Virtue, Fortune and Faith:

A Genealogy of Finance

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Abstract

International finance is often understood to be a rational practice, taking place within an autonomous, coherent and clearly bounded structure. This thesis questions the naturalness implied by such understandings of the international financial system. It argues that the contingencies and ambiguities of financial history have been largely written out of the discipline of International Political Economy (IPE) in general and the study of international finance in particular.

The thesis presents a detailed account of the conceptual histories that enable us to think of a domain called finance. It does so in terms of a 'genealogy,' the concept offered by French philosopher Michel Foucault to denote a historical study that resists being a linear and frictionless account of the emergence of modern practices.

A genealogy of finance discusses the contingent emergence of financial thought, thus arguing that no logical or evolutionary trajectory for the development of financial rationality was implicit in history or human nature. The thesis analyses a range of archival materials debating the emerging financial sphere in London and New York, beginning with the birth of the credit economy in seventeenth-century England and proceeding into the 1990s. The analysis looks at political contestations over understandings of time and money, the gendered discourse of credit and credibility, the proper meaning of the free market, understandings of financial crisis, the morality of speculation, the differences between gambling and finance, and the imagination of finance as a rational and scientific practice. The thesis emphasises how these political controversies assume, invoke and debate a subject called 'financial man.'

The debates analysed in this thesis have shaped the regulatory and institutional structures of modern international finance. In an era when financial practices are closed off from democratic politics through the assertion that finance is too specialist for broad-based public debate, the exposure of contingencies and ambiguities in financial practices must be regarded as a political critique.

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> 'Lo, the beast with the pointed tail that passes mountains and breaks through walls and arms! Lo, he that infects all the world!' Thus my Leader began to speak to me... and that foul image of fraud came... His face was the face of a just man so gracious was its outward aspect, and all the rest was a serpent's trunk; he had two paws, hairy to the armpits, and the back and breast and both the flanks were painted with knots and circles. (...)
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> So I went by myself still farther along the extreme edge of that seventh circle to where the unhappy folk were seated. Through the eyes their pain was bursting forth; on one side and the other they defended themselves with their hands, sometimes from the flames, sometimes from the burning soil, like dogs in the summer that ply, now snout, now paw, when they are bitten by fleas or gnats or gad-flies... I observed that from the neck of each hung a pouch of a certain colour and device, and on these they seemed to feast their eyes. And when I came among them, looking about, I saw, azure on a yellow purse, the face on form of a lion; then, continuing my inspection, I saw another, blood-red, which showed a goose whiter than butter.
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> Dante Alighieri [1314][1]

This thesis discusses the development of a modern financial rationality. Dante's description of the moneylenders in the seventh circle of hell with pouches of money around their necks, decorated with the arms of wealthy Florentine and Paduan families, and under the rule of Geryon, the monster of fraud, makes clear the profound cultural, moral, religious and political transformations necessary for modern financial instruments and institutions to emerge as morally justified and socially beneficial. To Dante, the moneylenders, while appearing behind a just and gracious face, were corrupt and evil by nature. Their practices were contemptible and unnatural, for fraud, in Dante's poem, "is the deliberate use of the distinctively human powers for inhuman ends" (Sinclair 1975:222).

This thesis discusses some of the moral, religious and political transformations which have slowly made the domain of 'finance' a legitimate and, above all, a *natural* practice. These moral and

[1] *The Divine Comedy: Inferno*, translated by John D. Sinclair, 1975 [1939], Oxford: Oxford University Press, pp.215-217.

political transformations should not be seen as secondary to, or separate from, the emergence of material financial networks, but are at the heart of the ways in which modern finance has taken shape. The discussions examined in this thesis have determined the legal, political and moral spaces in which modern finance operates.

There are a number of important works which have documented the conceptual and cultural transformations that are at the basis of modern capitalism. The following books have been of particular influence on my project, and have helped me formulate my main ideas: Lorraine Daston's *Classical Probability in the Enlightenment* (1988); Ann Vincent Fabian's *Card Sharps and Bucket Shops: Gambling in Nineteenth-Century America*, first published in 1990; J.G.A. Pocock's *The Machiavellian Moment: Florentine Political Thought and the Atlantic Republican Tradition* (1975); and Mary Poovey's *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (1998).

The object of inquiry in the following pages, however, departs from these books in two main respects. First, whereas these studies are first and foremost historical enquiries, my aim has been to pull the historical discussions concerning the legitimacy of finance into the present. In other words, I have emphasised that the conceptual and moral struggles and debates documented were not historical aberrations or temporary hurdles on the path to modern finance, but remain unresolved and politically relevant today.

Second, my purpose has been to pull the literatures on the conceptual histories of contemporary capitalism into the disciplinary domains of International Relations and International Political Economy in particular. I will argue that political economy limits its own scope for criticism of contemporary financial practices when failing to take into account the history of economic and financial ideas. These conceptual and political histories have shaped the regulatory and institutional structures of modern international finance, and can thus serve as a basis for critique of the present. In an era when financial practices are closed off from democratic politics through the assertion that finance is too specialist for broad-based public debate, the

exposure of contingencies and ambiguities in financial rationality must be regarded as a form of political critique in itself.

This project has travelled a long way since its first insecure steps at the Research Centre for International Political Economy (RECIPE) at the University of Amsterdam in 1997. I am grateful, first of all, to the funding bodies that have made this project possible. These were, in 1997-1998 the Netherlands-America Commission for Educational Exchange (NACEE), the Netherlands-America Foundation (NAF), and the New School Vera List Foundation, who provided the resources for my stay at the New School for Social Research in New York. During 1998-1999, the Prins Bernhard Fonds, the Stichting Doctor Catharine van Tussenbroek Fonds, and the Fundatie van de Vrijvrouwe van Renswoude enabled me to take up my PhD position at the University of Newcastle upon Tyne. I would like to thank the University of Newcastle upon Tyne for a three-year tuition waiver. Grants for my archival research have been forthcoming from the British International Studies Association (BISA) postgraduate research fund and from the International Federation of University Women (IFUW) in Geneva. Finally, I am grateful to the British Council Chevening Scholarship Programme, which has generously supported this project since October 1999.

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Without Marianne Marchand's enthusiastic support during my time at RECIPE this project might have never come off the ground. I wish to thank her for her support and guidance. While at the New School, Eli Zaretsky and the participants of the 1997-1998 Culture /

Knowledge Pro-Seminar contributed meticulous readings of the earliest drafts of this project. Eli's enthusiasm and encouragement enabled me to formulate some of the core ideas of this thesis. I am grateful to Bastiaan van Apeldoorn and Alex Betancourt for comments on various draft chapters of this thesis. I would like to thank the Department of Politics at the University of Newcastle for intellectual as well as secretarial support over the last three years. In particular, Simon Caney, Tim Gray and Chris Potter have read parts of this project and offered helpful critiques. Martin Coward has meticulously read all the chapters in some form or another, and has offered many ideas during discussions which have slowly been absorbed into this project. I thank him for being a good colleague and friend. Erna Rijsdijk has been my intellectual soulmate during our common fate in Newcastle, as well as an excellent friend. Erna has contributed readings, critiques and ideas to this project. Randall Germain has read all these chapters and offered good suggestions and enthusiastic support. Randall has generously shared his academic insights and experience with me. I am thankful to David Campbell, whose enthusiastic commitment to this project has given it direction and drive. I have much enjoyed the cooperation with David, who has been an excellent supervisor and mentor. I am happy to have experienced the regular meetings of the 'happy philosophy' reading group, which have included Christiane Miller and Mika Luoma-Aho, as well Erna, Martin and David. These meetings have helped me come to grips with what have become the core ideas of this thesis.

I am grateful to my friends, Danielle Freriks, Elke Veldkamp and Liedwien Wit, and my bother, Jeroen de Goede, who have all supported my decision to live abroad and enthusiastically travelled to visit me during these years. I wish to thank my parents, Meu and Cyrano de Goede, who have encouraged me to pursue my curiosity and have supported this project without a moment's doubt. Gunther Irmer has contributed to this project in many ways, and has made me believe that there was more than one purpose for coming to Newcastle.

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INTRODUCTION

What is Value?

Figure 1: J.S.G. Boggs 'Fun Buck,' http://www.jsgboggs.com/

Money as Performance

In November 1987, the American artist J.S.G. Boggs was ordered to appear before London's Central Criminal Court (also known as the Old Bailey) in order to face charges under the 1981 Forgery and Counterfeiting Act, brought against him by the Bank of England. Boggs was not charged with forgery nor with counterfeiting, but with reproducing British banknotes without consent of the Bank of England. Although the artist had attempted to obtain written permission from the Bank to produce artistic images freely based on the design of the British currency on two occasions, such permission had been denied. This denial was affirmed even after Boggs had provided the Bank's governor with slides of his work, pleading that "this was an unusual case but insisting that [it] was a serious artistic endeavour deserving of serious attention" (Boggs quoted in Wenschler 1999:73). The Bank did take the matter seriously, and just before the opening of a London exhibition around the theme of money in a small gallery, three detectives of Scotland

Yard arrested Boggs and confiscated his artworks. Boggs was questioned and released in the care of his solicitor, in anticipation of the trial at the Old Bailey.

Boggs had begun his performance art around the themes of money and value about five years earlier, when a waitress in a Chicago diner accepted an impromptu drawing of a dollar bill as a payment for coffee, and insisted on giving him the change he was due. "This," Boggs later recalled to *New Yorker* journalist Lawrence Wenschler (1999:17), "set me to thinking: what was it that she valued so much? Was it the way the drawing mimicked a regular dollar bill? or the fact that she'd sat and watched me do all the work?" The encounter led Boggs to do a series of experiments in which he 'spent' drawings of banknotes (including British, Swiss, American and Australian ones) and insisted on receiving both receipts and appropriate change for the transaction. For Boggs, all the different components of the economic transaction together (the drawing of the bill, change, receipt, items bought) form the artworks, which are increasingly sought after by art collectors. Boggs never sells his painted banknotes directly, although they now regularly fetch ten times their face value. Nor does Boggs ever mislead his accomplices in these economic transactions: he makes it perfectly clear that the banknote drawings are artworks and not actual banknotes, and that the receiver is taking a risk or a gamble in accepting them. In spite of encountering anything from scepticism to outright hostility in attempting to spend his drawings, Boggs estimated that by the time of the trial in the Old Bailey he had spent around US$100,000 in his own currency.

This intersection of art and money that allows Boggs to (sometimes) spend his drawings, but is perceived as a profound threat by the Bank of England, raises a number of questions concerning the nature of value that are, as I will argue, highly pertinent to understanding the international economy today. Boggs's transactions provoke a moment of thought in naturalised economic practices; they are "brief, momentary tears in the ordinarily seamless fabric of taken-for-granted mundanity" (Wenschler 1999:49). Thus Boggs disturbs the ordinary functioning of money, which depends on the prior forgetting of the controversial and contestable nature of its

value. "Money works best," the sociologists Carruthers and Babb (1996:1556) observe in their study of late nineteenth-century US monetary debates, "when it can be taken for granted, when its value, negotiability, and neutrality can be simply assumed." Boggs's performances force to the surface these forgotten negotiations necessary for the smooth functioning of money. They force economic participants to consider a number of questions, beginning with what Wenschler (1999:23) describes as "small perturbations," but expanding into "true tremblors": "What is art? What is money? What is the one worth? What the other? What is *worth* worth? How does value itself arise, and live, and gutter out?" (emphasis in original).

This project coincides with Boggs's questions by enquiring into the historical, discursive, constitution of modern financial values. It discusses how present financial instruments and entitlements are legitimised through a financial rationality such that they are taken as natural reality. As Nigel Thrift (1996:13) argues, current debates on the world economy are all too often founded on a "discourse of transcendental rationality, on a notion of a single, correct, God's eye view of reason which transcends the way human beings... think, and which imparts the idea of a world that is centrally organised [and] rigidly bounded." In contrast to the discourse of transcendental rationality, this project considers economic and financial discourses as historically contingent and dependent upon practices of valuation that are historically situated. As Michael Shapiro (1997:60) puts it, by considering "valuing... [as] a radically contingent, spatio-temporally delimited practice, not a process of discovering stable features of... the world,... we can engage in inquiry as to how 'value' arises from historically situated human actions and involvements."

This thesis will argue that money-flows, capital and financial contracts are not unmediated economic realities which can be taken as a starting point to academic enquiry, but have been made possible through contested historical articulations and practices of valuation. International Political Economy (IPE) as a field of inquiry currently fails to address the questions raised by Boggs's performances and expressed in Shapiro's argument on the contingency of value. In other words, most authors in IPE take the existence and value of money, credit and other financial

instruments to be stable features of the world which form the material starting-points to their inquiries, and fail to address the ways in which financial values and priorities are constituted historically. IPE's uncritical acceptance of the categories and containers of value offered by the financial industry limits its scope for criticism of financial practices. While many authors in IPE, as I will argue in the next chapter, offer important criticisms of the era of liberalised finance, they accept that there is a profound division between art and money, value and rationality, and politics and economics. This thesis will argue instead that economic and financial practices are firmly rooted in cultural, moral, political and religious history, and that current economic valuations and priorities are rendered possible through these cultural histories. The purpose of this project is to criticise priorities of value that are entrenched in the modern economy, and which have been depoliticised by the technical and rational appearance of financial practices.

The remainder of this introduction will offer a number of examples which demonstrate the problematic nature of economic and financial values and valuation, before setting out the contours of the argument to follow. The historical and contemporary examples offered in this introduction show that monetary values and instruments cannot be taken as stable features or unproblematic starting-points to enquiry in political economy. The next chapter will offer a review of IPE literature, and will suggest that a 'genealogy of finance' addresses political questions concerning value and valuation that are currently muted in the study of political economy in general and international finance in particular.

