs for 'Blood for Oil?' were approved by Retort.

I hope you can see your way to writing a letter setting out your argument: perhaps a correspondence in the LRB would be the most effective way of airing your disagreements with Retort's position.

Best wishes,

Mary-Kay Wilmers

Joseph Goebbels used to say that if you tell a big enough lie and keep repeating it, people will eventually come to believe it. This insight proved a fitting basis for postmodernists on which to build their booming business of 'narratives', 'mass communication' and 'virtual' piracy.

In her email, the editor made another attempt to minimize the damage, trying to have us air our 'disagreements' with Retort via 'correspondence'. We admit to being somewhat surprised with the terminology. We did not know that, in politically correct newspeak, plain theft has become 'disagreement'. Better wait for *Afflicted Powers*.

Afflicted Powers

Eventually, the book arrived in the mail. We read it. The situation was much worse than we had thought. The book contained the very same plagiarism as the article, and more.

Afflicted Powers begins by dispelling all doubts. In their second paragraph the Retort authors declare that all of them – individually and as a group – knew *exactly* what they were doing:

> After preparatory work by the four of us separately and together, each one of the quartet took responsibility for the first drafting of a chapter. **Every paragraph was then subjected to scrutiny, discussion, and multiple revisions by all four.** (*Afflicted Powers*, Retort 2005: XI, our emphasis)

The overall method of plagiarism is spelled out a few paragraphs later. Apparently, the book consists of two types of text – documented and undocumented.

> Following the example of the *Junius Brochure*, at points in the book certain arguments and assertions are made **without resort to the formal critical apparatus of scholarship; footnotes there are few, the larger canvas of relevant literature largely invisible**. At other points, the nature of the subject at hand demands **a level of historical and empirical detail (even exegesis)** in order for the book's criticism of the present to be sustained. (p. XII, our emphasis)

The documented parts are rather impressive in their detailed attributions. The Retort authors carefully annotate even the most trite facts and claims with detailed references and quotations. The main exception to this rule is the work of Nitzan and Bichler. Apparently, this 'larger canvas of relevant literature' does not demand footnotes. It does not require the 'formal critical apparatus of scholarship'. It is best kept 'invisible'.

In their affidavit, the Retort authors state that there is only one part of Chapter 2 which deals 'directly' with our theses (section VI, pp. 67-72). This is a plain lie. Retort would have been correct to say that there is only one part that deals 'explicitly' with our work; the rest of the chapter deals with it 'implicitly' – namely, through plagiarism.

Form and Content

The overall structure of Chapter 2 – the central chapter of the book – bears a surprising resemblance to two of our articles – 'It's All About Oil' (Nitzan and Bichler 2003) and 'Clash of Civilization, or Capital Accumulation?' (Nitzan and Bichler 2003). These

papers begin by presenting the conventional creed. They explain, in point form, the accepted logic of why the new wars are supposedly 'all about oil'; the papers then debunk these arguments, point by point; finally, they offer our own alternative explanations.

The Retort authors lay out this very structure, explicitly. Moreover – and contrary to their sleek affidavit where they insist that they merely 'rehearse' our theses and claim 'no originality' – here they take full credit, repeatedly. Notice, the frequent use of 'we' and 'our':

> Let us set out **our ambitions** for this chapter as unambiguously as we can. The first aims to identify the broad contours of the Blood for Oil account – in the process putting the thesis itself in the strongest form **we can manage**. The second goes on to expose the actual complexity, and the heterogeneous form, of the oil argument when it is deployed as anything more than a slogan (and in so doing **we hope to demonstrate** that the argument itself, pursued at all seriously, compels its users to move beyond oil as such). **We then provide our own reading of oil politics**; namely a synoptic view of the constitutive role of oil in American empire, but one that exposes, and questions, Blood for Oil's Malthusian underpinnings – its presumption that the control of oil led ineluctably to war, and most of all, its unwillingness to situate oil on the larger landscape of capital. Finally, **we turn to the occupation of Iraq**, and try to situate American policy in the Middle East in relation to the full spectrum of capital's need and appetites over the past decade. . . . What follows is sometimes technical, not to say tortuous. **We see no way out of this**. . . . The Blood for Oil argument claims to provide an account of capitalist politics. **We believe** it does not. **Our obligation** to the reader, therefore, is to establish what **a genuine account would consist of.** (*Afflicted Powers*, Retort 2005: 42-43)

As usual, the Retort authors work wholesale. In converting Nitzan and Bichler's view into their own 'genuine account', they plagiarize everything – from the form, to the contents, to the language. Begin with the very rationale for their title, 'Blood for Oil?':

Retort #9: 'If there was a single political thread tying the anti-war mobilizations together, it was undoubtedly the refrain of "No Blood for Oil"' (*Afflicted Powers*, pp. 40-42).	Nitzan and Bichler: 'If there is any agreement among the pundits, this surely must be it: *the coming war on Iraq will be fought largely over oil*' ('It's All About Oil', 2003: 8, original emphasis).

When done with the title, the Retort authors move on to borrow our point-form specification of the conventional reasoning of the war:

Retort #10: ''*In our tally*, the Blood for Oil argument might mean that the war was launched for any (or all) of the following reasons, or through some concatenation of them' (*Afflicted Powers*, p. 50, emphasis added)

Nitzan and Bichler: 'The gist of the argument [regarding the coming war in Iraq] is simple enough, and could be summarized as follows' ('It's All About Oil', 2003: 8).

In 'It's All About Oil', we enumerate five related reasons, listed in bullet form. On pages 51-52 of *Afflicted Powers*, the Retort authors reproduce this same format with a hodgepodge of twelve bulleted reasons. The tenth bullet strikes a cord:

> Because war represented, as in other energy conflicts, a means to restore flagging corporate profitability, low oil prices, and general order within the oil system worldwide. (p. 52)

In other words, with a few strokes of the keyboard, the *least* conventional of reasons – the view of the Iraq invasion as an 'energy conflict' – has suddenly become part of the convention. Note that this is the first place in the book where the Retort authors mention 'energy conflicts'. Yet, there is no explanation as to what these conflicts are, how they work and how they are connected to corporate profitability (and, of course, no reference to Nitzan and Bichler who invented the concept in the first place).

Instead we are told that the Iraq war is just like 'other' energy conflicts. Presumably, the reader already knows precisely what 'energy conflicts' are, and that the Iraq war qualifies as one. The reader also knows – probably from watching Fox News – that these conflicts typically 'restore' flagging corporate profitability. The only glitch is the bizarre reference to *low* oil prices. Is it true that 'energy conflicts' produce low oil prices? And if so, how would low oil prices restore the profits of oil companies? Is this a sophisticated tactic of hiding one's sources (since Bichler and Nitzan talk about *high* prices)? Or is it simply the unfortunate typo of a plagiarist?[9]

[9] The Retort authors use this tactic of 'appropriation-by-trivialization' throughout the text. For instance, on page 47 of their book, they refer to the first part of the twentieth century as 'the **so-called** era of "free-flowing oil"'. So-called?! So-called by whom?! So-called where?! This is the first time the concept appears in the book. But since it is 'so-called' – i.e. familiar enough to have acquired a well-known nickname – there is no need to reference its source. Or consider the discussion of 'scarcity' on page 63 of their book. There they write: 'An examination of [crude oil] inventories (a **common way to estimate the desires of buyers and sellers**) confounds expectations further'. Inventories as a common way to estimate desires?! Where is this method common?! Who uses it?! Even a half-trained economist would not make this claim. Moreover, and as already noted, our discussion of the 'scarcity thesis' explicitly debunks the notion that changes in inventories could proxy 'excess demand' as 'excess supply'. But since the Retort authors convince themselves that this is in fact a 'common' method – i.e. well known and frequently used – they feel free to both distort our critique and plagiarize our research in the same swoop.

Having listed the accepted reasons for the war, the Retort authors set the stage for their 'own' view:

Retort #11: 'So much for the prosecution case. . . . But the argument, under closer scrutiny, turns out to be rather more complex and unstable' (*Afflicted Powers*, p. 50)	Nitzan and Bichler: 'These views all ring true . . . [but] . . . As it turns out, the situation is a bit more complicated' ('It's All About Oil', 2003: 8-9).

The beginning of the millennium was marked by exceptionally low oil prices – so much so that even *The Economist* of London was tempted to conclude the world was awash with oil. OPEC was clearly helpless, and *The Economist* went so far as to predict a further drop in oil prices, perhaps to $5 a barrel (Anonymous 1999). It was in this context that we raised the obvious – yet unasked – question: what was the point of launching a war to make oil cheaper when it was already practically free? The Retort authors were obviously struck by the same lightning:

Retort #12: 'Given all this, why would the companies or the Bush Cabinet believe that it required an invasion to put things right? . . . Indeed, why open the box at all? . . . War is rarely a vehicle for price stability . . . but perhaps that is the point' (*Afflicted Powers*, pp. 65-66).	Nitzan and Bichler: 'Under these circumstances, and assuming it is indeed 'all about oil', shouldn't the cartel be left alone to pursue its futile maneuvers? Or perhaps OPEC's ineffectiveness is precisely the problem? ('It's All About Oil', 2003: 8).

Of course, the Retort authors do not stop at the structure. The detailed content of their book chapter – their so-called 'genuine account' – plagiarizes and distorts our work precisely in the same way as their *London Review of Book* article. Since we have already exposed this plagiarism earlier in the paper, there is no point in reproducing it here. Suffice it to say that the eight plagiarized 'quotes' from their article, individually numbered from Retort #1 to Retort #8, could all be found in Chapter 2 of *Afflicted Powers*.[10] Six of these eight quotes appear without any reference to Bichler and Nitzan – and, indeed, appear before their names are even mentioned. The two remaining quotes contain references to our work; but as we illustrate later, these references are grossly misleading.