Practices of Valuation

The mystical value of paper money has been a topic of public debate and political struggle on many occasions before the circulation of Western currencies became taken for granted, to be disturbed only by rare occurrences such as Boggs's performances. For example, in his *Structures of Everyday Life*, Fernand Braudel (1981:468) documents how during the siege of Tournay in 1745

lack of money made it difficult to pay the soldiers, whereupon "someone thought of borrowing 7000 florins from the canteens. It was all there was in them. By the end of the week, the seven thousand florins had returned to the canteens from which the same sum was once more borrowed. This was then repeated seven weeks until the surrender, so that the same seven thousand florins had the effect of forty-nine thousand." The alchemy-like qualities of credit puzzled and mystified those who came in contact with it during the slow emergence of paper money in seventeenth- and eighteenth-century Western Europe. As Braudel (1981:436-478) argues, credit and paper money caused disruptions in the structures of everyday life, sharp variations in prices, and forced breaks with custom and tradition. This was particularly so for bills of exchange and bookkeeping money, types of "money which [were] not money at all, and this juggling of money and bookkeeping to a point where the two became confused, seemed not only complicated but diabolical" (Braudel 1981:471). As I will show in subsequent chapters, the alliance between money and the devil has appeared many times in the Western imagination, and remained politically important long after Dante's depiction of the moneylenders in the seventh circle of hell. Braudel's point to be stressed here is that the introduction of credit, paper money, and other modern monetary instruments was not a smooth or evolutionary process but a controversial, contingent and ambiguous transformation, firmly rooted in cultural history.

One important public debate organised around the question what value is and how it should be embodied in a money-economy, questions rearticulated by but long preceding Boggs's performances, was the US greenback debate which took place between the end of the civil war and the return to the goldstandard in 1879. Greenbacks were the first paper banknotes that were not redeemable in gold or silver, and were issued by the Union States in order to finance military expenses during the civil war. By the end of the civil war, an estimated US$450 million was circulating in greenbacks, and a political debate ensued over the question whether these should be made redeemable in gold or silver specie. This was a truly public debate, in contrast with present disputes around money and finance which are often technical and depoliticised. "Defining

American currency," sociologist Viviana Zelizer (1994:14) writes, "became one of the most explosive political and social issues of the late nineteenth century." On one side of the debate were 'gold-bugs,' who argued that irredeemable paper money was socially and morally unacceptable, and that gold was the natural embodiment of monetary value. Gold was argued to possess intrinsic value independent of authority and legislation and "the fact that gold and silver were mined out of the ground, coming from nature itself," bolstered this argument (Carruthers and Babb 1996:1567; also O'Malley 1994:380). On the other side were the 'greenbackers,' who argued that the creation of fiduciary money was part of the natural progress of economic civilisation and therefore morally acceptable (Carruthers and Babb 1996:1571). Although the dividing lines in the greenback debate can partly be attributed to social hierarchies, because bankers, financiers and other creditors stood to loose most from the inflation caused by circulation of greenbacks (Frieden 1997:218-222), the debate is not simply reducible to calculating economic interests. The very definitions of economic interests were being contested, and were driven by "conflicting conceptions of both money and the economy" (Carruthers and Babb 1996:1566).

The US greenback debate illustrates not just that the value of money is politically contestable, but also that cultural, moral and social arguments are inseparable from economic ones, a feat often overlooked by political-economic explanations of the gold standard (f.i. Frieden 1997; Livingston 1986:71-125). On the occasion of the first issuance of greenbacks in 1862, Representative George Pendleton protested: "You send these notes out into the world stamped with irredeemability. You put on them the mark of Cain, and, like Cain, they will go forth to be vagabonds and fugitives of the earth" (quoted in Shell 1982:7). US resistance to paper money lamented the ghost-like and diabolical properties of it. This was exacerbated by the widespread existence not just of counterfeit notes, but also of 'phantom notes,' issued by non-existent banks (Shell 1982:5-8). One image supporting the gold-bugs, drawn by the famous political cartoonist Thomas Nast,[1] depicted the inflation caused by paper money as a rag-baby (Figure 2). Another

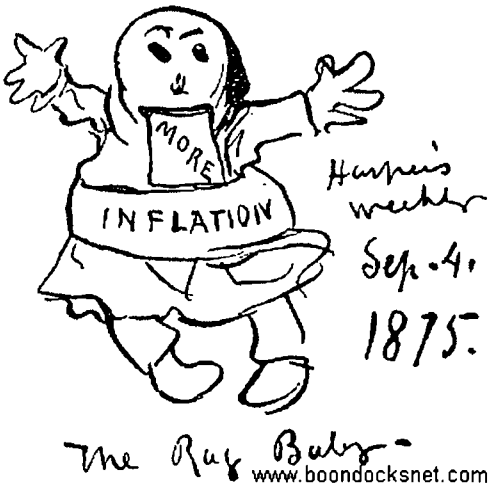

Figure 2: Thomas Nast 'The Rag Baby'

First published in *Harper's Weekly*, September 4, 1875

Available from: http://www.boondocksnet/gallery/nast750904.html

cartoon by Nast, titled 'Milk Tickets for Babies, in Place of Milk' and published in 1876, depicts the same rag-baby being fed a piece of paper on which is written: "this is MILK by Act of Congress." On the wall behind the baby is written "this is not a rag-baby but a REAL baby by Act of Congress." On a picture of a cow, pasted to the wall behind the rag-baby, Nast wrote: "this is a COW by act of the artist," and on a picture of a house, Nast wrote "this is a house and a lot, by act of the architect" (quoted in Shell 1982:6, 220).

Nast's images captured the anxiety of gold-bugs over the fictitious creation of monetary value. Paper money, they maintained, was *real* when it could be redeemed for gold or silver at the bank, and deceitful when it could not. "If we shall once get the thought fairly and fully into our minds of the difference between a thing and the representative of a thing we will be comparatively safe," said gold supporter General Garfield in a speech before the 'Honest Money League' in 1879 (quoted in Carruthers and Babb 1996:1568).

The construction of difference between real value embodied by gold and the false promise of paper money was created and contested in webs of meanings overflowing what is commonly understood to be the economic domain. Michael O'Malley (1994) argues that the greenback debate (on 'specie') was thoroughly intertwined with late nineteenth-century debates on race (or 'species') which similarly appealed to a true and natural hierarchy of values. The articulation of the essential value of gold and silver by appeal to a natural order paralleled the articulation of the

essential character of races. "If money's value was intrinsic, governed like the value of gold by laws of nature rather than society," O'Malley (1994:377) argues, "then so, too, individuals had an intrinsic, inalienable character, governed by natural law." No act of legislation was able to alter the natural order of things, such arguments held, nor could formal equality for African-Americans "elevate or improve the physical, moral or intellectual condition of the negro," as one Senator put it in 1869. This Maryland Senator concluded: "We cannot legislate into them any fitness or qualifications which they do not now possess" (quoted in O'Malley 1994:378). Rather than arguing that all greenbackers supported racial equality while gold-bugs did not, O'Malley (1994:389) demonstrates that the discursive stability of both the categories of race and the categories of money depend upon "fantasies of intrinsicality that mirrored each other." In other words, the meanings of specie and species were generated through the larger context of late nineteenth-century scientific discourses and their appeals to natural laws (see also Campbell 1998a:116-119).

If the value of paper money is largely unquestioned today in Western economies, there are numerous other occasions which illustrate the contestable nature of the value of financial instruments, contracts and definitions. For instance, the current controversies over the proper valuation of internet stocks can be rethought in light of the questions posed by Boggs. Even before the 2001 crash of the Nasdaq index, the leading US stock market index dominated by internet and high-tech stock, the question how to value 'new-economy' stocks was widely debated.[2] In Britain, anxiety over proper stock valuation surged in March 2000, when nine companies from the technology and communication sectors joined the FTSE 100, displacing more traditional industries such as brewing and building. "It can be a struggle to value these new companies," one Merrill Lynch analyst was quoted in the *Financial Times*, "traditional measures mean nothing for such companies" (Targett 2000). Traditional guidelines for the determination of a "stock's intrinsic value" are not applicable to internet stocks, argued another economic analyst, "because they have no assets, earnings, or dividends, and precious little management or definite

prospects" (Martin 2000). Much of the debate has centred on the question whether the high valuation of internet stocks and the unprecedented rise in Nasdaq were rational or signs of widespread popular delusion.[3]

Like the US money debate a century earlier, the new-economy debate rallies around the articulation of natural laws and hierarchies. It assumes that stocks have an intrinsic value which can be discovered with the proper economic tools. For instance, when Nasdaq dropped in April 2000, *New York Times* economic analyst Gretchen Morgenson wrote: "The Nasdaq composite surrendered to the force of gravity last week, falling 7.9 percent." She concluded, "the laws of physics apply to new-economy stocks after all" (Morgenson 2000). The new-economy debates do not just attempt to stabilise the meaning and the value of the 'new' stocks, but also provide discursive stability for the valuation of more 'traditional' stocks, which was never as consensual and fixed as is now implied. Subsequent chapters will discuss how the articulation of contested economic value in terms of natural laws became historically possible and acceptable during the nineteenth century. Here, the importance of the new-economy debate to my argument is twofold.

First, the question of what value is, how it arises and how it is fixed in financial discourses is as pertinent to understanding the economy in the twenty-first century as it was to the late nineteenth-century US economy. The terms of debate have been displaced from contestations over paper money to contestations over stock valuation, but it is *not* the case that confusions over financial valuation simply arose from ignorance at the birth of a money economy to be progressively resolved in subsequent centuries. Second, the political content of the new-economy debate should be emphasised, as the discursive fixing of the nature and origins of value benefits some groups over others, even if the debate is not simply reducible to competing economic interests. Similar to the greenback debate, the new-economy debate entails an (ongoing) redefinition of economic interests around conflicting perceptions of money, value and economic growth.

A final example illustrating the ongoing political importance of competing definitions of value in the modern global economy is the current battle over the worldwide formulation and implementation of International Accounting Standards (IAS). These standards are currently being revised by an international accounting body, appointed by former US Federal Reserve chairman Paul Volcker (Norris 2000; 2001). Currently, accounting practices vary widely from country to country, leading to different ways of measuring such financial categories as costs, capital and profits (Underhill 1997:34). The politics of creating and promoting unified international standards operate on two levels. First, as Wade and Veneroso (1998a:11-12) note, the inclusion of standardised accounting practices in IMF conditionality furthers Western domination over the global economy. The IAS do not just require the adoption of certain (Western) standards of measurement by countries desiring IMF loans, such as Korea, but also command the use of one of five Western accounting firms (the 'Big Five') for the annual auditing of financial institutions (Wade and Veneroso 1998a:12). More generally, countries not borrowing from the IMF are also expected to adopt the IAS in order to gain access to and credibility in the international capital markets. Thus, the standards are cast as a "passport" to international financial participation (Cameron 2001).

Secondly, accounting is political because it favours certain definitions of value over others. This is argued in a growing body of literature which aims to scrutinise and democratise the accounting profession.[4] As one author puts it: "accounting systems allow only one of the many competing versions of an organisation's economic reality to be legitimised" (Boland 1989:599). As a result, alternative sources of value are delegitimised, including ecological responsibility (Power 1997:60-66). The international negotiations over the creation of IAS hinge on these competing definitions of economic reality. The US refused to accept previous international accounting rules because they diminished reported profits of companies engaged in mergers and acquisitions (Norris 2000). While the world-wide promotion of international accounting standards takes place

under the guise of "technical expertise" (Cameron 2001), it objectifies and quantifies contestable definitions of financial value.

These illustrations of the contestability of monetary value help clarify why the Bank of England feels so threatened by Boggs's art. Boggs's questioning of ritualised monetary practices exposes the indispensable authoritative bases and social networks that enable financial instruments to function. Precisely because it is based on faith and confidence, the functioning of money and finance requires strong nodal points of authority supporting and maintaining that faith. This is sometimes overlooked by sociological accounts which argue that money has been abstracted from social networks and has become a neutral, indifferent, cold, calculating and impersonal force, leaving its marks on modern society. Such understanding of money was pioneered by Georg Simmel in his *Philosophy of Money* [1900].[5] Simmel argues that the emergence of the modern money economy objectifies social relationships, reduces kinship to calculation and leads to "a psychically impoverished modern order" (Thrift and Leyshon 1997:36). "The money economy," Simmel (1990:444) writes, "enforces the necessity of continuous mathematical operations in our daily transactions. The lives of many people are absorbed by such evaluating, weighing, calculating and reducing of qualitative values to quantitative ones." Indeed, Simmel (1990:237) argues that money has become the modern god and financial gain the new salvation: "the wild scramble for money, the impulsiveness that money – in contrast with other central values, for example landed property – spreads over the economy and indeed over life in general [does not] at all contradict the final pacification in which the effect of money approaches that of a religious mood."

More recent accounts have similarly stressed the impersonal, empty and meaningless social relationships brought about by a money economy. This is seen to be exacerbated by modern financial developments such as the deregulation and dematerialisation of money. For instance, David Harvey (1989) establishes his influential critique of late modern capitalism partly by arguing that it reduces rich social bonds to instrumental, superficial and impersonal profit relations. "The

more flexible motion of capital," which, according to Harvey (1989:171) characterises the new 'disorganised' capitalism, "emphases the new, the fleeting, the ephemeral, the fugitive and the contingent in modern life, rather than the more solid values implanted under Fordism."

Although Simmel's writings offer important insights into the socio-economic transformations of the modern money economy, his emphasis on the cold, calculating and depersonalising effects of money on social relations obscures the fact that modern monetary instruments are equally dependent upon social networks and geographical nodal points of authority. Simmel's writings display a nostalgia for an undefined era in which economic ties were somehow more genuine and reciprocal, in contrast to the money economy which has abstracted economic exchange from its social environment. This nostalgia is shared by Harvey (1989:100), who argues, following Marx, that money "dissolves the bonds and relations that make up traditional communities so that money becomes the real community." Harvey (1989:100) laments the displacement of "a social condition in which we depend directly on those we know personally," by a social condition "in which we depend on impersonal and objective relations." Thus, Simmel and Harvey insufficiently recognise that monetary practices, even late-modern deregulated financial practices, require in-depth social relationships, interpretative communities and authoritative underpinnings (Thrift and Leyshon 1997:38).[6] Below I will elaborate how emphasising this discursive and authoritative grounding of money rephrases certain questions in political economy. Here, it can help understand why Boggs's disturbances are taken so seriously by the Bank of England.

The carefully constructed, but largely forgotten, symbolic authority enabling monetary circulation is called into question in Boggs's performances. That the social conventions and symbolic authority required for the functioning of (paper) money are much less ancient that is generally believed, has been discussed by Emily Gilbert and Eric Helleiner (1999). The centralisation of monetary authority and the creation of exclusive national currencies were undertaken in the latter half of the nineteenth century. Although the Bank of England was

founded in 1694, it did not gain exclusive rights over note issue until the Bank Act of 1844 (Helleiner 1999b:143). In the US, private issue of banknotes and currency of "original design" were outlawed as late as 1909 (Zelizer 1994:16). Instead of being a natural or evolutionary process then, the creation of national currencies required elaborate and extensive state policies and coercion, ranging from the active removal of foreign currencies to the harsh sentences imposed on nineteenth-century counterfeiters. This coercive process included the persecution of late nineteenth-century trompe d'oeil painters, whose experiments with images of money were not unlike Boggs's (Zelizer 1994:16; Wenschler 1999:85-91). In addition to excluding 'illegitimate' monies, consolidation of national monetary authority was more positively attained through the iconography on the national banknotes. Classical images of Goddesses and Allegories were one way in which the authority and stability of banknotes was communicated (Gilbert 1998). Early US banknotes sometimes depicted the coin for which it could be redeemed (Wenschler 1999:129).

In short, the creation and maintenance of faith in modern currencies is a much more tenuous and unstable project than is generally conceded. If the Bank of England's authority had been natural, and the use of paper pound notes had been historically inevitable, the Bank would not have felt threatened by the playful imitation of its notes, being able to rely, instead, on man's natural propensity to distinguish the 'real' from the 'fake.' However, if we understand the maintenance of monetary authority as a carefully constructed, and never completed, political project, we see how Boggs's disturbances become intolerable for monetary authorities. The Bank of England's current prosecution of Boggs fits seamlessly into the late nineteenth-century coercive establishment of exclusive national currencies.[7]

This relates to a second way in which Boggs's questions threaten monetary authority. As Carruthers and Babb (1996:1560) point out, when the US greenbackers wanted to make their new monetary form socially acceptable, they began by "remembering" the social construction of money, "thus raising the possibility of alternative monetary arrangements." If Boggs's performances similarly publicly remember the social and cultural contingency of monetary forms,

they may pry open alternative monetary possibilities which form a threat to the monetary order supported by the Bank of England.

Chapter Outline

This project will proceed broadly along three assumptions, which are further elaborated in the first chapter. First, I will consider money as a system of writing which is firmly rooted in cultural history. This is illustrated by the examples in this introduction, which expose the ambiguous and socially constructed nature of monetary forms. Attributing value to money, whether it be gold, paper, stocks or derivatives, is only ever possible through social and historical practices. It is in this sense that Boggs's art can be considered political, as it forces us to rethink the consequences of choosing one monetary form over another. At the same time, the smooth functioning of money is conditional upon a forgetting of this political contestability of the monetary form, a collective forgetting which is in the interest of some groups more than others.

Second, the current literature in the broadly defined field International Political Economy insufficiently considers the socially and politically constructed nature of money and finance. In fact, many authors assume finance to be an autonomous sphere with clearly defined boundaries, and take for granted the unproblematic existence of money, paper money, credit, financial instruments etc., as a material starting point to their inquiries.

Third, I contend that this forgetting of the controversial history of money limits political possibilities in IPE. In other words, it is difficult for IPE as field of economic criticism to expose and question the political consequences of current financial discourses which have taken shape instead of, and at the expense of, alternative financial possibilities and representations. In chapter 1, I will explain how a 'genealogy of finance' considers these foreclosed possibilities and decisive moments in financial history and thus contributes to imagining alternative economic futures.

After setting out these assumptions, chapters 2-5 each focus on a problematic area of financial history, in which the meanings and boundaries of 'the financial' and the character and behaviour of 'financial man' were subject to political and cultural struggles. I will re-read these historical financial struggles, attentive to the arguments and questions their discursive resolutions sought to exclude. I am particularly interested in analysing how these political controversies rallied around the character of financial agents, thus assuming, constituting, invoking and amending a subject whom I will call 'financial man.'[8] While proceeding broadly in chronological order, each chapter will discuss the continuities and contrasts with current financial understandings when relevant.

The historical episodes of political struggle and controversy that are reread in this thesis concern primarily the British and US financial centres (London, New York and Chicago). This choice does not deny that financial debate and controversy took place in other European financial centres as well, most notably in Paris during the Mississippi bubble in the first half of the eighteenth century, and in Berlin in the late nineteenth century. For example, in 1896, the German government passed an Act to prohibit financial speculation, which outlawed futures trading and severely restricted the operations on the Berlin exchange. This case was closely followed in the US, which was considering similar legal action at the time, as will be discussed in chapter 3 (see Emery 1895; 1908). However, time and space constraints have forced me to exclude political controversies other than those in the Anglo-American financial centres.

The choice to focus on London and New York is also underpinned by their particular place in financial history. As Germain (1997) demonstrates, London emerged as a 'principle financial centre' during the nineteenth century, to be succeeded by New York during the twentieth century. Financial centres are defined by their functions of information gathering, interpretation and dissemination, and consequently the particular ways in which financial instruments, responsibilities and virtues are defined in these localities are of particular importance to the development of modern financial rationality. The periods of debate and discussion

examined in this thesis precede the periods of centrality and influence of these two cities as identified by Germain.

After considering the political controversies accompanying the birth of the national debt in Britain, chapters 3 and 4 will slowly move the focus of the controversies under examination from London to New York and Chicago, for three reasons. First, the early proliferation of financial controversy in London led to the adoption of an anti-speculation Act in 1734, which restricted financial practices and thus muted subsequent financial debate in Britain. Secondly, nineteenth-century British finance was based on a particularly close relationship between the financial and the political establishments (the City and the government), as a result of which financial decision-making took place largely behind closed doors (Ingram 1994). Although social, moral and religious anxiety continued to surround financial practices in nineteenth-century Britain, British legal and political authorities were less susceptible to public questioning of financial practices. In the US, by contrast, the influential Populist movement and its 'muckraking' journalism, which sought to expose the practices of big business, guaranteed that debate on financial practices was firmly in the public domain, as it had been in Britain in the early eighteenth century (Hofstadter 1955:186-214). As I will show, US courts were sympathetic to legal challenges to the validity of financial instruments. Thus, this period in US history provides unique insight into the arguments and knowledges which had to be excluded in order for finance to emerge as a rational and coherent practice. Third, the current importance of US firms and institutions in the international financial sphere means that their concepts and legitimations, which were formulated through the nineteenth-century controversies, are of particular importance to the current development of financial practices. However, it is important to observe that there is a historical continuity rather than a disjunction between the London and New York financial centres, and even after the US War of Independence a high degree of cooperation and integration existed between London and New York's financial establishments. As we will see in chapters 3 and 4, British voices were part of US debates on speculation, and

British economists played an important role in the abstraction of financial practices from their political and moral contestations.

In summary, the thesis is organised as follows:

Chapter 1 offers a review of the ways in which discourse and ideas have been conceptualised in IPE literature in order to show how my questions build on, but depart from, this literature.

Chapter 2 discusses the difficult and controversial birth of public credit and the national debt in seventeenth-century England. It will show that the use of credit was morally and politically legitimised through the discursive juxtaposing of the English gentleman and the irrational, unpredictable *Lady Credit*, who embodied the uncertain and unpredictable future. This chapter will moreover argue that this gendered imagination still underpins the way we conceive of financial crises and disruptions today.

Chapter 3 discusses how the lack of a conceptual distinction between finance and gambling in early modern Europe became an obstacle to the respectability of trading in stocks, shares and credit certificates. It discusses how a separation between finance and gambling became imagined during the nineteenth century with the articulation of risk as a calculable entity. The US 'bucketshop' debate, which took place in the nineteenth century, is particularly important in this regard, as it legally inscribed, objectified and reinscribed the boundaries between gambling and finance.

Chapter 4 argues that statistics provided a particular rationality and respectability through which finance was to be separated from gambling. It discusses the contingent history of statistics, before focusing on the history and invention of financial statistics, epitomised by the Dow-Jones Industrial Index, which was first published in the late nineteenth century. Not only did statistics articulate a particular ascetic subjectivity that was to make finance respectable, it also opened the possibility for finance to emerge in the early twentieth century as an objective scientific endeavour.

The interlude provides a summary of the argument to show that all the discursive moves for finance to be imaged as a rational and coherent sphere of knowledge were in place in the early twentieth century. The 1929 stock market crash and its subsequent investigations will then be discussed to show how these consolidated and strengthened the possibilities of a discursive construction of financial science.

Chapter 5 will take the argument into the 1990s through a reading of the failure of the hedge fund Long-Term Capital Management (LTCM), to show the continuities and contradictions with past financial debates. The LTCM failure and the public discussion that took place in its wake demonstrate that the exclusions from legitimate finance, the objections and arguments that have been consigned to the aborted histories of irrationality, gambling, madness or miscalculation, continue to be politically relevant.

Chapter 6 will consider how this genealogy of finance, this rereading of the weaknesses and insecurities in the present financial order, opens up possibilities for political resistance and alternatively imagined financial futures. The chapter will conclude by discussing three sites of destabilisation and repoliticisation of financial practices which are currently taking shape.

Notes to the Introduction

[1] Nast was one of the most influential cartoonists of his time, and is remembered for creating the images which associate the Republican party with an elephant and the Democrats with a donkey. Many of his images arguably still influence the way we imagine politics today. Jim Zwick, http://www.boondocksnet.com/gallery/nast_intro.html

[2] The following references provide a few examples of the current debate over the valuation of internet and other 'new-economy' stocks: David Blackwell (2000) 'Old Economy versus New Economy: an Eddy in the Stream of High-Tech Flotations,' *Financial Times*, March 18; *The Economist* (2000a) 'Monopoly Money,' April 7; *The Economist* (2000b) 'Productivity on Stilts,' June 10; Alfred H. Kingon (2000) 'New Economy Savaged by the Same Old Bears', *Financial Times* April 3; Paul Krugman (2000) 'Roller-Coaster Markets,' *New York Times*, April 5; Peter Martin (2000) 'The Internet Enigma,' *Financial Times*, June 2; Morgenson, Gretchen (2000) 'Forces of Nature, Immutable Truths,' Market Watch, *New York Times*, April 2; Morgenson, Gretchen (2001) 'How Did They Value Stocks? Count the Absurd Ways,' *New York Times*, March 18; Floyd Norris (2000) 'Modigliani's Message: It's a Bubble, and Bubbles will Burst,' *New York Times*, March 31; Simon Targett (2000) 'Old Economy versus New Economy: Where p/e fails try Eye-Whites,' *Financial Times*, March 18; Maggie Urry and Charles Batchelor (2000) 'Old Analysts Face Bleak Future in New

Economy,' *Financial Times*, March 10; Elizabeth Wine (2000) 'New Economy Unlocked by Iron Laws,' *Financial Times*, April 10.

[3] The argument of mad overvaluation versus normal, rational valuation is a recurrent theme in financial history. It will be discussed in detail in Chapter 2.

[4] This body of literature is associated with the journal *Accounting, Organizations and Society*. A few good examples are: Boland 1989; Hopwood and Miller 1994; Miller and Napier 1993; Montagna 1990; Power 1997.

[5] Simmel's work arguably gave birth to a whole strand of literature concerned with the sociology of money. Secondary sources on Simmel's work and the sociology of money more broadly include: Dodd 1994:24-58; Frisby 1978; Ganssman 1986; Smelt 1980; Thrift and Leyshon 1997:35-38; Turner 1986; Zelizer 1994:16-12.

[6] The argument that money requires social, geographical and discursive nodal points of authority, is made by a number of recent works, including, for instance, Corbridge, Martin and Thrift (eds) 1994; Germain 1997; Gilbert and Helleiner (eds) 1999; Helleiner 1999a; Sassen 1991, 1994; Thrift and Leyshon 1997; Zelizer 1994, 1999.

[7] The Bank of England was not successful in its prosecution of Boggs. Although the judge was openly sympathetic to the Bank's case, instructing the jury that the question of reproduction of banknotes was straightforward and would clearly include the transcription of, for instance, bills' serial numbers, the jury returned a unanimous 'not guilty' verdict (Wenschler 1999:112-116).

More recently however, the US Secret Service has intensified prosecution of Boggs by intensively monitoring him and confiscating his work. A court case (without jury), which was started by Boggs in order to have his work returned, was lost by Boggs in December 1993. That decision is currently being appealed in the US Circuit Courts of Appeals, in Washington DC.

It should be pointed out that Boggs's work benefits from these legal battles, as they underline the legal contestability of banknotes and their value. As Wenschler (1999:140) puts it: "Boggs's rising worth in the market is clearly a direct function of his transgressive approach and the persecution it invariably provokes. Boggs has often said he'd have stopped by himself a long time ago if only the government hadn't been so insistent on trying to stop him."