[10] For those interested, the quote from the *London Review of Books* article, numbered Retort #1, appears in *Afflicted Powers* on pp. 47-48; Retort #2 appears on p. 48; Retort #3 on p. 59; Retort #4 on pp. 63-64; Retort #5 on p. 64; Retort #6 on pp. 67-68; Retort #7 on pp. 68-69; and Retort #8 on p. 54.

The Stamp of Property

The main difference between Chapter 2 of *Afflicted Powers* and the article in the *London Review of Books* is the language. In their article, the Retort authors tend to plagiarize our claims in the 'abstract'. Occasionally, they use the prefix 'in our view'; but, for the most part, they simply provide the explanation or assertion, leaving it to reader to connect the obvious dots to Retort. Their book chapter is far less subtle. Here, the Retort authors stamp their proprietary claims all over the plagiarized text. Consider the following illustrations, with our emphases added:

> **In our tally**, the Blood for Oil argument might mean that the war was launched for any (or all) of the following reasons, or through some concatenation of them. (p. 50)

> How, then, do ***we*** position oil [original emphasis], and the global reach of the supermajors, in **our interpretation** of the Iraqi invasion? (p. 55)

> How, then, does this history affect the Blood for Oil argument in the case of Iraq? In brief, **we go on to argue the following**. First, there was no shortage, or impending shortage, of oil during the time war was in the planning state. Second, war was in no sense a structural or strategic necessity; indeed it represented a high-stakes gamble, not least for the oil industry itself. There was a record – long and ignominious – of proven alternatives to military force, as the recent history of both imperial and American oil reveal. And third, as **we have stated previously**, a narrow focus on oil *qua* commodity cannot grasp the larger capitalist complex of which oil is a constituent part. (p. 59)

> **We begin** with the specter of shortage. . . . **Our view** is that scarcity and price – the twin sisters of Mathusian pessimism – provide no ground on which the Iraq war can or shod be located (p. 59)

> **In our view**, the very formulation of the Blood for Oil hypothesis concedes too much to this magical point of view. **As we have said before**, it substitutes oil (as one sector or industry) for a dominant capitalist core, and fixes on the character of a single commodity at the expense of the systematic imperatives of capital in general. (p. 67)

'Giving Full Credit': A Case Study of Referenced Plagiarism

We now arrive at Retort's saving grace, the section of their book that supposedly 'deals directly' with our theses (Section VI, pp. 67-72). This is where Nitzan and Bichler are

first mentioned (cited 'six times'); it is where the Retort authors are 'explicit' that they are merely 'rehearsing' our work; where they endorse 'the originality and power' of our argument; where they declare their 'indebtedness'; where they 'fully credit and highly praise' our 'otherwise unjustly ignored work'.

As already noted, the Retort authors 'deal' with our work not only in this section, but *throughout* Chapter 2 – and mostly before our work is even mentioned. But let's leave that aside for a moment and concentrate specifically on the pages of this oasis of honesty.

The Retort authors do mention our names several times, but it is hard to know exactly what they reference. The first paragraph of Section VI, found on page 67, ends with a footnote in which the Retort authors announce:

> We are deeply indebted to the brilliant analysis of the political economy of oil offered by Jonathan Nitzan and Shimshon Bichler in *The Global Political Economy of Israel*

Evidently, the Quartet has internalized the lessons of advanced Taylorism. It is much cheaper to dispossess with a little gift than with an expensive stick. Give the natives glass necklaces; decorate your subjects for patriotic bravery; hand the blacks their Bantustans; give the Palestinians their Westbank-Gazustans; make your workers 'employees of the month'. It costs nothing and it works well. So well that even here, in their rare moment of gratitude, the Retort authors could not resist the temptation. Their indebtedness notwithstanding, they attribute the actual contents of the paragraph not to the 'brilliant analysts', but to themselves ('In our view. . . . As we have said before. . . '.).

The next paragraph (pp. 67-68) ends with a footnote referencing page 227 of *The Global Political Economy of Israel*. On the face of it, this looks like an honest attribution. It is not. The content of this paragraph is the same as the plagiarized text quoted in Retort #6. The Retort authors pretend to reference this content, but in fact they do not. The bulk of Retort's argument here is taken *not* from page 227 of our book, but from page 228. There, we draw on the works of six different authors, synthesizing their views about the converging interests of OPEC, Western governments and the oil companies. Our own synthesis fully references these authors. By contrast, Retort references neither this synthesis nor the original authors.

But if so, why do they end this paragraph with a reference to the wrong page in our book? The answer is simple. The last sentence in the paragraph quotes the words of Sheikh Yamani. This quote is given on page 227 of our book. In other words, it is Yamani's words – and not the wider argument – that the Retort authors reference. Yet, even that reference is misleading. In fact, the quote from Yamani originates not in our own book, but in a book by Richard Barnet. We reference Barnet; Retort does not even mention him. In this way, the unsuspecting reader is led to believe that the thrust of

the argument in this paragraph is Retort's, while Nitzan and Bichler merely supply the decoration.

This smokescreen method is also applied elsewhere in the book. For instance, when dealing with the conventional reasons for the invasion of Iraq, the Retort authors write:

> Shock and awe offered the prospect, as Thomas Friedman said at the time, of **killing two birds with one stone**: 'Destroy Saddam and destabilize OPEC'. (*Afflicted Powers*, Retort 2005: 46, emphasis added)

But that is not exactly what Friedman said. In the *Guardian*, from where he is quoted, he used a metaphor from American salesmanship:

> If that scenario prevails, you could look at an invasion of Iraq as a possible **two-for-one sale**: destroy Saddam and destabilise Opec at the same time. (August 6, 2002, emphasis added)

The killing-of-birds metaphor comes from *The Economist*, as quoted in our article:

> It might seem, then, that knocking out Mr Hussein would **kill two birds with one stone**: a dangerous dictator would be gone, and with him would go the cartel that for years has manipulated prices, engineered embargoes and otherwise harmed consumers. (*The Economist*, September 14, 2002; cited in 'It's All About Oil', 2003: 8, emphasis added)

On other occasions, the Retort authors are less careful in covering up their trail. On pages 72-73, for instance, they provide evidence for neoliberalism that presumably comes from the United Nations:

> Ninety five percent of all regulatory changes during the 1990s, as inventoried by the *UN World Investment Report*, were aimed at liberalizing capital controls. The tripling of bilateral investment treaties in the first half of the same decade was almost wholly aimed at removing 'barriers' to foreign investment.

Unfortunately, the Retort authors never bothered to check the *World Investment Report* itself. They simply copied these 'facts' from a footnote on page 266 of *The Global Political Economy of Israel* (Nitzan and Bichler 2002). Had they actually read the *Report*, they would have realized that these 'cited' facts do not appear there. They were computed by us, calculated from the *raw* data provided in the *Report*.

Back to Section VI of Chapter 2, the next paragraph in line (pp. 68-69) is one where Nitzan and Bichler are 'fully credited' – or so it seems. In this paragraph, the Retort authors attribute to us the concept of the 'politicization of the oil sector', the

concept of 'commercialization of the arms industry', and the concept of 'Weapondollar-Petrodollar Coalition'. The entire attribution is condensed into two sentences. Since there is no explanation for these terms, no reader could possibly understand what they mean. Furthermore, the attribution is *specific* to these concepts, and *only* to these concepts. The rest of the paragraph contains the plagiarized text of Retort #7. It includes a discussion of the 'Arma-Core', data on the financing of arms exports, statistics on the distribution of corporate profits, and more – all taken from our work without any reference.

The plagiarism feeds into the next couple of paragraphs (pp. 69-70). Here, the Retort authors introduce numerous additional claims and facts – from the redistribution of global income to the redistribution of global arms imports, the correlation between OPEC's oil revenues and Middle-East arms imports, the interaction of 'energy conflicts' and 'oil-fuelled militarization', 'danger zones' and oil price movements, among others. All of these claims and facts are taken from Nitzan and Bichler. Yet, only two – the correlation between oil revenues and arms imports and the notion of 'tension without war' – are explicitly referenced. Each attribution occurs in the middle of a paragraph. Each *specifically* references the item in question, and *only* the item in question. Since all the other claims, facts and concepts are not referenced at all, the obvious conclusion is that they must be Retort's. The sole exception is 'danger zones' – a concept that Nitzan and Bichler invented and the Retort authors, in their infinite arrogance, attribute to . . . 'the industry'!

The next paragraph (pp. 70-71) begins the process of disengagement. Like in the *London Review of Books*, the Retort authors are all too happy to 'take their distance', only here they do so with much more fanfare and far greater assertiveness:

> **We take our distance** here from Nitzan and Bichler's analysis. The kind of political servo-mechanism they point to, precisely calibrating the oil/arms nexus – and setting the tempo of American rule more broadly – is in the end too perfunctory, too mechanical. For the significance of oil, **we have been arguing**, derives as much from. . . . **We are not fully convinced** that the oil-arms-military-engineering-construction-finance-drug nexus was brought to crisis point by the 'peace dividend', by low oil prices, and by the 1990s explosion of the high-tech sector [as presumably argued by Nitzan and Bicher]. But **we are confident** that the transnational constellation of capital . . . must be assessed. (Afflicted Powers, Retort 2005: 70-72)

Of course, like with Sharon's 'disengagement' from the Palestinians, at this point no reader could possibly know what it is precisely that the Retort authors 'take their distance' from. With so much plagiarism, smokescreens and misleading references, the dividing line between 'Nitzan and Bichler's analysis' and Retort's 'genuine account' has practically vanished. But, then, that is the whole purpose: eviscerate the content

and dump the corpse. From now on, it is *we*, Retort, who 'have been arguing', *we* who are 'not fully convinced', *we* who are 'confident'.