[8] 'Financial man' is *male* on purpose, for two reasons. First, financial markets were, and to some extent still are, dominated by male participants (see McDowell 1997). Secondly, and more importantly, the agent of finance which we see emerging historically is a particularly masculine character, shaped and articulated around dominant notions of what is does and does not mean to be a 'man.' This is discussed at length in chapter 2.

CHAPTER 1

International Political Economy and Cultural History

> Curiosity... evokes 'concern'; it evokes the care one takes for what exists and could exist; a readiness to find strange and singular what surrounds us; a certain relentlessness to break up our familiarities and to regard otherwise the same things; a fervour to grasp what is happening and what passes; a casualness in regard to the traditional hierarchies of the important and the essential.
>
> Michel Foucault[1]

Contingent Value

The purpose of this project is to problematise priorities of value that are entrenched in the modern globalised economy. It does so through arguing that value and valuation are social and cultural practices that are historically contingent. In Foucault's words, this thesis seeks to make strange current hierarchies of value and rationality.

Shapiro has shown in his reading of Adam Smith that modern economics assumes value is derived directly from objects. This is a metaphor of intrinsicality, similar to the assumed intrinsic value of gold and silver, in which "objects satisfy senses... their value derives from their material relationship with the body" (Shapiro 1993:62). In this way, modern economics forgets the (social, cultural, discursive) contexts through which objects take on value, and the interpretative struggles that determine what 'value' is to mean (Shapiro 1993:64). In contrast, Shapiro (1993:66) argues, practices of value and valuation are less "an individual choice than an

enactment of a social code... the value of an object for a subject emerges within a linguistic act that is... anchored in history." In other words, "interpretation *produces* value," instead of value existing objectively and prior to interpretative struggles (Shapiro 1993:81, emphasis in original). Still, if discourses of value are historically contingent, this does *not* imply that they are fictitious. The authoritative understandings of money and finance that have taken shape through historical struggles and controversies, some of which are briefly outlined in the introduction, direct international capital flows and regulate credit access. As such, they are very *real* in their effects; they channel resources through entrenched criteria of investment, speculation, creditworthiness etc.

What this project seeks to contest, then, are transcendental economic discourses which assume value to be directly derived from objects, allowing a deep-rooted separation between the sphere of the economic (the domain of objects and their circulation) and the sphere of the political (understood in a broad sense as the domain in which meanings are given and contested). Thus the economic sphere is depoliticised and shielded from the contestability of practices of valuation. As I will argue, this dichotomy between politics and economics is largely perpetuated in IPE literature, even if negotiating and transcending this distinction has been one of the main objectives of this field of study. A recent example illustrates the depoliticisation of economics.

In the same week in June 2000, two international reports statistically assessing Western societies, including Britain, were published. The first report was published by the United Nation's children's fund, UNICEF, and presents a comprehensive study of children's health, wealth, opportunities and education in twenty-three industrialised countries (all OECD countries). UNICEF's conclusions for Britain are devastating: Britain is among four industrialised countries in which child poverty is most common, with 19.9% of British children currently living below the poverty line, suffering poor education, insufficient housing and bad health. Almost half of British children live in households which are unable to afford one week's holiday per year. UNICEF concludes that the material, cultural and social resources of almost one-fifth of British children

"are so limited as to exclude them from the minimum acceptable way of life" in Britain (UNICEF 2000:6; also Ahmed 2000).

The second report appearing in June 2000 was delivered by the Organisation for Economic Cooperation and Development (OECD) and reports a very favourable view of the British economy. According to the OECD, Britain compares very well with other Western countries including the US, France and Germany on key economic indicators such as growth, inflation and macroeconomic stability. British economic growth is praised and is expected to last. Although the report does note that "poverty, including among children, is unacceptably high" (OECD 2000:17), it does so only to address ways in which Britain can improve its productivity levels and employability, which are lagging behind the rest of Europe.[2]

The almost simultaneous publication of these reports begs the question how the OECD can value the British economy so highly when child poverty is widespread in Britain. How can UK economic performance be praised for its global competitiveness when one in five British children lack access to adequate housing and education? How have economic indicators been formulated and legitimised which exclude measures of equality and poverty? How has such an exclusive definition of the economic domain been historically legitimised? How can it be challenged? I contend that historical practices of valuation have made possible this separation between the domain of the economic and the domain of the political, in which child poverty has been assigned to the latter. It is therefore legitimised for the OECD to praise the UK economy while assuming that concerns over child poverty belong to a different, less important, sphere of thought and action. Moreover, these discourses which valorise (a certain definition of) economic performance while devaluing child welfare channel money and investment. Although it would take no more than an estimated 6.45% of British GNP to eradicate child poverty (UNESCO 2000:9), and despite the Blair government's awareness of the issue of child poverty,[3] current priorities of value prohibit channelling public money towards large scale improvement of housing, education and health in the UK's poorest areas.

International Political Economy

Criticising the separation between politics and economics is not new. International Political Economy (IPE) as a "self-conscious field of study" has been formed in the 1970s as a critique of the exclusion of politics from the study of international economic and financial relations (Gill and Law 1988:3).[4] Staniland (1985) demonstrates the historical continuity between these 'new' insights and the earlier works of those enquiring into the relationship between politics and economics, such as, amongst others, John Kenneth Galbraith and Gunnar Myrdal. Benjamin Cohen (1977:6), who is considered one of the first to define the field of IPE, wrote in 1977 about the post-war boom in the study of monetary relations:

> [F]or all the intellectual energy expended in these efforts, most discussions have been seriously deficient in at least one fundamental respect. They have failed to integrate satisfactorily the economic and the political aspects of the problem into a single analytical framework. With few exceptions, economists and political scientists each have relied on their separate disciplinary approaches to design parallel analyses of the same set of issues... The result has been a vain sort of dialogue of the deaf.

The prerogative of IPE became to foster the disciplinary dialogue between politics and economics, thus giving it a critical edge over the increasingly abstracted and mathematical study of finance and economics. As Robert Cox argues, this has made IPE by definition a critical discipline, for it inquires into the historical and political constitution of present economic and financial orders. "Political economy," writes Cox (1995:32), "is concerned with the historically constituted frameworks or structures within which political and economic activity takes place. It stands back from the apparent fixity of the present and asks how the existing structures came into being and how they may be changing, or how they may be induced to change. In this sense, political economy is critical theory." Although a variety of approaches currently proliferate within IPE, not all as critical as Cox might prefer, it is safe to say that IPE as a field of economic criticism has furthered an academic agenda which investigates how political decisions shape and regulate economic and financial flows, how income is distributed not just within but also between nations, how politics and democracy are constrained by powerful economic actors, and, generally, how politics and economics interact.

In spite of its broadly critical agenda, I will argue that currently there exists within IPE little possibility to investigate the practices of value and valuation that have been discussed in the introduction and that, in my interpretation, underlie the exclusionary definition of economic indicators. IPE has incurred increasing criticism that it operates with a restricted definition of politics that looks almost exclusively to identifiable actions of states and policy makers. Such political action is then perceived to be interacting with, *but still largely distinct from*, the domain of the economic. "This distinction," Craig Murphy and Roger Tooze (1991:24) argue in their critique of IPE, "is based on the definition of 'economics' as the science investigating wealth production and distribution under scarcity, where wealth is somehow separate from 'politics,' and 'politics' takes place where the realm of economics stops" (see also Rosow 1994). Moreover, as Tooze and Murphy (1996:682-685) argue, when 'adding' politics to the study of economics, "orthodox IPE" leaves the domain of 'the economic' intact, through an "almost wholesale adoption... of the apparatus of neoclassical economics." A majority of authors in IPE accepts the conceptual separation between politics and economics, or state and market, even if these spheres are seen to be interacting. They are seen to be mutually exclusive domains, pulling society in different directions. As Robert Gilpin (1987:8) puts it: "without both state and market there would be no political economy. In the absence of the state, the price mechanism and market forces would determine the outcome of economic activities; this would be the pure world of the economist. In the absence of the market, the state or its equivalent would allocate economic resources; this would be the pure world of the political scientist" (c.f. Hettne 1995:2)

The continued conceptual separation of politics and economics in IPE means that the discursive and ideological constitution of economic reality is not questioned within the discipline. The examples in the introduction which illustrate that the economic reality of money and finance is subject to political struggle and controversy are overlooked by many authors in the field as a result. The remainder of this section will assess what IPE assumes to be its unproblematic

economic realities. The next section will discuss three ways in which discourse and ideology have been considered within IPE, and how this project will depart from those.

An important perceived economic reality which has increasingly defined the debate in IPE is the global integration of financial markets. "Like a Phoenix risen from the ashes," as one widely accepted metaphor goes, "global finance took flight and soared to new heights of power and influence in the affairs of nations" (Cohen 1996:268). Benjamin Cohen's metaphor attributes a large capacity of agency to an abstracted image of global finance. The mythological phoenix bird symbolises immortality and resurrection. In classical antiquity, the phoenix was "a fabulous bird associated with the worship of the sun. [It] was said to be as large as an eagle, with brilliant scarlet and gold plumage and a melodious cry."[5] The image of finance as an immortal being, preying upon the capacities of nation-states pervades academic literature on international finance. Such conceptualisations see international finance as a 'mastering force' undermining national sovereignty and scope for domestic policy intervention, in contrast to the post-war Bretton Woods order when finance was the 'servant' of economic production, and financial flows were subjected to capital controls.[6] In this assumed trade-off between financial power and state sovereignty, the only way for national states to retain their capacities to control financial institutions is by creating a transnational regulatory framework. "As financial activities become increasingly integrated," Cohen (1996:295) concludes, "a new organising principle could be needed, a competing transnational model, based not on political space but on economic space, which is becoming truly global in character."

While literature discussing the increased importance of finance in the post-Bretton Woods order has offered important criticisms of contemporary economic relations, these images of global finance as a predatory and immortal agency homogenise financial institutions and markets and assume unproblematic boundaries to this 'system.' This particular representation accepts as starting point an economic reality measured and defined by contestable economic indicators. For instance, Philip Cerny (1994:320) has argued that "the evolution of the

international financial system... characterised by the acceleration of international capital movements" has "challenged the capacity of the state to provide effective governance not only of financial markets themselves, but also of economic affairs generally." This financial evolution, according to Cerny (1994:332), is mainly driven by inventions in information and communications technology, creating a situation in which financial trading can take place through "a computer screen which can be linked into almost any market in the world at any time of the day or night." Not only does Cerny offer an understanding of international finance which implies a trade-off between market and state authority then, he also assumes the unproblematic existence of financial markets as self-regulating and self-contained entities. Even if Cerny's work criticises the emergence of self-regulating markets on a global scale, he bases his arguments on a profoundly uncritical image of the financial market as an efficient and transparent mechanism, allocating capital on the basis of price information. It is only thus that Cerny's political agenda can prioritise the promotion of an stable international financial order based on undistorted financial markets (Cerny 1993:6-7; also Cerny 1995).

A final example which illustrates how IPE reifies finance as a homogenous and clearly defined structure is provided by Louis Pauly's *Who Elected the Bankers?* (1997). As his title indicates, Pauly (1997:2) is concerned with the democratic effects of the global integration of financial markets, and sets out to investigate how the "evolution" of global capital markets means that "the power to make substantive decisions affecting our own material prospects and prospects of our children is currently shifting out of our control." Pauly argues that financial markets are products of state negotiation and regulation. In order to make this argument, Pauly proposes to understand global financial markets as a building for which international political institutions have provided the foundations and the plumbing. In this international financial architecture, "constructively interacting national macroeconomic policies are the foundations and a modicum of convergence in national regulatory standards is the plumbing. Central bankers, bank supervisors, securities regulators, and accounting standards boards all have a large role to

play in reinforcing the plumbing" (Pauly 1997:142). Pauly's preoccupation is with the promotion of a stable international financial order. But similar to the metaphor that casts finance as an autonomous powerful agency, the metaphor that casts finance as an architectural structure – while acknowledging a more important role of politics in its construction – presents finance as a coherent and homogenous sphere of thought and action with clearly defined walls.

The representation of finance as an autonomous and clearly bounded domain obscures all historical ambiguity, political struggle and cultural confusion over what may be legitimate preoccupations within 'the financial sphere.' Cerny's and Pauly's arguments illustrate that academics in international finance often take for granted "the origins, evolution, and meaning of economic ideas" (Dombrowski 1998:23). This project accepts Dombrowski's (1998:23) challenge to "pay more attention to the history of ideas to understand the concepts underlying modern international financial relations."

Three Models of 'Ideas' in IPE

Stephen Krasner (1996:108-109) has recently praised IPE for adhering to "the standard epistemological methodology of the social sciences which, stripped to its bare bones, simply means stating a proposition and testing it against external evidence." Krasner sees as problematic those efforts wishing to consider the complex roles of ideas, ideology and discourses as part of the discipline of IPE, wishing to adhere instead to narrowly defined economic methodologies "International political economy," Krasner (1996:121-122) writes,

> has been primarily concerned with material interests and power even if the definitions of interest and power have been intensely debated. The influence of norms and ideas has received much less attention. The analytic problem in discussing the impact of ideas and values is that they often covary with other factors such as economic interests. When there is such covariance, it is impossible to make a compelling argument that ideas really matter, that they are any more than rationalisations for more conventional concerns.