More Correspondence

The conclusion is crystal clear. There was never any misunderstanding. On the contrary. The Retort authors knew precisely what they were doing.

For the sake of good order, we emailed the following summary letter to the *London Review of Books*.

June 12, 2005

Dear Mary-Kay Wilmers,

Thank you kindly for the clarification and invitation for a correspondence. We want to apologize for our delayed response. We were travelling and did not have regular access to email. We also received Retort's *Afflicted Powers* and took the time to carefully read and assess its contents.

With your permission, we would like to summarize the situation as we see it and to suggest a different course of action.

SUMMARY:

(1) The Retort authors write *Afflicted Powers*. The main chapter of the book, titled 'Blood for Oil?' is essentially a reproduction of our work. A small part of this reproduction is attributed to us explicitly. The bulk of it is straightforward plagiarism.
(2) The Retort authors re-write this material into an *LRB* article (or let the *LRB* editors rewrite it for them). The re-writing is done in a manner that presents almost our entire argument, including theory and facts, as if it were their own.
(3) The Retort authors approve the final proofs of the *LRB* article.
(4) In response to our draft article, 'The Scientist and the Church', Michael Watts blames *LRB* for 'cutting us out'.

The situation, then, is worse than we originally thought.

In his letter to us, Michael Watts states that there is one section in *Afflicted Powers* that deals directly with our theses (pp. 67-72) and that the Retort authors are explicit that this section merely rehearses our work.

This statement is misleading, to put it mildly. In fact, the entire thrust of Ch. 2 – including the main questions it asks, the way it presents the argument and the answers it gives – is an appropriation of our work (with plenty of errors and gross misunderstandings on the way). In 'The Scientist and the Church' we provide eight long quotations to demonstrate the plagiarism in the *LRB* article. Six of these eight quotations appear in Ch. 2 of the book without any reference to our work and indeed before our names are even mentioned. Finally, as in 'Blood for Oil?' in this chapter too the authors have the audacity to caricature our work that they so skilfully appropriate as 'too perfunctory' and 'too technical'. This is a necessary step. Once minimized, our work can be easily absorbed into their own deeply contemplated framework.

We have already heard from several people about that 'brilliant *LRB* piece'. Little did these people know that, if fully referenced, that brilliant piece would amount to no more than a book review. It certainly wouldn't qualify as a lead article in your magazine.

SUGGESTION:

Personally, we are puzzled by your suggestion that we write a 1,000-word letter. Retort was given over 8,000 words for their plagiarism. We feel that, in the interest of fairness, the least that *LRB* can do is to publish 'The Scientist and the Church' in full.

And there are other reasons:

(1) This piece should be of great interest to the progressive *LRB* readership.
(2) We are dealing here with a serious intellectual matter. Radical thinking has been stultified by repressive orthodoxy dressed in progressive clothes. Not to expose this process is to enhance it further.
(3) The issue has possible legal implications. An economics professor was expelled from the Hebrew University for such plagiarism.

The substance of 'The Scientist and the Church' cannot be summarized in a 1,000-word article, and it will be completely diluted if fractured into a series of short accusations and responses stretched over several issues.

We hope and trust you will agree with us and publish our paper in full.

Respectfully,

Jonathan Nitzan and Shimshon Bichler

The obvious answer arrived a few days later:

June 16, 2005

Dear Jonathan Nitzan and Shimshon Bichler,

Thank you for your message of 12 June. It is not our policy to run essay-length responses to pieces that we've published. We would be happy, however, as I said before, to consider a response for publication on our letters page: 1000 words is considerably longer than we usually allow for a letter. The deadline would be Wednesday 22 June.

Best wishes,

Mary-Kay Wilmers

There was little we could do to penetrate this wall. It was time to conclude:

June 16, 2005

Dear Mary-Kay Wilmers,

Thank you very much for your reply of June 16.

We understand your policy regarding standard responses. However, 'The Scientist and the Church' is not a standard response – just as 'Blood for Oil?' is not a standard piece. 'Blood for Oil?' is largely plagiarized from our work. You have published this long plagiarized article – probably without checking it or, alternatively, after having removed references to our work. You now insist that we restrict ourselves to a short 'reply', knowing full well that the substance of our essay cannot be summarized in 1000 words. This expediency may be consistent with your formal policy regarding letters, but it also suggests an effective 'partnership' to the plagiarism.

Cordially,

Jonathan Nitzan and Shimshon Bichler

A Dialectical Conclusion

Twentieth-century Marxists produced some remarkable insights. The path-breaking works of Georg Lukács, Michal Kalecki, Herbert Marcuse, Franz Neumann, Paul Baran and Paul Sweezy, Harry Magdoff, Josef Steindl, Michael Kidron, Immanuel Wallerstein and Cornelius Castoriadis – among others – have enriched our imagination and deepened our knowledge.

But these were all intellectual rebels, people who contested Marxist orthodoxy. The orthodoxy itself moved in the opposite direction. Having been taken over by Leninism-Stalinism, Marxism gradually lost its scientific footing. Increasingly, it assumed the structure of a church, complete with it own clergy of party officials and other gatekeepers. Rigidity hastened its decline. Eventually, it was eclipsed and partly overtaken by a more predatory church, assembled under the rubric of 'post-modernity'.

The 'postist' fashion emerged in the 1980s. It first took hold in North American universities, from where it subsequently spread to the rest of the academic world. Its practitioners – whether post-Nazi, post-liberal or post-Marxist – are united in their denial of novelty, enlightenment and progress. They flood the 'academic space' with rivers of meaningless words, indecipherable 'texts' and deconstructed 'discourses'. They smother scientific creativity by tolerating and encouraging critical ignorance.

There is no need for new research, for new explorations, for new inventions. The academic postists already know it all. They possess the up-to-date insight, the most progressive opinions, the authoritative last word on every subject. They know everything on 'imperialism', the 'American Empire', and 'military neoliberalism' (or is it 'neo-military liberalism'?). They think 'dialectically', not 'mechanically'. They grasp reality 'in-depth' without ever having to conduct scientific research. And they know it all in the name of Marx – the same Marx who tried to create a revolutionary science; the same Marx who tried to uncover the concrete contradictions that underlie the capitalist totality; the same Marx who challenged the idealism of mechanical/bourgeois science, its evasion of contradictions, its dodging of criticism.

Surrounding these experts is an efficient network of communication. The publishers that put out politically-correct books, the magazines that promote them with uplifted chapters, the academic friends who review them in refereed journals, the popular media that endorse them in talk shows. These are all connected, sometimes loosely, sometimes more tightly, and always dialectically, to the new church of postmodernity.

Of course, like all fortified dogmas, this church too is bound to collapse. It is the inevitable dialectic – the only dialectic that the 'critical experts' can know nothing of.

References

All of Bichler and Nitzan's works are available for free under the Creative Commons license from *The Bichler & Nitzan Archives* (http://bnarchives.net).

Agassi, Joseph. 1990. *An Introduction to Philosophy. The Siblinghood of Humanity.* Delmar, N.Y.: Caravan Books.

Althusser, Louis. 1971. Ideology and Ideological State Apparatuses (Notes Towards an Investigation). Translated from the French by Ben Brewster. In *Lenin and Philosophy and Other Essays*, edited by L. Althusser. New York and London: Monthly Review Press, pp. 127-186.

Amin, Samir. 1974a. Accumulation and Development: A Theoretical Model. *Review of African Political Economy* (1): 9-26.

Amin, Samir. 1974b. *Accumulation on a World Scale. A Critique of the Theory of Underdevelopment*. 2 vols. New York: Monthly Review Press.

Anonymous. 1999. Drowning In Oil. *The Economist*, March 6, pp. 19.

Anonymous. 2002. Don't Mention the O-Word -- Iraq's Oil. How Would an American Strike Affect Oil Reserves, and OPEC? *The Economist*, September 14, pp. 25-27.

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

Arrighi, Giovanni , Po-keung Hui, Krishnendu Ray, and Thomas Ehrlich Reifer. 1999. Geopolitics and High Finance. In *Chaos and Governance in the Modern World System*, edited by G. Arrighi and B. J. Silver. Minneapolis: University of Minnesota Press, pp. 37-96.

Arrighi, Giovanni, and Beverly J. Silver. 1999. Introduction. In *Chaos and Governance in the Modern World System*, edited by G. Arrighi and B. J. Silver. Minneapolis: University of Minnesota Press, pp. 1-36.

Asimov, Isaac. 1959. The Last Question. In *Nine Tomorrows. Tales of the Near Future*. Garden City, N.Y.: Doubleday.

Aston, T. H., and C. H. E. Philpin, eds. 1985. *The Brenner Debate. Agrarian Class Structure and Economic Development in Pre-Industrial Europe*. Cambridge and New York: Cambridge University Press.

Baines, Joseph. 2013a. Food Price Inflation as Redistribution: Towards a New Analysis of Corporate Power in the World Food System. *New Political Economy*: 1-34, published electronically on April 22.

Baines, Joseph. 2013b. Walmart's Contested Expansion in the Retail Business: Differential Accumulation, Institutional Restructuring and Social Resistance. Monograph, Political Science, York University, pp. 1-33.

Baines, Joseph. 2014. The Ethanol Boom and the Restructuring of the Food Regime. *Working Papers on Capital as Power* (2014/03, July): 1-50.

Bakija, Jon, Adam Cole, and Bradley T. Heim. 2012. Jobs and Income Growth of Top Earners and the Causes of Changing Income Inequality: Evidence from U.S. Tax Return Data. Working Paper.

Baran, Paul A. 1957. *The Political Economy of Growth.* New York and London: Modern Reader Paperbacks.

Baran, Paul. A., and Paul M. Sweezy. 1966. *Monopoly Capital. An Essay on the American Economic and Social Order.* New York: Modern Reader Paperbacks.

Bechler, Zev. 1991. *Newton's Physics and the Conceptual Structure of the Scientific Revolution.* Dordrecht and Boston: Kluwer Academic Publishers.

Becker, Gary Stanley. 1964. *Human Capital. A Theoretical and Empirical Analysis, with Special Reference to Education.* New York: National Bureau of Economic Research; distributed by Columbia University Press.

Bichler, Shimshon, and Jonathan Nitzan. 1996. Putting the State In Its Place: US Foreign Policy and Differential Accumulation in Middle-East "Energy Conflicts". *Review of International Political Economy* 3 (4): 608-661.

Bichler, Shimshon, and Jonathan Nitzan. 2002. War Profits, Peace Dividends and the Israeli-Palestinian Conflict. *News From Within* 18 (4, April): 14-19.

Bichler, Shimshon, and Jonathan Nitzan. 2003. The End of Neoliberalism? Mimeograph, Jerusalem and Toronto, June, pp. 1-3.

Bichler, Shimshon, and Jonathan Nitzan. 2004a. Differential Accumulation and Middle East Wars: Beyond Neo-Liberalism. In *Global Regulation. Managing Crises After the Imperial Turn*, edited by D. Wigan, L. Assassi and K. van der Pijl. London: Palgrave, pp. 43-60.

Bichler, Shimshon, and Jonathan Nitzan. 2004b. Dominant Capital and the New Wars. *Journal of World-Systems Research* 10 (2, August): 255-327.

Bichler, Shimshon, and Jonathan Nitzan. 2008a. Contours of Crisis: *Plus ça change, plus c'est pareil? Dollars & Sense*, December 29.

Bichler, Shimshon, and Jonathan Nitzan. 2008b. From Welltop to Laptop? Monograph, Jerusalem and Montreal: 1-4.

Bichler, Shimshon, and Jonathan Nitzan. 2009. Contours of Crisis II: Fiction and Reality. *Dollars & Sense*, April 28.

Bichler, Shimshon, and Jonathan Nitzan. 2010a. Imperialism and Financialism. A Story of a Nexus (Revised and Expanded). Monograph, Jerusalem and Montreal (September), pp. 1-29.

Bichler, Shimshon, and Jonathan Nitzan. 2010b. Systemic Fear, Modern Finance and the Future of Capitalism. Monograph, Jerusalem and Montreal (July), pp. 1-42.

Bichler, Shimshon, and Jonathan Nitzan. 2010c. To the New Reader Innocent of the Undeconstructed Past: On the Second Edition of *Peace, Peace, and No Peace*. Hebrew, Jerusalem and Montreal (March), pp. 1-4.

Bichler, Shimshon, and Jonathan Nitzan. 2011. Differential Accumulation. Monograph, Jerusalem and Montreal (December), pp. 1-13.

Bichler, Shimshon, and Jonathan Nitzan. 2012a. The Asymptotes of Power. *Real-World Economics Review* (60, June): 18-53.

Bichler, Shimshon, and Jonathan Nitzan. 2012b. Capital as Power. *Philosophers for Change*, May 29.

Bichler, Shimshon, and Jonathan Nitzan. 2012c. Capital as Power: Toward a New Cosmology of Capitalism. *Real-World Economics Review* (61, September): 65-84.

Bichler, Shimshon, and Jonathan Nitzan. 2012d. Imperialism and Financialism: The Story of a Nexus. *Journal of Critical Globalization Studies* (5, January): 42-78.

Bichler, Shimshon, and Jonathan Nitzan. 2013a. Aki and Friends. Monograph. Hebrew, Jerusalem and Montreal (March), pp. 1-16.

Bichler, Shimshon, and Jonathan Nitzan. 2013b. Aki and Friends. Monograph, Jerusalem and Montreal (April), pp. 1-19.

Bichler, Shimshon, and Jonathan Nitzan. 2013c. Can Capitalists Afford Recovery? Economic Policy When Capital is Power. *Working Papers on Capital as Power* (2013/01, October): 1-36.

Bichler, Shimshon, and Jonathan Nitzan. 2013d. Francis' Buy-to-Build Estimates for Britain and the United States: A Comment. *Review of Capital as Power* 1 (1): 73-78.

Bichler, Shimshon, and Jonathan Nitzan. 2014a. How Capitalists Learned to Stop Worrying and Love the Crisis. *Real-World Economics Review* (66, January): 65-73.

Bichler, Shimshon, and Jonathan Nitzan. 2014b. No Way Out: Crime, Punishment and the Limits to Power. *Crime, Law and Social Change.* 61 (3, April): 251-271.

Bichler, Shimshon, and Jonathan Nitzan. 2015. Still About Oil? *Real-World Economics Review* (70, February): 49-79.

Bichler, Shimshon, Jonathan Nitzan, and Tim Di Muzio. 2012. The 1%, Exploitation and Wealth: Tim Di Muzio interviews Shimshon Bichler and Jonathan Nitzan. *Review of Capital as Power* 1 (1): 1-22.

Bichler, Shimshon, Jonathan Nitzan, and Piotr Dutkiewicz. 2013. Capitalism as a Mode of Power: Piotr Dutkiewicz in Conversation with Shimshon Bichler and Jonathan Nitzan. In *22 Ideas to Fix the World: Conversations with the World's Foremost*

Thinkers, edited by P. Dutkiewicz and R. Sakwa. New York: New York University Press and the Social Science Research Council, pp. 326-354.

Bichler, Shimshon, Jonathan Nitzan, and Robin Rowley. 1989. The Political Economy of Armaments. Working Paper 7/89, Department of Economics, McGill University, Montreal, pp. 1-34.

Bichler, Shimshon, Robin Rowley, and Jonathan Nitzan. 1989. The Armadollar-Petrodollar Coalition: Demise or New Order? Working Paper 11/89, Department of Economics, McGill University, Montreal, pp. 1-63.

Blair, John M. 1976. *The Control of Oil.* New York: Vintage Books.

Blinder, Alan S. 1979. *Economic Policy and the Great Stagflation.* New York: Academic Press.

Blinder, Alan. S., and Jeremy B. Rudd. 2008. The Supply-Shock Explanation of the Great Stagflation Revisited. December. *NBER Working Paper Series* (14563): 1-80.

Boal, Iain, T. J. Clark, Joseph Matthews, and Michael Watts. 2005. Blood for Oil? *London Review of Books*, April 21.

Bodanis, David. 2000. *E=MC2. A Biography of the World's Most Famous Equation.* Toronto: Doubleday Canada.

Bohm, David. 1980. *Wholeness and the Implicate Order.* London: Routledge & Kegan Paul Ltd.

Bohm, David, and David F. Peat. 1987. *Science, Order, and Creativity.* London: Bantham Books.

Bohm, David, and David F. Peat. 2000. *Science, Order, and Creativity*. 2nd ed. London and New York: Routledge.

Bosworth, Barry , Susan M. Collins, and Gabriel Chodorow-Reich. 2007. Returns on FDI: Does the U.S. Really Do Better? No. 13313. *NBER Working Paper Series* (August).

Bourdieu, Pierre. 1984. *Distinction. A Social Critique of the Judgement of Taste.* Cambridge, Mass.: Harvard University Press.

Bourdieu, Pierre. 1986. The Forms of Capital. In *Handbook of Theory and Research for the Sociology of Education*, edited by J. G. Richardson. New York: Greenwood Press, pp. 241-258.

Braudel, Fernand. 1985. *Civilization & Capitalism, 15th-18th Century*. Translated from the French and Revised by Sian Reynolds. 3 vols. New York: Harper & Row, Publishers.

Brennan, Jordan. 2012a. The Power Underpinnings, and Some Distributional Consequences, of Trade and Investment Liberalisation in Canada. *New Political Economy* (*iFirst*): 1-33.

Brennan, Jordan. 2012b. A Shrinking Universe: How Concentrated Corporate Power is Shaping Income Inequality in Canada, Canadian Centre for Policy Alternatives, Ottawa, November, pp. 1-49.

Brennan, Jordan. 2014. *The Business of Power: Canadian Multinationals in the Postwar Era*. Unpublished Doctoral Dissertation, Department of Political Science, York University, Toronto.

Brenner, Robert. 1977. The Origins of Capitalist Development: A Critique of Neo-Smithian Marxism. *New Left Review* 104 (July-August): 25-92.

Brenner, Robert. 1978. Dobb on the Transition from Feudalism to Capitalism. *Cambridge Journal of Economics* 2 (2, June): 121-140.

Bruno, Michael, and Jeffrey Sachs. 1985. *Economics of Worldwide Stagflation.* Cambridge, Mass.: Harvard University Press.

Bulgakov, Mikhail Afanas Evich. 1968. *The Heart of a Dog*. Translated from the Russian by Mirra Ginsburg. New York: Grove Press.

Canetti, Elias. 1960. [1973]. *Crowds and Power*. Translated from the German by Carol Stewart. Harmondsworth, Middlesex: Penguin Books.

Cardoso, Fernando Henrique, and Enzo Faletto. 1979. *Dependency and Development in Latin America.* Berkeley: University of California Press.