Apart from begging the question why, indeed, his *own* ideas matter,[7] Krasner's remarks dismiss a number of strands within IPE literature which have fruitfully integrated the study of

ideas and ideology into their analyses. Tooze (2000:179) points out that Krasner's definition of "legitimate knowledge" in political economy as a "scientific research program" which offers the "progressive... discovery of new facts" amounts to a policing of the boundaries of IPE which consciously seeks to delegitimise and marginalise other approaches. In fact, there are a number of authors within IPE who have problematised the "view from nowhere" which Krasner purports to provide (Tooze 2000:180). These literatures demonstrate that scientifically testing, assessing and measuring international economic relations is not as simple as Krasner simply assumes. Broadly, there are currently three avenues open for those interested in studying ideas and meaning-making in IPE. The first is provided by the literature on epistemic communities.[8] The second is inspired by Cox's reading of the Italian Marxist Gramsci and has been taken up in a literature loosely defined as Gramscian IPE. The third flows from the work Susan Strange did on information and has more recently been taken up by Tony Porter. I will assess each of these avenues in turn to demonstrate how my questions build on, but depart from, them.

The 'epistemic communities approach'[9] has been offered as a way in which "students of world politics can empirically study the role of ideas in international relations" (Adler and Haas 1992:367). It prioritises within IPE and IR an investigation into "the manner in which people and institutions interpret and represent phenomena and structures," which makes a difference for the "outcomes we can expect in international relations" (Adler and Haas 1992:370). The literature on epistemic communities departs from Krasner's assumptions of an unproblematic economic reality and material interests, and seems to offer a way to integrate questions of valuation and meaning-making into the study of IPE. Indeed, John Ruggie (1998:55) argues that members of epistemic communities share "a dominant way of looking at social reality, a set of shared symbols and references, mutual expectations, and a mutual predictability of intention." In respect to financial politics, Ruggie (1998:21) has considered the post-war Bretton Woods order as "an intersubjective framework of meaning that included a shared narrative about the conditions that had made these regimes necessary and what they intended to accomplish." A financial epistemic

community, Helleiner (1994:198-201) argues, involves state agencies as well as private actors. Ruggie and Helleiner problematise the image of finance as an autonomous and predatory agency by arguing that governments were an active force in deregulation and liberalisation of finance capital.

Yet when these broad and promising definitions of epistemic communities are translated into a research agenda, the approach is reduced to considering the traditional concerns of international relations, such as state interaction and international negotiation. As the 1992 special issue of *International Organization* demonstrates, the epistemic communities agenda is limited to the study of international negotiations in specialist issue-areas, such as nuclear arms control and environmental regulation, where scientists are seen to play a privileged role. Ideas are conceived of as self-contained entities, which "circulate from societies to governments, as well as from country to country" and inform policy-making (Haas 1992:27). The operationalisation of ideas as 'independent variables' (as Haas puts it) allows this literature to assume a sharp dichotomy between ideas and a prior unproblematic material reality which shapes and informs scientific research. Ideas, in this argument, are "figured as no more than that which is not material... which can be isolated as variables possessing at least some causal autonomy" (Campbell 1998a:218). Thus, Katzenstein, Keohane and Krasner warn that a focus on the study of language and ideas will lead one to loose sight of the reality of international politics. The postmodern research agenda, which seeks to "[decentre] established discourse... by paying attention to what is marginal or silent," Katzenstein, Keohane and Krasner (1998:678) write in the fiftieth anniversary issue of *International Organization*, "falls clearly outside of the social science enterprise, and in international relations research it risks becoming self-referential and disengaged from the world, protests to the contrary notwithstanding." This sharp ideal/material dichotomy is also articulated by Adler and Haas. "Our critique... should not be interpreted as reflecting a preference for poststructuralist, postpositivist and radical interpretative analyses," Adler and Haas (1992:370-371) are keen to point out: "So long as even a tenuous link is maintained between objects and their representation,

we can reject an exclusive focus on words and discourse. By defending an epistemological and ontological link between words and the objects with which they are commonly associated, we believe that learning may occur through reflection on empirical events rather than through their representation."

A similar point is made by Ruggie (1998:90), who makes a distinction between meanings and "brute facts," in which the latter exist in "the familiar world of material capabilities and similar palpable properties, of pre-given and fixed preferences, of increases in trade restraints and depreciations of currencies and so on."[10] These arguments overlook a body of literature in the history of science which investigates the ways in which scientific facts are culturally, socially and historically articulated and contested.[11] They also foreclose the possibility of considering the political processes of valuation that underpin the functioning of money, finance, currency etc., exemplified by Ruggie's (1998:90-91) assumption that currencies exist independently of mental states, beliefs, desires, hopes and fears.

The second avenue for the inclusion ideas or practices of meaning-making into the study of IPE has been provided by Cox (1996a:87), who has problematised Krasner's ideal of positivist scientific methodology by stating that "theory is always *for* someone *for* some purpose" (emphasis in original). In a now classic article, first published in 1981, Cox (1996a:103) argues that understanding the international order requires studying the complex interaction between "a configuration of material power, the prevalent collective image of world order (including certain norms) and a set of institutions which administer the order with a certain semblance of universality (that is, not just as the overt instruments of a particular state's dominance)." Cox advances a research agenda which prioritises the historical study of international structures, in order not just to understand how these "impose pressures and constraints" on agents, but also in order to map out possibilities for emancipatory change (Cox, quoted in Sinclair 1996:8). The importance of understanding hegemony in a Gramscian sense is that it provides an opportunity to question that which is assumed to be natural, such as perhaps the meaning and value of

money. "Hegemony... in the Gramscian meaning," Cox (1996b:517) argues, includes "a structure of values and understandings about the nature of order that permeates a whole society... In a hegemonic order these values and understandings are relatively stable and unquestioned. They appear to most actors as *the natural order of things*" (emphasis added).

Cox's reading of hegemony has been elaborated and applied to the study of international finance most notably by Stephen Gill, who seeks to explain rather than assume the economic interests of international actors by looking at the ideological debates informing them. The departure from Bretton Woods in favour of a more liberal international financial order was caused, Gill and Law (1993:104) argue, by a transformation in the way business and government leaders of different countries perceived "the general conditions of existence of the international order." International change in this field takes place though consensus rather than through coercion, Gill (1990) argues, thus making it imperative for the classes profiting most from a certain order to phrase their narrow class interests in terms of universal interests. This is precisely what happened with the political shift towards neo-liberalism in the late 1970s and 1980s, according to Gill (1990:95), when Thatcher claimed that "there was no alternative to her supply-side monetarist policies." Thus, Gill (1995:11) concludes, we have arrived at a transnational financial structure with its own discursive practices which act "to discipline deviations from the orthodoxy of neo-liberal economics and serve to constitute the limits of the possible in matters of global finance and sovereign debt."

Although Gramscian IPE[12] has opened possibilities to study the structural limits to our perceptions of international economic reality, it is subject to its own structural and conceptual limits which exclude from consideration some of the questions provoked by Boggs's performances. Because it derives largely from a Marxist framework, Gramscian IPE takes class as its most basic unit of analysis. Although political *consciousness* of these class-units is not inherent or self-evident according to Gramscian IPE, class *identity* is seen to precede the political. This theoretical position is made clear in a recent article by Cox (1999:15), who points out that

"Consciousness was not, for Gramsci, a direct derivative of class; it was an historical construction." Class consciousness thus belongs to the domain of the political for Gramsci and Cox, in which "an evaluation of the degree of homogeneity, self-awareness, and organisation attained by the various social classes" takes place (Gramsci 1971:181; Cox 1999:26). Class identity, on the other hand, precedes this political level and belongs to the domain of the "objective relations... brought about by the level of development of the material forces of production" (Cox 1999:25). This latter domain is comparable to Ruggie's world of brute facts, or in Gramsci's (1971:180) words, "a refractory reality: Nobody can alter the number of firms or their employees, the number of cities or the given urban population, etc."

However, as I have demonstrated in the introduction, the process of counting assets, profits etc. in accounting practices is highly contested and is currently subject to international negotiation and standardisation. Thus, as I will elaborate in chapter 4, which deals with the history of statistics, the counting of economic reality is not a simple as Gramsci assumes. It requires definitions, categorisations and classifications which are already political in themselves. It moreover requires a large and reliable statistical apparatus and adequate financial resources. The complexity of such statistical counting is illustrated by recent political upheaval and financial anxiety surrounding the 2000 US census. The point to be emphasised here is that in Gramscian IPE, culture, discourse and ideology remain largely in the domain of the 'superstructure,' and of secondary importance to the study of the economic 'base' which ultimately determines the objective economic interests of agents.[13]

A third avenue for the inclusion of ideas and information into the study of IPE, which departs from Krasner's ideal of scientific testing, has been provided by the work Susan Strange has done on the knowledge structure. "Money is information," Strange (1990:263) writes, "it is not gold, silver or copper, not yet banknotes, cheques, letters of credit or bills of exchange. It is electronic messages crediting or debiting accounts in computerised recording systems operated by financial institutions." For Strange (1990:263), this is a new phenomenon, brought about by

technological improvements in the means of communication, which have made possible "global financial markets in which, potentially, all operators are in touch with each other all over the world at all hours of day or night." This has led to a financial order in which what Strange (1988) calls "the knowledge structure" enjoys relative autonomy to the production and financial structures. The knowledge structure comprehends "what is believed... what is known, and perceived as understood; and the channels by which beliefs, ideas, and knowledge are communicated – including some people and excluding others" (Strange 1988:119).

More recently, Strange's work has been used and elaborated by Tony Porter (1999a:138), who has identified a late modern knowledge structure characterised by "the increased speed and intensity with which new abstract knowledge is transformed into routine unquestioned practices which can then be taken as commonsense reality." To Porter (1999a:141-148), the dramatically increased importance of the formulation and dissemination of technical knowledge in late modernity manifests itself in the financial sphere in the form of the mathematical creation of new financial instruments, the rearticulation of financial standards and the redefinition of capital in order to include 'intangibles' such as human capital. Porter's work thus starts to take into account some of the questions raised in the introduction, including the complexity of defining capital and other financial 'basics.'

Still, Strange, and to a lesser extent Porter, advance an instrumental definition of knowledge which supports a dichotomy between the worlds of the ideal and the material, although this dichotomy becomes increasingly blurred. In Strange's work on the knowledge structure, knowledge is conceptualised as a resource, a coherent entity which can be discovered, stored and communicated. "Knowledge is cumulative and communicable," Strange (1988:122) asserts, and power is derived from it as power is derived from other sources such as material, productive or financial capacities. As May (1996:184) argues, not only does Strange advance an "instrumentalist view of knowledge-information," but she also fails to enquire into the relation between what she calls the knowledge structure and the other structures of power which she

identifies, namely the security-, production-, and financial structures. May (1996:184) concludes: "Having introduced knowledge in a structural form, Strange immediately attempts to close the Pandora's box that she has opened. She can only do this by requiring us to accept that knowledge is a *resource*" (emphasis in original).[14] Similarly, in Porter's conceptualisation knowledge retains instrumental features which objectify and reify it. The regulation of "the international flow of knowledge," Porter (1999b:276) argues, is an important resource in the creation and maintenance of hegemony, which he illustrates with a study of British and US hegemonic cycles. In this reading, knowledge is a clearly recognisable entity, which can be owned, contained and shared.

At the same time however, Porter advances a model which opens a possibility for questioning how economic material reality, so easily recognisable for Krasner and Ruggie, is discursively constituted and politically contestable. "The production of knowledge," Porter (1999a:151) argues, "is increasingly entering into the constitution of objects (such as tradeable products) and relationships (property rights and capital) that conventionally have been regarded as natural or material." The fact that 'knowledge,' 'information' and 'ideas' are not as clearly contained and easily recognisable as some authors assume, is captured by Thrift and Leyshon (1997:300), who quote one financial journalist as saying "true, I've got information coming out of my ears. But what it all *means* I haven't got a clue about" (emphasis in original). Processing, selecting and interpreting information is an ambiguous and political process which is vital to the possibility of a financial sphere. "The more one analyses the realm of money and finance," Thrift and Leyshon (1997:289) point out, "the more one realises that an attention to discursivity is required to come to an understanding of it... the world of money is a world of interpretative power struggles, where competing sets of scripts and discourses conjure up alternative plausible 'orderings' of the economic world." Similarly, Williams (1999:79) points out that "the economy [is] constructed 'all the way down,' and does not, and cannot, rest upon any natural foundations."

In contrast to the image of finance as an "overarching and seamless web," Thrift and Leyshon (1999a:161) propose to conceptualise finance as a series of complex networks of

authority which include "particular devices, particular monetary skills, and particular attitudes toward, and beliefs about, what money is." These monetary networks do not exist in 'virtual space' or regardless of geography, but manifest themselves in concrete geographical locations such as the City of London and New York's financial district.[15] "International financial centres," Thrift (1994:335) concludes, "are centres of representation... [they] are centres of discursive *authority*, able to describe what constitutes 'news' and how that 'news' is interpreted" (emphasis in original). That this is not just a recent phenomenon is demonstrated by Randall Germain (1997:42), who argues that Amsterdam's role as principal financial centre in the seventeenth century hinged upon "the density, diversity, and reach of the information-gathering institutions of the day... Upon being channelled into Amsterdam, information was collated, aggregated, and analysed."

Before I go on to argue how Foucauldian analyses offer a framework in which the particular modes of power associated with the discursive constitution of economic reality can be investigated, a brief etymological inquiry highlights the discursive nature of finance. Credit, from the Latin *credere*, signifies belief, faith and trust—a person being worthy of trust, or having the reputation to be believed. More specifically, credit pertains to respect and trustworthiness in business matters, and indicates a source of honour and authority (*OED* 1989, Vol.III:1138). To be a creditor, thus, was originally possible as a function of social and moral standing: "extending credit... meant that you were willing to trust someone to pay you in the future... [T]o have credit in a community meant that you could be trusted to pay back your debts" (Muldrew 1998:3).