Carlson, Susan M., Elizabeth A. Bradshaw, and Carrie L. Buist. 2013. Bringing 'The Poor' Back In: Regulation and Control of Surplus Populations in Finland and the Netherland. *Journal of Crime and Justice* 36 (2): 194-232.

Castoriadis, Cornelius. 1987. *The Imaginary Institution of Society*. Translated by Kathleen Blamey. Cambridge: The MIT Press.

Castoriadis, Cornelius. 1991a. The Greek *Polis* and the Creation of Democracy. In *Philosophy, Politics, Autonomy. Essays in Political Philosophy*, edited by D. A. Curtis. New York and Oxford: Oxford University Press, pp. 81-123.

Castoriadis, Cornelius. 1991b. *Philosophy, Politics, Autonomy. Essays in Political Philosophy*. Series Edited by D. A. Curtis. New York and Oxford: Oxford University Press.

Clark, John Bates. 1899. [1965]. *The Distribution of Wealth.* New York: Augustus M. Kelley.

Clarke, Arthur Charles, and Stanley Kubrick. 1968. *2001. A Space Odyssey*. Based on the screenplay by Arthur C. Clarke & Stanley Kubrick. London: Hutchinson.

Clavell, James. 1986. *Whirlwind*. 1st ed. New York: W. Morrow.

Crichton, Michael. 2002. *Prey*. 1st ed. New York: Harper Collins Publishers.

Crotty, James. 2005. The Neoliberal Paradox: The Impact of Destructive Product Market Competition and 'Modern' Financial Markets on Nonfinancial Corporate Preformance in the Neoliberal Era. In *Financialization and the World Economy*, edited by G. A. Epstein. Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 77-110.

Curcuru, Stephanie E. , Tomas Dvorak, and Francis E. Warnock. 2008. Cross-Border Returns Differentials. No. 13768. *NBER Working Paper Series* (February).

De Giorgi, Alessandro. 2006. *Re-Thinking the Political Economy of Punishment. Perspectives on Post-Fordist and Penal Politics*. Advances in Criminology. Aldershot: Ashgate.

De Giorgi, Alessandro. 2007. Toward a Political Economy of Post-Fordist Punishment. *Critical Criminology* 15 (3, September): 243-265.

Deeley, Robert. 2013. Commodity Prices & Political Risk. *Commodities Now*, December.

Di Muzio, Tim. 2015. *The 1% and the Rest of Us. A Political Economy of Dominant Ownership.* London: Zed Books.

Djilas, Milovan. 1957. *The New Class. An Analysis of the Communist System.* New York: Praeger.

Dobb, Maurice. 1946. [1963]. *Studies in the Development of Capitalism.* London: Routledge & Kegan Paul Ltd.

Dyer, Geoff, and Ed Crooks. 2014. Saudi Arabia Takes Calculated Gamble. *Financial Times*, October 17, pp. 5.

Eco, Umberto. 1983. *The Name of the Rose*. Translated from the Italian by William Weaver. 1st ed. San Diego: Harcourt Brace Jovanovich.

Elon, Amos. 1996. *Founder. A Portrait of the First Rothschild and His Time.* New York and London: Penguin Books.

Emmanuel, Arghiri. 1972. *Unequal Exchange. A Study of the Imperialism of Trade.* New York: Monthly Review Press.

Engels, Friedrich. 1966. *Herr Eugen Dühring's Revolution in Science (Anti-Dühring).* Translated by Emile Burns; Edited by C. P. Dutt. New York: International Publishers.

Engels, Friedrich. 1971. *The Condition of the Working Class in England*. Translated and edited by W. O. Henderson and W. H. Chaloner. 2nd ed. Oxford: Basil Blackwell.

Epstein, Gerald A., and Arjun Jayadev. 2005. The Rise of Rentier Incomes in OECD Countries: Financialization, Central Bank Policy and Labor Solidarity. In *Financialization and the World Economy*, edited by G. A. Epstein. Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 46-74.

Evans, Geoffrey. 1958. Ancient Mesopotamian Assemblies. *Journal of the American Oriental Society* 78 (1, Jan.-Mar.): 1-11.

Farrell, Diana, Susan Lund, Christian Fölster, Raphael Bick, Moira Pierce, and Charles Atkins. 2008. *Mapping Global Capital Markets. Fourth Annual Report*. January. San Francisco: McKinsey Global Institute.

Fisher, Irving. 1892. [1965]. *Mathematical Investigations in the Theory of Value and Price*. Appreciation and Interest, 1896. New York: A.M. Kelley.

Fisher, Irving. 1896. What is Capital? *The Economic Journal* 6 (24, December): 509-534.

Fix, Blair. 2015. *Rethinking Economic Growth Theory from a Biophysical Perspective.* New York: Springer.

Foster, John Bellamy, and Henryk Szlajfer, eds. 1984. *The Faltering Economy. The Problem of Accumulation Under Monopoly Capitalism*. New York: Monthly Review Press.

Francis, Joe, Shimshon Bichler, and Jonathan Nitzan. 2010. Imperialism and Financialism. An Exchange, London, Jerusalem and Montreal (January), pp. 1-29.

Francis, Joseph. 2013. The Buy-to-Build Indicator: New Estimates for Britain and the United States. *Review of Capital as Power* 1 (1): 63-72.

Frank, Andre Gunder. 1966. The Development of Underdevelopment. *Monthly Review* 18 (September).

Frank, Andre Gunder. 1967. *Capitalism and Underdevelopment in Latin America. Historical studies of Chile and Brazil.* New York: Monthly Review Press.

Frankfort, Henri. 1948. [1978]. *Kingship and the Gods. A Study of Ancient Near Eastern Religion as the Integration of Society & Nature*. Oriental Institute essay. With a new Preface by Samuel Noah Kramer. Chicago: University of Chicago Press.

Frankfort, Henri. 1951. *The Birth of Civilization in the Near East.* London: Williams & Norgate.

Frankfort, Henri, H. A. Groenewegen-Frankfort, John Albert Wilson, Thorkild Jacobsen, and William Andrew Irwin. 1946. *The Intellectual Adventure of Ancient Man. An Essay on Speculative Thought in the Ancient Near East.* Chicago: The University of Chicago press.

Gagnon, Marc Andre. 2009. *The Nature of Capital in the Knowledge-Based Economy: The Case of the Global Pharmaceutical Industry*. Unpublished PhD dissertation, Department of Political Science, York University.

Galeano, Eduardo H. 1973. *Open Veins of Latin America. Five Centuries of the Pillage of a Continent.* New York: Monthly Review Press.

Galilei, Galileo. 1632. [1953]. *Dialogue Concerning the Two Chief World Systems -- Ptolemaic & Copernican*. Forward by Albert Einstein. Translated by S. Drake. 2nd ed. Berkeley and London: University of California Press.

Gerstenberger, Heide. 2005. [2009]. *Impersonal Power. History and Theory of the Bourgeois State*. Translated by David Fernbach. Chicago: Haymarket Books.

Giammarioli, Nicola, Julian Messina, Thomas Steinberger, and Chiara Strozzi. 2002. European Labor Share Dynamics: An Institutional Perspective. EUI Working Paper ECO No. 2002/13, Department of Economics, European University Institute, Badia Fiesolana, San Domenico (FI).

Giles, Chris. 2013. Central Bankers Say They Are Flying Blind. *Financial Times*, April 17.

Giveon, Raphael. 1978. *The Stones of Sinai Speak.* Tokyo: Gakuseisha.

GlobeScan. 2012. Public Remains Concerned Over Wealth Inequalities: Global Pole.

Gold, David A. 1977. The Rise and Fall of the Keynesian Coalition. *Kapitalistate* 6 (1): 129-161.

Graves, Robert. 1944. *The Golden Fleece.* London and Toronto: Cassell and Company Ltd.

Graves, Robert. 1957. *The Greek Myths.* New York: G. Braziller.

Greenberg, David F., and Valerie West. 2001. State Prison Populations and Their Growth, 1971-1991. *Criminology* 39 (3): 615-654.

Griever, William L., Gary A. Lee, and Francis E. Warnock. 2001. The U.S. System for Measuring Cross-Border Investment in Securities: A Primer with a Discussion of Recent Developments. *Federal Reserve Bulletin* (October): 634-650.

Hager, Sandy Brian. 2012. Investment Bank Power and Neoliberal Regulation: From the Volcker Shock to the Volcker Rule. In *Neoliberalism in Crisis*, edited by H. Overbeek and B. van Apeldoorn. Basingstoke, UK: Palgrave Macmillan, pp. 68-92.

Hager, Sandy Brian. 2013a. *Public Debt, Ownership and Power: The Political Economy of Distribution and Redistribution*. Unpublished PhD Dissertation, Department of Political Science, York University.

Hager, Sandy Brian. 2013b. What Happened to the Bondholding Class? Public Debt, Power and the Top One Per Cent. *New Political Economy*: 1-28, published electronically on April 16.

Hanifan, Lyda Judson. 1916. The Rural School Community Center. *Annals of the American Academi of Political and Social Science* (67): 130-138.

Harcourt, Geoffrey C. 1969. Some Cambridge Controversies in the Theory of Capital. *Journal of Economic Literature* 7 (2): 369-405.

Harcourt, Geoffrey C. 1972. *Some Cambridge Controversies in the Theory of Capital.* Cambridge: Cambridge University Press.

Harris, Robert. 2012. *The Fear Index.* New York: Alfred A. Knopf.