Similarly, bonds can be seen in such historical and social context, which sheds new light on the old saying, 'a gentleman's word is his bond.' As Steven Shapin (1994:65-95) has argued, scientific credibility was originally generated in a social network which recognised the seventeenth-century gentleman as the truth-teller *par excellence*, in contrast to women and servants. Thrift also documents the historical importance of the "narrative of the gentleman" to London's financial district. This was one way in which the worth of people and practices was assessed: it

was "a widespread narrative based on values of honour, integrity, courtesy, and so on, and manifested in ideas of how to act, ways to talk [and] suitable clothing" (Thrift 1994:342). Historically, then, credit and bonds carry a gendered dimension: the reputation and authority that underlies credibility distinctly belong to the gentle*man*. This issue will be taken up and discussed in detail in chapter 2.

Finance as a Political Rationality

In order to arrive at a framework in which we can study the ways in which economic realities and values have been historically constructed and contested, it is important to move away from what David Campbell (1996) calls the "sovereignty problematic," which underpins much of literature in international relations in general and political economy in particular. The sovereignty problematic conceptualises power as located in a particular geographical centre stage which can "only ever be occupied by *one* source of authority" (Campbell 1996:18, emphasis added). This exclusive conception of authority underlies the assumed trade-off between state power and financial power. In the sovereignty problematic, power is assumed to be emerging from an "easily identifiable, unitary agent" or collection of agents, who are "endowed with relative autonomy and capable of purposively wielding material resources" (Campbell 1996:18). Even if such 'material' resources are increasingly seen to include intangibles such as information, the sovereignty problematic prohibits a consideration of how power operates on a prior level of *identity* construction and self-understanding of economic agents.

Gill (1995) has taken a first step towards the problematisation of economic agency with his concept of 'economic citizenship.' Late modern capitalism, Gill argues, prepares its members for economic citizenship from an early age, by including in the education curriculum lessons on financial rectitude. Teenagers are targeted with programmes explaining how to develop a personal credit-rating record, which has become increasingly important in order to obtain employment

and accommodation. In this way, citizens are educated and disciplined in particular modes of financial responsibility (Gill 1995:25-27). That pedagogical programmes are not just targeted at teenagers is discussed by Adam Harmes (1998a:112-114), who documents that investment companies are increasingly teaching basic financial skills to their members, and have set up "investment clubs for children." Targeting children in the promotion of investment skills is done through such ingenious marketing strategies as special children's investment funds, for instance the 'Rupert the Bear Fund' in the UK, and the 'FUNds for Kids' programme in Canada. The latter includes "a package for children under nine years of age with a stuffed Henry the hedgehog toy (as in 'hedge your investments'), a mock mutual fund certificate and a storybook entitled *Henry's Mysterious Present: a Story about Mutual Funds*" (Harmes 1998b:27).

It is important to note that education in financial rectitude and responsibility is not a *new* phenomenon. Zelizer (1994:31) documents how the development of American consumer society in the 1920s and 1930s went hand in hand with popular education in 'spending well': "to spend money is easy," as one economist put it in 1912, "but to spend well is hard." Education in spending well consisted of magazine articles, essays and pamphlets targeted mainly at poor and middle-class housewives. American immigrants received instructions on financial responsibility, shopping, banking and budgeting during programmes in citizenship training upon arrival in the US (Zelizer 1994:30-35).

These examples demonstrate the problems with assuming the existence of autonomous individuals in the economic domain, and point to the need to refocus the debate on questions of identity and truth-production. In contrast to the "economistic conception of power" of the sovereignty problematic, which regards power as "a commodity to be wielded by agents," Campbell (1996:18) suggests a Foucauldian understanding of power as "employed and exercised through a net-like organisation... [I]ndividuals circulate between its threads; they are always in the position of simultaneously undergoing and exercising this power. They are not only its inert or consenting target; they are always also the elements of its articulation" (c.f. Foucault 1980:98).

In order to move away from the sovereignty problematic, it is fruitful to conceptualise finance as a particular mode of *political rationality* instead of as a homogenous and clearly defined system. According to Wendy Brown (1998:44), Foucault articulated notions of political rationality in contrast to "the coherently bounded, internally consistent (or internally contradictory) and relatively ahistorical figure of a system." Forms of rationality, in Foucault's interpretation, provide the "legitimating discursive structure of any political order," so that they do not cloak violence but "[release] governments from the need to use instrumental violence" (Brown 1998:43).[16] "Power is not a substance" writes Foucault (1988b:83), "[n]either is it a mysterious property whose origin must be delved into. Power is only a certain type of relation between individuals." Forms of rationalisation work to sustain and naturalise particular relations of power, so that "[w]hat has to be questioned" when one wants to criticise power relations in society, "is the form of rationality at stake... The question is: how are such relations of power rationalised?" (Foucault 1988b:84).

Thus, it becomes important to inquire into the particular rationalisations which sustain and naturalise financial power relations. Understanding financial practices as rendered possible through a particular political rationality serves a dual purpose. First, it prioritises investigation into how understandings of economic reality and rationality *in themselves* exercise a particular power, as exemplified by concepts of economic citizenship and financial credibility. Second, it moves debate away from images of finance as a rational and coherent whole, in order to demonstrate the weaknesses, contingencies and contradictions in the existing order. The remainder of this section will discuss the first aspect, a subsequent section called 'a genealogy of finance' will discuss the second.

In Foucault's work, the power of ideology is no longer seen as a more or less conscious distortion of the truth in order to further particular (class) interests, but rather as bound up with complex and historically grounded technologies of truth production. Foucault (1980:102) proposes to reject the concept of ideology in favour of the study of historically constituted

"apparatuses of knowledge." In this manner, knowledge, ideas and ideology no longer *follow* material production and institutions, but are *a requirement for* material and institutional possibilities: "indeed," Foucault (1980:93) argues, "we must produce truth *in order* to produce wealth in the first place" (emphasis added). The power of a particular political rationality exists in the spaces in which "production of effective instruments for the formation and accumulation of knowledge" takes place, including "methods of observation, techniques of registration, procedures of investigation and research"(Foucault 1980:102). Peter Miller and Nikolas Rose (1990), amongst others, have used Foucault's work in order to understand modern economic governance.[17] Their work demonstrates how this approach breaks with the more narrowly defined interactions of politics and economics discussed above. Foucault's notion of government, Miller and Rose (1990:3-4) argue,

> highlights the diversity of powers and knowledges entailed in rendering fields practicable and amenable to intervention. It suggests that the analysis of 'policy' cannot be confined to the study of different administrative agencies, their interests, funding, administrative organisation and the like. A complex and heterogeneous assemblage of conditions thus makes it possible for objects of policy to be problematised, and rendered amenable to administration.

Before events and phenomena can be discussed in policy forums or be the subject of international negotiations – thus *before* they come into focus within IPE – they must be "rendered into information," in the form of, for instance, "written reports, drawings, pictures, numbers, charts, graphs, statistics" (Miller and Rose 1990:7). "Programmes of government," Miller and Rose (1990:7) conclude, "have depended upon the construction of devices for the inscription of reality in a form where it can be debated and diagnosed. Information in this sense is not the outcome of a neutral recording function. It is itself a way if acting upon the real."

Indeed, understanding power as rendered possible and sustained through modes of rationalisation, raises the question how the economic and the political domains have been defined as mutually exclusive entities in the first place. This understanding considers as political the boundaries to currently accepted disciplinary domains, thus opening the possibility to question the exclusionary indicators of economic wealth which downgrade child poverty as political

priority. "The question which I ask," said Foucault (1991a:59) in an essay first published in May 1968, is about "the law of *existence* of statements, that which rendered them possible – them and none other in their place: the conditions of their singular emergence; their correlation with other previous or simultaneous events, discursive or otherwise" (emphasis in original). Foucault's analysis suggests that there are general regulative practices that determine what can and cannot be said within the financial domain. Particular forms of rationalisation thus comprise a set of rules which govern "the limits and forms of the *sayable*" within a constituted domain of discourse (Foucault 1991a:59, emphasis in original). They determine what it is possible to speak of within the historically constituted financial sphere; which events are recorded as evidence and which utterances are recognised as valid (Foucault 1991a:59-60). These same limits govern which statements are considered futile and irrelevant to the financial domain; which evidence is inadmissible, which utterances are invalid. Indeed, is it not precisely through its *exclusions* that a more or less coherent financial domain becomes thinkable at all? Most importantly then, as will be explored below, understanding finance as a particular political rationality focuses debate on the exclusions made in order for financial discourse to emerge as a rational, normal, scientific and respectable practice.

The regulative practices which govern the limits of the financial domain act upon the ways participants in this sphere understand their roles, interests and possibilities. Financial practitioners are simultaneously undergoing and exercising power, and it is in this sense that the material interests and identity of financial practitioners may be questioned rather than assumed. In modern political rationality, Foucault (1991b:87) argues, governing others is bound up with requirements of "how to govern oneself." This is a specifically *modern* phenomenon, according to Foucault, connected to Christian morality and economic liberalism.[18] Liberalism, as Rose (1993:289) puts it, "abandons [the] megalomaniacal and obsessive fantasy of a totally administered society... Liberal mentalities of rule... seek to produce the subjective conditions, the forms of self-mastery, self-regulation and self-control, necessary to govern a nation now made up

of free citizens." With Christian morality, individual self-government becomes an important site of power, according to Foucault (1982:214), exemplified by the technique of confession which implies "a knowledge of the conscience and an ability to direct it." Power thus understood prescribes moral behaviour for the individual, starting with the rehabilitation of the sick, the criminal and the poor, but at the same time patrolling the boundaries beyond which 'the normal' may not venture.

In the financial sphere, the field of possibility of behaviour is regulated through criteria of responsibility, rationality and morality, as the examples above of education in financial rectitude demonstrate. Another important example through which financially correct behaviour is articulated, taught and incited, are technologies of credit-rating. These technologies define and patrol the boundaries between 'good' and 'bad,' or financially responsible and financially irresponsible, economic citizens. In retail finance, Thrift and Leyshon (1999b:440) argue, "potential customers are required to demonstrate to the bank that they are suitable and appropriate persons to do business with." Procedures for consumer credit-rating are increasingly standardised and computerised, reducing the determination of creditworthiness to a few variables on a scorecard, such as age and employment. Increasingly financial decisions are being made on the basis of geographical information such as postcodes, leading to geographies of financial inclusion and exclusion (Thrift and Leyshon 1999b; 1997:225-259). These articulations of creditworthiness demonstrate a clear continuity with older definitions of credit as moral standing, trustworthiness and social responsibility. At the same time, what is *new* about late modern computerised credit-rating is the speed and intensity with which it operates. As Thrift and Leyshon (1999b:435) put it, "in the world of business information, it is always census time."

That it is not just consumers and citizens whose identities are shaped and regulated through criteria of financial rectitude and responsibility is demonstrated by Timothy Sinclair's studies on bond-rating agencies, who assess the creditworthiness of states. These agencies "disavow any ideological content to their rating judgements" by claiming that their rating

processes are "technical rather than judgmental in nature" (Sinclair 1994:454). However, bond-rating agencies have acquired authoritative positions in international credit networks, offering particular visions of financial truth and particular criteria of financial responsibility which shape and regulate the behaviour of states and financial institutions. Rating agencies, Sinclair (1999b:161) argues,

> vet and judge practices, opportunities, forms of organisation, whole fields of human enterprise. They adjust the ground rules inside capital markets and thereby shape the international organisation and behaviour of those institutions seeking funds... Thus the agencies do not just constrain capital markets, as neorealism sees anarchy doing to states, but actually provide significant pressures on market participants themselves, contributing importantly to their *internal constitution as agents* (emphasis added).

The continuity between the individualising technologies of consumer credit-rating, which prescribe financial responsibility for economic citizens, and the globalising technologies of bond-rating, which prescribe financial responsibility for states, is not accidental. Foucault's (1991b:91) understanding of political rationalisation emphasises a continuity between "three fundamental types of government, each of which relates to a particular science or discipline. The art of self-government, connected with morality; the art of properly governing a family, which belongs to the economy; and finally the science of ruling the state, which concerns politics." This continuity observed by Foucault pries open restrictive definitions of both the political and the economic. Thus it becomes clear that IPE needs to move away from its state-centrism to include in its analyses the politics of everyday experience, as argued by Sinclair (1999a:165) in his plea for an international political economy of the commonplace (IPEC): "IPEC will break with the 'states and markets' view of the world, in which specific domains are allocated to politics and economic respectively... The second major characteristic of IPEC... is an interest in drawing links between ordinary lives and major structural change... Consumer behaviour, tax revolts, and education are all important places to develop understanding of the emerging world order."[19]

The World of the Real and the World of the Ideal

Instead of being concerned solely with the "circulation of things," Murphy and Rojas de Ferro (1995:63) have argued, IPE should concern itself with "circulation of meanings" of wealth, poverty, rationality and civilisation. Understanding finance as a particular political rationality effects such a shift of priority, by considering articulations of technical analysis and economic reality as major sites of power struggle. As I have argued, such understanding of finance emphasises the *discursive* nature of financial instruments, practices and rationalities. Money, credit and capital are, quite literally, systems of writing. This goes for the earliest forms of credit and bookkeeping money as much as for late twentieth-century definitions of capital. For instance, Mary Poovey (1998:56) argues that early modern bookkeeping, which forms the basis of current accountancy practices, was a rule-governed kind of writing which "tended to *create* what it purported to describe" (emphasis in original). She demonstrates that the systems of writing and numbering that made up bookkeeping not just actualised the categories it assumed to exist as prior economic reality, but also disciplined and regulated economic agency and credibility. "The formalising of accounting – its transformation into a codified system of public accountability – tended to privilege not just a rule-governed kind of writing but also the system of education and credentialing by which particular individuals (almost always men) were rendered obedient to such rules" (Poovey 1998:63). In modern capitalism, by comparison, international negotiations take place over the definition of capital, and the political effects of adopting one definition over another have made these negotiations anything but consensual (Kapstein 1989).