Hegel, Georg Wilhelm Friedrich. 1807. [1971]. *The Phenomenology of Mind*. Translated with an introduction and notes by J. B. Baillie. 2nd Revised ed. London and New York: George Allen & Unwin and Humanities Press.

Heinrich, Erik. 2008. Opportunity Play. *Global Finance* 22 (3).

Hilferding, Rudolf. 1910. [1981]. *Finance Capital. A Study of the Latest Phase of Capitalist Development*. Edited with an Introduction by Tom Bottomore, from a Translation by Morris Watnick and Sam Gordon. London: Routledge & Kegan Paul.

Hilton, Rodney, ed. 1978. *The Transition from Feudalism to Capitalism*. Introduction by Rodney Hilton. London: Verso.

Hirst, Paul, and Grahame Thompson. 1999. *Globalization in Question. The International Economy and the Possibilities of Governance.* Cambridge: Polity Press.

Hobson, John A. 1894. *The Evolution of Modern Capitalism. A Study of Machine Production*: London: W. Scott and New York: C. Scribner's Sons.

Hobson, John A. 1902. [1965]. *Imperialism. A Study.* Ann Arbor: University of Michigan Press.

Hobson, John M. 2004. *The Eastern Origins of Western Civilisation.* Cambridge, UK and New York, USA: Cambridge University Press.

Hodgson, Geoffrey. 1997. The Fate of the Cambridge Capital Controversy. In *Capital Controversy, Post-Keynesian Economics and the History of Economic Thought. Essays in*

the Honour of Geoff Harcourt, Vol. 1, edited by P. Arestis, G. Palma and M. Sawyer. London and New York: Routledge.

Hoffman, Paul. 1998. *The Man who Loved Only Numbers. The Story of Paul Erdös and the Search for Mathematical Truth*. 1st ed. New York: Hyperion.

Houellebecq, Michel. 2000. *The Elementary Particles*. Translated from the French by Frank Wynne. New York: Knopf.

Houellebecq, Michel. 2005. *The Possibility of an Island*. Translated from the French by Gavin Bowd. 1st American ed. New York: Alfred A. Knopf.

Howard, Michael Charles, and J. E. King. 1992. *A History of Marxian Economics. Volume II, 1929-1990.* Princeton, N.J.: Princeton University Press.

Hoyos, Carla. 2006. OPEC Set to Defend $60 Global Minimum. *Financial Times*, October 20, pp. 1.

Hubbert, Marion King. 1956. Nuclear Energy and the Fossil Fuels. Paper presented before the Spring Meeting of the Southern District, Division of Production, American Petroleum Institute, Plozo Hotel, Son Antonio, Texas, March 7-9.

Hudson, Michael. 2010. From Marx to Goldman Sachs: The Fiction of Fictitious Capital, and the Financialization of Industry. *Critique* 38 (3): 419-444.

Hunt, E. K. 2002. *History of Economic Thought: A Critical Perspective*. 2nd, updated ed. Armonk, N.Y.: M.E. Sharpe.

Huxley, Aldous. 1962. *Island. A Novel*. 1st ed. New York: Harper.

Inverarity, James, and Daniel McCarthy. 1988. Punishment and Social Structure Revisited: Unemployment and Imprisonment in the United States, 1948-1984. *The Sociological Quarterly* 29 (2): 263-279.

Inverarity, James, and Daniel McCarthy. 1989. Institutional Responses to Unemployment:A Comparison of U.S. Trends, 1948-1985. *Contemporary Crises* 13: 351-370.

Jacobsen, Thorkild. 1943. Primitive Democracy in Ancient Mesopotamia. *Journal of Near Eastern Studies* 2 (3, July): 159-172.

Jammer, Max. 1957. *Concepts of Force. A Study in the Foundations of Dynamics.* Cambridge: Harvard University Press.

Jevons, Stanley W. 1871. [1970]. *The Theory of Political Economy*. Edited with an introduction by R. D. Collison Black. Harmondsworth, Middlesex, England: Penguin Books Ltd.

Kalecki, Michal. 1933. [1971]. The Determinants of Profits. In *Selected Essays on the Dynamics of the Capitalist Economy*, edited by M. Kalecki. Cambridge: Cambridge University Press, pp. 78-92.

Kalecki, Michal. 1939. [1971]. Determination of National Income and Consumption. In *Selected Essays on the Dynamics of the Capitalist Economy*, edited by M. Kalecki. Cambridge: Cambridge University Press, pp. 93-104.

Kalecki, Michal. 1943. [1971]. Costs and Prices. In *Selected Essays on the Dynamics of the Capitalist Economy, 1933-1970*. Cambridge: Cambridge University Press, pp. 43-61.

Kalecki, Michal. 1964. [1972]. The Fascism of Our Times. In *The Last Phase in the Transformation of Capitalism*, edited by M. Kalecki. New York and London: Modern Reader, pp. 99-104.

Kalecki, Michal. 1967. [1972]. Vietnam and U.S. Big Business. In *The Last Phase in the Transformation of Capitalism*, edited by M. Kalecki. New York and London: Modern Reader, pp. 99-104.

Kautsky, Karl. 1914. [1970]. Ultra-Imperialism. Original German version published in 1914. *New Left Review* 59 (Jan/Feb): 41-46.

Kendrick, John W. 1968. A Brief History of National Income Accounts. In *The International Encyclopedia of the Social Sciences*, edited by D. Sills. New York: Crowell, Collier and Macmillan, pp. 19-33.

Kendrick, John W. 1970. The Historical Development of National Income Accounts. *History of Political Economy* 11: 284-315.

Kennedy, Paul M. 1987. *The Rise and Fall of the Great Powers.* New York, NY: Random House.

Kidron, Michael. 1974. *Capitalism and Theory.* London: Pluto Press.

Klare, Michael. 2005. The Failed Mission To Capture Iraqi Oil. *Information Clearing House*, September 22.

Kliman, Andrew, Shimshon Bichler, and Jonathan Nitzan. 2011. Systemic Crisis, Systemic Fear: An Exchange. Special Issue on 'Crisis'. *Journal of Critical Globalization Studies* (4, April): 61-118.

Koestler, Arthur. 1952. *Arrow in the Blue, An Autobiography.* London: Collins with H. Hamilton.

Koestler, Arthur. 1959. [1964]. *The Sleepwalkers. A History of Man's Changing Vision of the Universe*. With an Introduction by Herbert Buttrefield, M.A. London: Hutchinson of London.

Kramer, Samuel Noah. 1956. *From the Tablets of Sumer. Twenty-Five Firsts in Man's Recorded History.* Indian Hills, Colo.: Falcon's Wing Press.

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

Kurzweil, Ray. 2005. *The Singularity is Near. When Humans Transcend Biology.* New York: Viking.

Larsen, Peter Thal. 2009. Barclays' Mideast Investors Cash In After Six Months. *Financial Times*, June 2.

Lavoie, Marc, and Engelbert Stockhammer. 2013. Wage-Led Growth: Concepts, Theories and Policies. *ILO Conditions of Work and Employment Series* (41): 1-32.

Lefebvre, Henri. 1991. *The Production of Space*. Translated by Donald Nicholson-Smith. Oxford, UK and Cambridge, Mass.: Blackwell.

Lefebvre, Henri. 2003. *The Urban Revolution*. Translated by Robert Bononno. Foreword by Neil Smith. Minneapolis: University of Minnesota Press (originally published in French in 1970).

Lenin, Vladimir I. 1917. [1987]. Imperialism, The Highest State of Capitalism. In *Essential Works of Lenin. 'What Is to Be Done?' and Other Writings*. New York: Dover Publications, Inc., pp. 177-270.

Levitt, Steven D. 2004. Understanding Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six that Do Not. *Journal of Economic Perspectives* 18 (1, Winter): 163-190.

Liptak, Adam. 2012. Justices, 5-4, Tell California to Cut Prisoner Population. *The New York Times*, May 23.

London, Jack. 1905. *White Fang.* New York and London: The Macmillan company.

London, Jack. 1907. [1957]. *The Iron Heel.* New York: Hill and Wang.

Lopez, Robert Sabatino. 1967. *The Birth of Europe.* London: Phoenix House.

Lucas, Louise, and Ben McLannahan. 2014. Mixed Blessings for Japan as Drop in Crude Threatens to Hold Down Inflation. *Financial Times*, October 17, pp. 5.

Luxemburg, Rosa. 1913. [1951]. *The Accumulation of Capital*. With an Introduction by Joan Robinson. Translated by A. Schwarzschild. New Haven: Yale University Press.

Lynch, Michael J. 1988. The Extraction of Surplus Value, Crime and Punishment: A Preliminary Empirical Analysis for the U.S. *Contemporary Crises* (12): 351-370.

Lynch, Michael J. 1999. Beating a Dead Horse: Is There Any Basic Empirical Evidence for the Deterrent Effect of Imprisonment. *Crime, Law and Social Change* (31): 347-362.

Lynch, Michael J. 2010. Radical Explanations of Penal Trends: The Rate of Surplus Value and the Incarceration Rate in the U.S., 1977-2004. *Journal of Crime and Justice* 33 (2): 63-94.

Lynch, Michael J., and Raymond J. Michalowski. 2006. *Primer in Radical Criminology. Critical Perspectives on Crime, Power and Identity*. 4th ed. Monsey, N.Y.: Criminal Justice Press.

Machiavelli, Niccolò. 1532. [2003]. *The Prince and Other Writings*. Translated by W. A. Rebhorn. New York: Barnes & Noble Classics.

Mackey, Robert. 2011. The Economist Behind the Khmer Rouge. *The New York Times*, June 27.

Magdoff, Harry. 1969. *The Age of Imperialism. The Economics of U.S. Foreign Policy*. 1st Modern Reader ed. New York: Monthly Review Press.

Magdoff, Harry. 2003. *Imperialism Without Colonies.* New York: Monthly Review Press.

Magdoff, Harry, and Paul M. Sweezy. 1983a. [1987]. Production and Finance. In *Stagnation and the Financial Explosion*, edited by H. Magdoff and P. M. Sweezy. New York: Monthly Review Press, pp. 93-105.

Magdoff, Harry, and Paul M. Sweezy. 1983b. [1987]. *Stagnation and the Financial Explosion.* New York: Monthly Review Press.

Magdoff, Harry, and Paul M. Sweezy. 1985. [1987]. The Financial Explosion. In *Stagnation and the Financial Explosion*, edited by H. Magdoff and P. M. Sweezy. New York: Monthly Review Press, pp. 141-150.

Marcuse, Herbert. 1964. *One-Dimensional Man. Studies in the Ideology of Advanced Industrial Society.* Boston: Beacon Press.

Marshall, Alfred. 1920. *Principles of Economics. An Introductory Volume*. 8th ed. London: Macmillan.

Martin, Ulf. 2010. Rational Control and the Magma of Reality. Paper read at Eastern Economic Association Annual Conference, February 26-28, at Philadelphia.

Marx, Karl. 1859. [1971]. *A Contribution to the Critique of Political Economy*. With an Introduction by Maurice Dobb. London: Lawrence & Wishart.

Marx, Karl. 1867. [1906]. *Capital. A Critique of Political Economy. Vol. 1: The Process of Capitalist Production*. Translated From the Third German Edition, By Samuel Moore and Edward Aveling and Edited by Frederick Engels. Revised and Amplified According to the Fourth German Edition by Enrest Untermann. Chicago: Charles H. Kerr & Company.

Marx, Karl. 1909. *Capital. A Critique of Political Economy*. 3 vols. Chicago: Charles H. Kerr & Company.

Marx, Karl. 1963. On the Jewish Question. In *Karl Marx: Early Writings*, edited by T. B. Bottomore. New York, Toronto and London: McGraw-Hill Book Company, pp. 1-40.

Marx, Karl. 1973a. The Class Struggles in France: 1848 to 1850. In *Surveys from Exile. Karl Marx, Political Writings, Volume II*, edited by D. Fernbach. New York: Random House, pp. 35-142.

Marx, Karl. 1973b. The Eighteenth Bruaire of Louis Bonaparte. In *Surveys from Exile. Karl Marx, Political Writings, Volume II*, edited by D. Fernbach. New York: Random House, pp. 143-249.

Marx, Karl, and Frederick Engels. 1970. *The German Ideology*. Part One. With selections from Parts Two and Three, together with Marx's "Introduction to a Critique of Political Economy. Edited and with Introduction by C. J. Arthur. New York: International Publishers.

McEwan, Ian. 2010. *Solar. A Novel.* 1st U.S. ed. New York: Nan A. Talese/Doubleday.

McMahon, James. 2013. The Rise of a Confident Hollywood: Risk and the Capitalization of Cinema. *Review of Capital as Power* 1 (1): 23-40.

Meiksins Wood, Ellen. 2003. *Empire of Capital.* London and New York: Verso.

Melman, Seymour. 1970. *Pentagon Capitalism. The Political Economy of War*. 1st ed. New York: McGraw-Hill.

Melman, Seymour. 1974. *The Permanent War Economy. American Capitalism in Decline.* New York: Simon and Schuster.

Melossi, Dario. 2003. A New Edition of *Punishment and Social Structure* Thirty-Five Years Later: A Timely Event. *Social Justice* 30 (1, Spring): 248-263.

Michalowski, Raymond J., and Susan M. Carlson. 1999. Unemployment, Imprisonment, and Social Structures of Accumulation: Historical Contingency in the Rusche-Kirchheimer Hypothesis. *Criminology* 37 (2, May): 217-250.

Michalowski, Raymond J., and Susan M. Carlson. 2000. Crime, Punishment, and Social Structures of Accumulation: Toward a New and Much Needed Political-Economy of Justice. *Journal of Contemporary Criminal Justice* 16 (3, August): 272-292.

Michalowski, Raymond J., and Michael A. Pearson. 1990. Punishment and Social Structures at the State Level: A Cross Sectional Comparison of 1970 and 1980. *Journal of Research in Crime and Delinquency* 27 (1, February): 52-78.

Mumford, Lewis. 1934. *Technics and Civilization.* New York: Harcourt Brace and Company.

Mumford, Lewis. 1961. *The City in History. Its Origins, Its Transformations, and Its Prospects*. 1st ed. New York: Harcourt Brace & World.

Mumford, Lewis. 1967. *The Myth of the Machine. Technics and Human Development.* New York: Harcourt, Brace & World, Inc.

Mumford, Lewis. 1970. *The Myth of the Machine. The Pentagon of Power.* New York: Harcourt, Brace Jovanovich, Inc.

Naveh, Joseph. 1987. *Early History of the Alphabet. An Introduction to West Semitic Epigraphy and Palaeography*. 2nd rev. ed. Jerusalem: Magnes Press Hebrew University.

Nitzan, Jonathan. 1989. Price and Quantity Measurements: Theoretical Biases in Empirical Procedures. Working Paper 14/1989, Department of Economics, McGill University, Montreal, pp. 1-24.

Nitzan, Jonathan. 1992. Inflation as Restructuring. A Theoretical and Empirical Account of the U.S. Experience. Unpublished PhD Dissertation, Department of Economics, McGill University, Montreal.

Nitzan, Jonathan. 2001. Regimes of Differential Accumulation: Mergers, Stagflation and the Logic of Globalization. *Review of International Political Economy* 8 (2): 226-274.

Nitzan, Jonathan, and Shimshon Bichler. 1995. Bringing Capital Accumulation Back In: The Weapondollar-Petrodollar Coalition -- Military Contractors, Oil Companies and Middle-East "Energy Conflicts". *Review of International Political Economy* 2 (3): 446-515.

Nitzan, Jonathan, and Shimshon Bichler. 2000. Inflation and Accumulation: The Case of Israel. *Science & Society* 64 (3): 274-309.

Nitzan, Jonathan, and Shimshon Bichler. 2001. Going Global: Differential Accumulation and the Great U-turn in South Africa and Israel. *Review of Radical Political Economics* 33: 21-55.

Nitzan, Jonathan, and Shimshon Bichler. 2002. *The Global Political Economy of Israel.* London: Pluto Press.

Nitzan, Jonathan, and Shimshon Bichler. 2003. It's All About Oil. *News From Within* XIX (1, January): 8-11.

Nitzan, Jonathan, and Shimshon Bichler. 2004. Clash of Civilization, or Capital Accumulation? *News From Within* XX (3, June-July): 4-6.

Nitzan, Jonathan, and Shimshon Bichler. 2005. The Scientist and the Church, Monograph. Montreal and Jerusalem (July), pp. 1-48.

Nitzan, Jonathan, and Shimshon Bichler. 2006a. Cheap Wars. *Tikkun*, August, 9.

Nitzan, Jonathan, and Shimshon Bichler. 2006b. New Imperialism or New Capitalism? *Review* XXIX (1, April): 1-86.

Nitzan, Jonathan, and Shimshon Bichler. 2007. *War Profits, Peace Dividends*. Hebrew. 2nd Expanded and Revised ed. Haifa: Pardes.

Nitzan, Jonathan, and Shimshon Bichler. 2009a. *Capital as Power. A Study of Order and Creorder*. RIPE Series in Global Political Economy. New York and London: Routledge.

Nitzan, Jonathan, and Shimshon Bichler. 2009b. Contours of Crisis III: Systemic Fear and Forward-Looking Finance. *Dollars & Sense*, June 12.

Nitzan, Jonathan, and Shimshon Bichler. 2014a. Can Capitalists Afford Recovery? Three Views on Economic Policy in Times of Crisis. *Review of Capital as Power* 1 (1): 110-155.

Nitzan, Jonathan, and Shimshon Bichler. 2014b. The Capitalist Algorithm. Reflections on Robert Harris' *The Fear Index*. *Real-World Economics Review* (67, May): 137-142.

Nitzan, Jonathan, Robin Rowley, and Shimshon Bichler. 1989. Changing Fortunes: Armaments and the U.S. Economy. Working Paper 8/89, Department of Economics, McGill University, Montreal, pp. 1-27.

OECD. 2001. *Measuring Capital. Measurement of Capital Stocks, Consumption of Fixed Capital and Capital Services*. OECD Manual. Paris: OECD Publication Services.

Orhangazi, Özgür. 2008. *Financialization and the US Economy*. Cheltenham, UK and Northampton, MA: Edward Elgar.

Orr, Akiva. 2000a. Autonarchy = Direct Democracy. n.p.: Self Published.

Orr, Akiva. 2000b. *Hevzekim (Flashes).* n.p.: Self Published.

Orr, Akiva. 2004. *From Protest to Revolution*. Hebrew. 2nd ed. n.p.: Self Published.

Orr, Akiva. 2010. *Alternative to a Psychotic State*. Hebrew. n.p.: Self Published.

Orr, Akiva. 2011. *Enlightening Disillusionment.* n.p.: Self Published.

Orr, Akiva. n.d.-a. *The Original Philosophy and the True Democracy*. Hebrew. n.p.: Self Published.

Orr, Akiva. n.d.-b. *Revolution, the D.I.Y Version (20th Century World Politics – and Their Consequences).* n.p.: Self Published.