Thus, understanding the domain of finance as made possible through a particular political rationality ties in with recent work in international relations which rejects what Campbell (1993:7-8) calls epistemic realism, "whereby the world comprises material objects whose existence is independent of ideas or beliefs about them," in favour of "considering the manifest political consequences of adopting one mode of representation over another." This literature, which has broadly been called 'poststructuralism,'[20] asks how power is embedded in the way global politics

are represented, stressing "the linguistic construction of reality," and the "need to ground all knowledge of social life in human history, culture and power relations" (George and Campbell 1990:270). The agenda of dissent articulated by poststructuralism assesses the disciplinary politics of IR and the ways in which "analytic approaches privilege certain understandings of global politics and marginalise or exclude others" (George and Campbell 1990:285). The representation of anything as a coherent system of knowledge and action, whether it be global finance or the discipline of IR, requires the prior exclusion of doubts and disturbances. Poststructuralism is concerned with these marginal and excluded sites, which are marked off through definitions of "uncertainty, indeterminacy, darkness, disorder, turbulence, irrationality, ungovernability, terror, and anarchy" (Ashley and Walker 1990:262). Concern for the marginalised in global politics leads to the politicisation of limits and the way they are imposed, and thus to "questioning the time-honoured dualisms upon which modern theory and practice have long pivoted," such as male/female, politics/economics, theory/practice, cultural/material and realism/idealism (Ashley and Walker 1990:264). In this manner, poststructuralism breaks with conceptions that understand ideology as a false or misleading representation, and thus with the critical research agenda that seeks to "expose the rotten foundations" of politics (George and Campbell 1990:280). In other words, poststructuralism, as George and Campbell (1990:281) conclude, "concentrates less on attempting to secure emancipation through the unmasking of power, oppression, and ideology, and more – via detailed historical inquiry – on concrete examples of the way power is used in all of society's sites."

Critical questioning of the ways power is embedded in dominant representations of global politics and concern for the voices and spaces thus marginalised, has of course long been a prerogative of feminist theory.[21] Feminist authors have addressed the problematic nature of the IR discipline, which has framed its preoccupations in specifically masculine ways, under the guise of neutral and rational scientific inquiry. In IR, writes Jan Jindy Pettman (1996:viii), "the soldier, the citizen, the political subject and the state are gendered male." Feminist IR has accepted the

dual task of both including women's activities and traditional roles into the realm of legitimate IR study, *and* of questioning and disturbing the discursively constructed gendered hierarchies that underpin the ways in which we make sense of global politics. Instead of a biological division, feminist scholarship increasingly emphasises that gender differences are social, historical and discursive constructions which structure the ways in which we make sense of all aspects of life, including, as I will argue, finance (Butler 1992; Hooper 1999; Peterson 1997).

Feminist thought has been especially important in questioning the disciplinary separation between politics and economics, which is made possible in a web of binary hierarchies where "economics deals with concepts of the individual, activity, choice, and competition which are identified in our culture with masculinity," while the 'private' sphere is seen to be concerned with 'feminine' activities such as nurturing, sheltering and cooperation (Nelson 1996:26). The marginal framing of "basic needs and household subsistence," Runyan (1997:81) notes, "relies heavily on neoclassical separations of the economic from the political," which, as I have argued, are largely perpetuated in the literature of political economy. Raising social and political issues in economic debates, as Marchand (1996:258) argues with respect to the NAFTA, is rendered difficult because neoclassical economics "perceives these issues as departing from assumed standards of rationality and objectivity, and consequently view them as social issues, and thus of secondary importance or external to the economic model under discussion." As I argue in subsequent chapters, rational economic man, who is criticised in feminist scholarship, also underpins financial rationality and normality in a variety of ways. The profoundly gendered identity of financial man means that feminism cannot just be added on to existing explanations or financial instruments, but that feminist criticism provokes a radical rethinking of the financial domain.

In these critical approaches to global politics, the dichotomy between the worlds of the ideal and the material, represented by for instance Ruggie's brute facts or Gramsci's refractory reality, is no longer tenable. Indeed, as Jim George (1996:40) argues, such a dichotomy is discursively constructed in the IR and IPE orthodoxies themselves: "At the core of International

Relation's inadequate understanding of global political life is a dichotomised ontological logic that assumes into ritualised reality a distinction between a realm of empiricist 'fact' and a realm of 'theorised' knowledge derived in one way or another (i.e., either inductively or deductively) from it."

The focus on language and discourse and the problematisation of an objectively knowable reality within poststructuralist IR has led to some anxiety among colleagues who fear that "to embrace postmodernism would be to strip social science of the most important contribution that it can make to the betterment of human society: that contribution is to discipline power with truth" (Krasner 1996:124-125). Additionally, Krasner (2000:134) asserts elsewhere, "in an environment where normative constraints are weak, and where violent death, big time violent death, is always a possibility, actors ignore material resources at their peril." Krasner's mistake, however, is to confuse the rejection of a dichotomy between material reality and our ideas and beliefs about it, with a reduction to the study of 'merely' text, rhetoric and ideas. Thus Krasner maintains the dichotomy and assumes that poststructuralists are solely concerned with one side of the equation, namely the realm of the ideal. This is assumed also in recent critiques by Colin Wight (1999:315), whose wish that poststructuralists clarify their position on the "relationship between the world and the word, facts and values and theory and practice" assumes the unproblematic and prior existence of these binaries as opposing realms. Wight thus lodges the work of Campbell and George, amongst others, into the realm of the ideal, overlooking the fact that poststructuralism wishes to question these dichotomies in the first place (Patomäki and Wight 2000).

These disciplinary confusions can be illuminated with a recent essay by philosopher of science Bruno Latour (1999), which was provoked when a concerned interviewer asked him the question 'do you believe in reality?' "Is reality something like God," Latour (1999:1) wondered at this question, "the topic of a confession reached after a long and intimate discussion?" In fact, Latour explains, what his work questions is not 'reality' but the historically constructed

dichotomy between the world of the ideal and the world of the real, which subsequently has made possible the discursive abstraction of human passions, beliefs, hopes and fears from scientific endeavours. This discursive move, which Latour (and others before him) attributes foremost to Descartes, underlies the possibility of distinguishing the human mind, with all its weaknesses and passions, from the 'outside world,' which then can (or cannot) be positively known. "Only a mind put in the strangest position," Latour (1999:4) writes, "looking at the world *from the inside out* and linked to the outside by nothing but the tenuous connection of the *gaze*, will throb in the constant fear of losing reality" (emphases in original). George (1996:42-43) similarly traces the ideal/material dichotomy to Descartes and argues that this imagination of a "world out there" in IR means that "reality now becomes the realm of the unchangeable and inevitable."

However, if there were such distinction between the world of the ideal and the world of brute material reality in IPE, *where* would it be? And *how* would we know it? I have already noted the difficulties inherent in the process of counting (factories, workers, cities) proposed by Gramsci, as any process of counting requires definitions, categorisations and financial resources which puts it firmly into the realm of politics. In other words, whatever material reality Gramsci (and many others) have in mind is never knowable without human intervention and interpretation. The counting of factories becomes a priority only within a discursive framework which attributes a certain *meaning* to the existence of factories and workers, in Gramsci's case the meaning of class-struggle and emancipation. A similar argument can be made in response to Krasner's worries about 'big time violent death' in our uncertain political environment. In my understanding, the first poststructuralist who denies that realities exist in which people die as a result of a 'bullet in the head,' has yet to be located. What *is* contested, however, is the meaning of death and violence, particularly large-scale political violence. As Campbell (2001:444) puts it:

> the body lying on the ground, the bullet in the head, and the shell casing lying not far away – tells us nothing itself about the meaning and significance of those elements... For example, did the body and the bullet get to be as they are because of suicide, manslaughter, murder, ethnic cleansing, tribal war, genocide, a war of inter-state rivalry, or... ? Each of those terms signifies a larger discursive formation through which a whole set of identities, social relations, political possibilities and ethical outcomes are made more or less possible.

In comparison, Latour's (1999:27) scientific expedition in search of material reality found instead what he calls "circulating reference," whereby the processed information of each step in a scientific process forms a resource for the next step in a "chain of translation." Between language and nature (or the ideal and the real) says Latour (1999:24), "there is neither correspondence, nor gaps, nor [are they] even two distinct ontological domains." Latour (1999:24-79) follows the chain of translation through which the soil of an Amazon forest is investigated, collected, sampled, transported, numbered, measured, tested and analysed, to result in a scientific publication. Nor can we say that the actual Amazonian soil was the unmediated material input for this chain of reference. A process of meaning-making, scientific discussion and fund-raising preceded the expedition of these scientists, convincing them they needed *this* soil, in *this* forest, at *this* particular time, just as their final publication will form a resource for future expeditions, both their own and those of rival scientists.

The process of circulating reference, moreover, enables power to be exercised from what Latour (1987) has called "centres of calculation." These are scientific nodal points from which the chains of reference are commanded and in which their successive stages are overseen and collected. "Inside these centres," Latour (1987:232) writes, "specimens, maps, diagrams, logs, questionnaires and paper forms are accumulated and are used by scientists and engineers to escalate the proof race." Thus Latour shows not just that a dichotomy between the ideal and the material is untenable, but also that scientific processes are already implicated in particular modes of power which enable and prioritise certain scientific endeavours over others. "The truth of what scientist say," Latour (1999:97) says in conclusion, "no longer comes from their breaking away from society, convention, mediations, connections, but from the safety provided by the circulating references that cascade through a great number of transformations and translations, modifying and constraining the speech acts of many humans over which no one has any durable control."

If everything we know and take to be true or real is discursively mediated, are there, then, no constraints on our actions? If science is nothing but a discursive process, can we then imagine at will anything to be true, real, or scientific? Is it so, as Patomäki and Wight (2000:217) maintain, that in poststructuralism "the objects of a given discourse exist if the discourse says they exist," making "external criticism of the existential claims of discourses... impossible"?

On the contrary, says Ernesto Laclau (1990). Laclau calls the forgetting of political struggle and scientific controversies through which discursively constructed concepts gain the appearance of objectivity, 'sedimentation.' "Insofar as an act of institution has been successful," argues Laclau (1990:34), "a 'forgetting of the origins' tends to occur; the system of possible alternatives tends to vanish and the traces of the original contingency to fade. In this way, the instituted tends to assume the form of a mere objective presence. This is the moment of sedimentation. It is important to realise that this fading entails a concealment. If objectivity is based on exclusion, that exclusion will always be somehow present." Still, argues Laclau (1990:34), we cannot just revisit the "act of institution," in order to subvert objectified practices: "the moment of reactivation cannot consist of a return to the origins, to the historic system of alternative possibilities that were discarded." For, the passing of time has modified systems of possibilities, nor did political alternatives ever exhaust the field of possibility, nor can we ever precisely locate and identify 'moments' of decision. In other words, Laclau's sedimented objectivities, just as Foucault's political rationalities, cannot simply be 'wished away,' because they regulate, shape and constrain current actions, possibilities and identities. In Judith Butler's (1998:40-41) formulation, sedimented objectivities should not be understood as "merely cultural," but have become part of material life in the sense that they define legal "personhood" and operate the "gendered distribution of legal and economic entitlements."

Does all this then mean that scientific and statistical endeavours of defining, measuring, counting and calculating are futile and irrelevant? Does it mean we should "throw up" all academic investigation, because "testing can never be definitive and is often entirely irrelevant"

(Krasner 1996:124)? Again the answer is no. Here we must avoid the binary thinking that associates the criticism of a practice automatically with its designated opposite. As V. Spike Peterson (1992:187) notes: "critiques of reason, objectivity, and foundational ontologies are frequently understood as entailing their opposites: irrationality, subjectivity or relativism, and nihilism. But neither are these the only alternatives, nor are they the alternatives articulated by most post-positivists." As long as the politics of investigation and statistics are explicitly recognised and debated, academic endeavours remain legitimate ways of making (political) inquiries, even if research agendas may shift as a result of these recognitions. As Campbell (1998a:221-222) puts it: "Broadly speaking, poststructuralists and their allies see their works as interpretative interventions that have political effects, whereas the mainstream (in both its orthodox and relatively progressive guises) perceives itself as engaged in the objective pursuit of cumulative knowledge."