Orr, Akiva, and Moshe Machover. 1961. [1999]. *Peace, Peace and No Peace*. in Hebrew. Jerusalem: Self Published.

Orr, Akiva, and Moshe Machover. 1999. *Peace, Peace and No Peace*. in Hebrew. 2nd ed. Jerusalem: Self published.

Orr, Akiva, and Moshe Machover. 2009. *Peace, Peace, When There Is No Peace (Israel and the Arabs 1948–1961)*. Translated by M. Marshall. n.p.: Self Published.

Orwell, George. 1936. [1999]. *Keep the Aspidistra Flying.* San Diego: Harcourt Brace.

Park, Hyeng-Joon. 2013. Dominant Capital and the Transformation of Korean Capitalism: From Cold War to Globalization. Unpublished PhD Dissertation, Department of Political Science, York University, Toronto.

Park, Hyeng-Joon. 2015 forthcoming. Korea's Post-1997 Restructuring: An Analysis of Capital as Power. *Review of Radical Political Economics*: 1-44.

Pfaff, John F. 2008. The Empirics of Prison Growth: A Critical Review and Path Forward. *The Journal of Criminal Law and Criminology (1973-)* 98 (2, Winter): 547-619.

Piketty, Thomas. 2014. *Capital in the Twenty-First Century*. Translated by Arthur Goldhammer. Cambridge, Mass and London, England: The Belknap Press of Harvard University Press.

Prebisch, Raúl. 1950. *The Economic Development of Latin America and its Principal Problems.* Lake Success, N.Y.: United Nations Dept. of Economic Affairs.

Quinney, Richard. 1980. *Class, State, & Crime*. 2nd ed. New York: Longman.

Rand, Ayn. 1966. *Capitalism. The Unknown Ideal.* New York: New American Library.

Rathbone, John Paul, Vivianne Rodrigues, and Andre Schipani. 2014. Oil Price Fall Sparks Venezuela Default Fears. *Financial Times*, pp. 5.

Retort. 2005. *Afflicted Powers. Capital and Spectacle in a New Age of War.* London and New York: Verso.

Robinson, Joan. 1953-54. The Production Function and the Theory of Capital. *Review of Economic Studies* 21 (2): 81-106.

Rostow, W. W. 1960. *The Stages of Economic Growth. A Non-Communist Manifesto.* Cambridge, England: Cambridge University Press.

Rowley, Robin, Shimshon Bichler, and Jonathan Nitzan. 1989. The Armadollar-Petrodollar Coalition and the Middle East. Working Paper 10/89, Department of Economics, McGill University, Montreal, pp. 1-54.

Rusche, Georg. 1933. [1978]. Labor Market and Penal Sanction: Thoughts on the Sociology of Criminal Justice. Translated by Gerda Dinwiddie. *Crime and Social Justice* 10, Fall-Winter.

Rusche, Georg, and Otto Kirchheimer. 1939. [2003]. *Punishment and Social Structure*. With a new introduction by Dario Melossi. New Brunswick, NJ: Transaction Publishers.

Samphan, Khieu. 1976. Underdevelopment in Cambodia. *Indochina Chronicle* (September-November): 1-28.

Samuelson, Paul A. 1938. A Note on the Pure Theory of Consumer's Behaviour. *Economica* 5 (17, February): 61-71.

Schneider, Dorothee. 2011. The Labor Share: A Review of Theory and Evidence. Discussion Paper 2011-069. *SFB 649 "Economic Risk"*: 1-38.

Schumpeter, Joseph A. 1919. [1955]. *Imperialism and Social Classes*. Introduction by Bert Hoselitz, Translated by Heinz Norden. New York: Meridian Books.

Senior, Nassau. 1836. [1938]. *An Outline of the Science of Political Economy.* London: Allen & Unwin.

Shaikh, Anwar M. 1978. An Introduction to the History of Crisis Theories. In *Capitalism in Crisis*: The Union for Radical Political Economics, pp. 219-241.

So, Alvin Y. 1990. *Social Change and Development. Modernization, Dependency, and World-Systems Theory*. Sage Library of Social Research, Vol. 178. Newbury Park, Calif.: Sage Publications.

Solzhenitsyn, Aleksandr Isaevich. 1968. *Cancer Ward*. Translated from the Russian by Nicholas Bethell and David Burg. London and Sydney: Bodley Head.

Solzhenitsyn, Aleksandr Isaevich. 1974. *The Gulag Archipelago, 1918-1956. An Experiment in Literary Investigation*. 1st Perennial Library ed. 3 vols. New York: Harper & Row.

Spencer, Herbert. 1904. *An Autobiography.* New York: D. Appleton.

Sraffa, Piero. 1960. *Production of Commodities by Means of Commodities. Prelude to a Critique of Economic Theory.* Cambridge: Cambridge University Press.

Steindl, Josef. 1952. [1976]. *Maturity and Stagnation in American Capitalism.* New York: Monthly Review Press.

Sumner, William Graham. 1920. *What Social Classes Owe to Each Other*. With an introduction by Albert Galloway Keller. New York: Harper & Brothers.

Sumner, William Graham. 1963. *Social Darwinism. Selected Essays*. With an Introduction by Stow Persons. Englewood Cliffs, N.J.: Prentice-Hall.

Supreme Court of the United States. 2011. *Edmund G. Brown, Jr., Governor of California, et al., Appellants v. Marciano Plata et al.* 563 U. S._ (2011). On Appeal from the United States District Courts for the Eastern Distric and the Northern District of California, May 23. .

Sweezy, Paul M. 1942. *The Theory of Capitalist Development. Principles of Marxian Political Economy.* New York and London: Modern Reader Paperbacks.

Sweezy, Paul M. 1950. [1978]. A Critique. In *The Transition from Feudalism to Capitalism. Introduction by Rodney Hilton*, edited by R. Hilton. London: Verso.

Sweezy, Paul M. 1974. Monopoly Capital and the Theory of Value. *Monthly Review* 25 (January): 31-32.

Sweezy, Paul M. 1991. Monopoly Capital After Twenty-Five Years. *Monthly Review* 43 (7): 52-57.

Tilly, Charles. 1992. *Coercion, Capital, and European States, AD 990-1992*. Revised paperback ed, *Studies in Social Discontinuity.* Cambridge, MA: Blackwell.

Trigger, Bruce G. 2003. *Understanding Early Civilizations. A Comparative Study.* Cambridge and New York: Cambridge University Press.

Tsuru, Shigeto. 1956. Has Capitalism Changed? In *Has Capitalism Changed? An International Symposium on the Nature of Contemporary Capitalism*, edited by S. Tsuru. Tokyo: Iwanami Shoten, pp. 1-66.

Tuchman, Barbara Wertheim. 1962. *The Guns of August.* New York: Macmillan.

Tuchman, Barbara Wertheim. 1966. *The Proud Tower. A Portrait of the World Before the War, 1890-1914.* New York: Macmillan.

Turner, Louis. 1983. *Oil Companies in the International System*. 3rd ed. London and Winchester, Mass., USA: Royal Institute of International Affairs and Allen & Unwin.

U.S. Department of Justice. Federal Bureau of Investigation. Uniform Crime Reporting Statistics. UCR Offense Definitions.

United States, National Security Council. 1950. *NSC 68: United States Objectives and Programs for National Security. A Report to the President Pursuant to the President's Directive of January 31, 1950. Top Secret.* Washington DC.

van Treeck, Till, and Simon Sturn. 2012. Income Inequality as a Cause of the Great Recession? A Survey of Current Debates. *ILO Conditions of Work and Employment Series* (39): 1-93.

Veblen, Thorstein. 1898. [1934]. The Beginning of Ownership. In *Essays in Our Changing Order*, edited by L. Ardzrooni. New York: The Viking Press, pp. 32-49.

Veblen, Thorstein. 1904. [1975]. *The Theory of Business Enterprise.* Clifton, New Jersey: Augustus M. Kelley, Reprints of Economics Classics.

Veblen, Thorstein. 1915. [1966]. *Imperial Germany and the Industrial Revolution*. Introduction by Joseph Dorfman. Ann Arbor: The University of Michigan Press.

Veblen, Thorstein. 1919. [1964]. *The Place of Science in Modern Civilisation and Other Essays.* New York: Russell & Russell.

Veblen, Thorstein. 1923. [1967]. *Absentee Ownership and Business Enterprise in Recent Times. The Case of America*. With an introduction by Robert Leckachman. Boston: Beacon Press.

Wallerstein, Immanuel Maurice. 1974. *The Modern World-System. Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. Studies in Social Discontinuity. New York: Academic Press.

Wallerstein, Immanuel Maurice. 1980. *The Modern World-System II. Mercantilism and the Consolidation of the European World-Economy, 1600-1750*. Studies in Social Discontinuity. New York: Academic Press.

Wallerstein, Immanuel Maurice. 1984. *The Politics of the World-Economy. The States, the Movements, and the Civilizations.* Cambridge, New York and Paris: Cambridge University Press and Editions de la Maison des sciences de l'homme.

Wallich, Henry C. 1984. Why is Net International Investment So Small? In *International Capital Movements, Debt and Monetary System*, edited by W. Engles, A. Gutowski and H. C. Wallich. Mainz: v. Hase & Koehler, pp. 417-437.

White, James R. 2008. International Taxation. Large U.S. Corporations and Federal Contractors with Subsidiaries in Jurisdictions Listed as Tax Havens or Financial Privacy Jurisdiction. Washington D.C.: United States Government Accountability Office.

Yergin, Daniel. 2014. A Surge of Oil That Keeps Prices Low Even as Fears Run High. *Financial Times*, October 18-19, pp. 9.