The indispensability of counting, measuring, debating, referencing and other ways of imagining reality, is perhaps most poetically discussed by Friedrich Nietzsche. In *The Gay Science*, Nietzsche wonders what the difference is between appearance (*Schein*) and essence (*Wesen*). How can we determine the true essence of an object behind its appearance, he wonders, before concluding that we cannot make such a distinction at all. The pretense of knowledge, according to Nietzsche, the distinction between appearance and essence is a kind of dance we perform to give meaning to our existence. Still, he deems it impossible for humans to stop dancing (or dreaming). Even if you think to 'know' that knowledge is a dream, you must keep on dreaming in order to be able to participate in daily life:

> What is 'appearance' for me now? Certainly not the opposite of some essence: what could I say about any essence except to name the attributes of its appearance! (...)
>
> Appearance is for me that which lives and is effective and goes so far in its self-mockery that it makes me feel that this is appearance and will-o'-the-wisp and a dance of spirits and nothing more – that among all these dreamers, I, too who 'know,' am dancing my dance; that the knower is a means for prolonging the earthly dance and thus belongs to the masters of ceremony of existence; and that the sublime consistency and interrelatedness of all knowledge perhaps is and will be the highest means to *preserve* the universality of dreaming and the mutual comprehension of all dreamers and thus also *the continuation of the dream.* (Nietzsche 1974:116, emphases in original)

A Genealogy of Finance

If Nietzsche is right and we must keep on dancing in order to exist, that does not mean that in IPE we can proceed as was the norm prior to poststructuralist interventions. As Laclau's concept of sedimented objectivities emphasises, the emergence of (economic) institutions and objectivities depends upon exclusions and concealments of political struggles and scientific controversies. These exclusions and concealments that render practices objective underpin a substantial "legitimacy deficit" in financial politics (Underhill 1997:19). As I will argue, finance has acquired a scientific and objective status in modern politics, closing off broad public debate on issues deemed technical and specialist. Questioning the sedimented objectivities that make financial science a possibility is therefore indispensable to broadening the democratic content of financial issues. Even if we can never revisit the *exact* origins of sedimented objectivities, Laclau (1990:35) argues, a reactivation of these struggles and controversies can demonstrate "the contingent nature of these so-called objectivities." Here the political and ethical agenda of poststructuralism is articulated: it (partly) consists of "making strange" or denaturalising the orders and possibilities that have taken on the appearance of necessity and objectivity (Gregory 1989:xiv). Quoting Foucault, Campbell (1998a:215) points out that a poststructuralist "ethos of criticism is thus far from being simply a negative and destructive enterprise. It is, as Foucault argues... 'a matter of flushing out that thought and trying to change it: to show that things are not as self-evident as one believed, to see that what is accepted as self-evident will no longer be accepted as such. Practising criticism is a matter of making facile gestures look difficult.'"

This project consists of a critique of present discourses of financial necessity, rationality and entitlement, through the reactivation of past struggles and controversies which have been excluded and concealed in order for finance to emerge as a rational and coherent sphere. This historical investigation is animated by what Foucault (1984a) calls a *genealogy*. A genealogy is not a search for the origins of finance but an account of the contingent, piecemeal and unsteady emergence of conditions of possibility for financial thinking. According to Foucault (1984a:78),

historians are all too often on a quest for origins, searching for "that which was already there... a primordial truth fully adequate to its nature." Conventional historical enquiry thus risks communicating that present orders are inevitably and evolutionary the way they are, result of a teleological unfolding of history. In contrast, a genealogy argues that no logical or evolutionary trajectory for the development of financial thought and instruments was implicit in history or human nature. In order to defy retrospective readings, a genealogy "will never neglect as inaccessible the vicissitudes of history. On the contrary, it will cultivate the details and accidents that accompany every beginning; it will be scrupulously attentive to their petty malice" (Foucault 1984a:80). I will show that the history of finance is ambiguously located in religious symbolism, colonial conquest, gambling, superstition and discourses of moral obligation, which still underpin the ways we make sense of finance today. However, these aspects have largely been *written out* of financial history, in order to maintain the carefully protected identity of modern rational finance (Foucault 1984a:78).

Much literature in political economy has eliminated all ambiguity and disturbances from its understandings of financial history. IPE thus presents the emergence of money and finance as what Shapiro (1993), quoting Erich Auerbach, calls a legend. A legend can be recognised because it "runs far too smoothly. All cross-currents, all friction that is casual, secondary to the main events or themes, everything unresolved, truncated and uncertain, which confuses the clear progress of the action and simple orientation of the actors, has disappeared" (Auerbach quoted in Shapiro 1993:56). Accordingly, Shapiro (1993:56) argues, a legend consciously or unconsciously aims at "silencing all tendencies subversive to the main, naturalising and legitimating story."

For instance, in her account of the emergence of the present monetary order, Strange (1988) presents financial history as a legend. After Strange (1988:93) rightly asserts that in order to criticise "the mix of values" prevalent in the current financial order it is helpful look at past financial orders, she presents the trajectory from a primitive to a developed monetary system far too smoothly. Strange's (1988:94) money legend can be demonstrated by a lengthy quote:

> A primitive economy, to begin with, makes very little use of money... The money economy is only a small part of the real economy... Money moreover tends to be in a form that can be seen and touched – asset money as the economists would say – not fiat or credit money. So it is apt to be some reasonably portable but scarce commodity – metal or shells or beads – over whose supply the ruler has little control.
>
> At intermediate stages in semi-developed monetary systems, the money economy begins to penetrate more of the real economy. Physical asset money becomes more sophisticated. Money is made into coins. (...)
>
> Next, banks appear. To begin with, they accept money or valuables for safe-keeping, give the depositor a receipt and allow him to draw on his deposit and settle accounts with third parties through the bank. Finding from experience that all the depositors will not want to draw money out at the same time, the banks lend, at a price, to others. The borrowers draw on their bank loans. Credit has been created. Pretty soon, the banks start printing 'promises to pay' beyond their liabilities to depositors and borrowers... As the number of banks and other specialised financial enterprises grow, the variety of forms of credit-money – what the bankers call 'credit instruments'— multiplies. Financial markets proliferate.

In Strange's legend, there is no mention of the confusions and disruptions to everyday life caused by money and credit as discussed by Braudel. Nor is there acknowledgement of the intense political controversies the appearance of credit produced in seventeenth-century England, and the gendered metaphors through which credit slowly became legitimised as discussed in chapter 2. Even when Strange (1988:98) does discuss periods of financial instability, these are made to appear like small regressions on the way to the modern international financial order.

Similarly, Cohen (1977) presents the historical emergence of money and finance as a legend. "The development of money," writes Cohen (1977:16-17),

> was one of the most important steps in the evolution of human society... Before money there was only barter, the archetypical economic transaction, which required an inverse double coincidence of wants in order for exchange to occur. The two parties to any transaction each had to desire what the other was prepared to offer. This was an obviously inefficient system of exchange, since large amounts of time had to be devoted to the necessary process of search and bargaining. (...)
>
> The introduction of generalised exchange intermediaries cut the Gordian knot of barter by decomposing the single transaction of barter into separate transactions of sale and purchase... This served to facilitate multilateral exchange; with costs of transactions reduced, exchange ratios could more efficiently equate the demand and supply of goods and services. Consequently, specialisation in production was promoted and the advantages of economic division of labour became attainable – all because of the development of money.

Cohen's story races without glitches, doubts or confusions from primitive times to the emergence of Adam Smith's liberal trading order, thus naturalising and legitimising the latter. Cohen's (1998:10-13) more recent work uses these same phrases to describe the emergence of monetary economies, but places more emphasis on the social bonds enabling the functioning of money. However, he still casts monetary exchange as a natural and evolutionary human practice,

which evolves from primitive forms and understandings to modern ones without encountering much resistance.[22]

Ron Martin (1994) provides a third example of the representation of financial history as a legend which naturalises present conditions by assuming a linear historical progression of financial innovation. Martin (1994:255-256) identifies three phases "in the historical evolution of the financial system of advanced capitalist countries," and presents these in tabular form. "[T]he earliest stage, associated with industrialisation," Martin (1994:255) explains,

> was essentially a 'regional' and 'bank-oriented' system, based on a network of regional banks using local resources of capital and saving to channel into private industry... To the extent that international movements of money took place, they were mainly associated with financing overseas trade. As the advanced capitalist countries moved into the mature stage of industrial development, so their financial system became much more spatially and organisationally centralised. In this second, 'national' or 'market-oriented,' phase, national capital markets largely replaced regional banks as sources of funds... The latest, contemporary, phase, associated with the passage to a late- or post-industrial era, marks the onset of a further shift in the nature of the financial system towards a 'transnational' and 'securitised' form. Capital and money markets are separating from industry, money has been commodified, and as national financial centres become increasingly globalised and globally integrated, it is now national monetary autonomy that is being challenged.

Martin presents a linear progressive history which dismisses all political debate, confusion, contingencies and reversals from the history of financial networks. His term 'historical evolution' accords to the financial sphere a self-propelling ability, which only ever proceeds in one direction and cannot be reversed. Martin leaves no possibility for different aspects of the historical phases to exist simultaneously in a given political order, except for a certain transition period in which, he notes, the phases may overlap.

Legends of monetary history, Jean-Christophe Agnew (1986) points out, arise partly because what we now call market exchange took place within a web of social actions that cannot be disentangled, and partly because of the lack of historical records of early motives for exchange. "The absence of documentation," Agnew (1986:17) observes, "is scarcely a deterrent for those who prefer to think of markets as the institutional expression of a natural human propensity to truck and barter. If anything, the seemingly magical appearance of markets in the landscape of antiquity tends to confirm this view of trade as a kind of socio-biological tropism,

suggesting, as it does, a spontaneous gravitational pull toward commodity exchange encoded deep within the cellular structure of primitive societies." In such a view, Agnew (1986:2) asserts, "an event such as the establishment of the Royal Exchange in London in 1658 is... but a more complex and sophisticated variation of transactions carried out elsewhere with yams, shells and salt."

In contrast to such retrospective readings of market exchange, Agnew documents the cultural webs of meaning within which concepts of the modern market emerged, demonstrating a close historical connection between the ways in which meanings of the market and the theatre evolved in sixteenth- and seventeenth-century England. The confusions and disruptions wrought on social relationships through the emergence of a credit-economy were comprehended and made sense of in the realm of the theatrical. Thus Agnew shows that Boggs's performances are not as alien to the financial sphere as the Bank of England argues. Late Medieval fairs, that are now regarded as the earliest incarnations of the modern market, were carnivalesque marketplace festivals during which money was ridiculed with "mock coinage passed from hand to hand" (Agnew 1986:35).

Similarly, Braudel's work documents the non-linear histories of monetary networks, showing that various forms of money, barter networks, silver and gold coin, paper money and credit existed side-by-side instead of as subsequent stages of monetary evolution. Barter and 'primitive' currencies, Braudel (1981:444-445) argues, were perpetuated in many countries long after the emergence of monetary economies: "Under the thin surface of monetary economies, primitive activities continued and blended into the others in the regular meetings at town markets, or in the more concentrated atmosphere of trade fairs. Rudimentary economies survived in the heart of Europe, encircled by monetary life which did not destroy them but kept them as so many internal colonies within easy reach" (c.f. Shapiro 1993:57). Even in the modern globalised economy, it is not difficult to distinguish networks of barter and informal exchange existing alongside sophisticated financial networks. Nor does modern money exist as a

homogenous and uniform entity. Zelizer (1994) documents that social differentiation of money takes the shape of, for instance, vouchers, gift certificates, tips, bribes, donations, fees and alimony.

Within IPE, a non-linear and non-teleological understanding of history as documented by Braudel is promoted by Germain (1997; 1999). Instead of understanding globalisation as the logical outcome of an unfolding historical processes, Germain (1999:73) argues, we must understand it as including a number of social practices which have existed in various guises throughout history: "globalisation did not enter the historical tunnel in the fifteenth century destined to exit in full running order in the twentieth century." Following Braudel, Germain (1999:78-79) discusses different but co-existing domains of commercial activity, which are "constructed around competing sets of social practices," in contrast to understandings of "the market economy [as] a homogenous and indivisible set of social relations." Such a differentiated model of market relations, then, defies rather pessimistic Gramscian readings of capitalist world order in which all aspects of life (ideas, institutions and material resources) converge to form a universalised hegemony. Germain and Kenny (1998:18) challenge the reading of hegemony as a "one-directional power relationship: hegemony is fashioned by this elite transnational class on its own terms and then forced or imposed on subaltern classes. These subaltern classes in turn either resist such frontal assaults as best they can or capitulate." For Germain and his colleagues, then, a Braudelian understanding of history goes hand in hand with problematising historical processes of class-based politics in favour of an "awareness of the multiple potential allegiances which individual agents may hold" (Amoore et al. 2000:64). Instead of a smooth and legendary understanding of history in IPE, which objectifies history as "a quarry for the social sciences," they propose that IPE is sensitive to *historicity*, which is entangled with the historical constitution of identity, consciousness and knowledge (Amoore et al. 2000:56-58).

A genealogy of finance ties in with such a Braudelian understanding of historicity in two ways. First, as the arguments on political rationality and economic citizenship outlined above

demonstrate, a genealogy of finance does not assume economic agency and interests, but enquires into their historical constitution. I will discuss the ambiguous and contested formulations of financial responsibility, rationality and agency that were put forward in order to make sense of and politically legitimise emerging credit networks. Secondly, a genealogy of finance challenges the imagination of finance as a rational and coherent whole, and the imagination of financial hegemony as a one-directional power relationship, by being attentive to the weaknesses, resistances and complications in financial discourses. These weaknesses and exceptions mean that financial power or rationality *are never completely established*, but are subject to continuous rearticulation and reaffirmation by financial practitioners. A genealogy, then, replaces linear, teleological and evolutionary accounts of history with the complexity, multiplicity and discursivity of historicity.

If, as I have argued throughout this chapter, value is dependent on interpretation, can we then discern, through genealogy, a number of founding acts which gave meaning (and value) to our current financial concepts? Laclau's arguments cited above suggest that this is not the case; for we can never reconstruct the alternatives of the past, nor can we clearly identify moments of decision, nor are historically discarded options the only weaknesses in present rationalities. We can, however, reread the historical controversies and political struggles which slowly and contingently produced the meanings that are in many instances unquestioned today. Some of the ways in which these discourses were stabilised may even be discernible as 'moments,' for instance when legal decisions succeeded in fixing the meaning of contested concepts, after which controversies slowly refocused. This happened, for example, when the US Supreme Court in 1905 formalised a certain demarcation between gambling and finance which had been contested and resisted for decades previously. Still, we must be careful not to portray the Court's decision as a solitary and definitive act in history, but understand it within the historical constellation of discourses which made it possible and attributed authority to it. The historical emergence of financial rationality, borrowing Foucault's terms, "must not be seen as a sudden discovery. It is

rather a multiplicity of often minor processes, of different origin and scattered location which overlap, repeat, or imitate one another, support one another, distinguish themselves from one another according to their domain of application, converge and gradually produce the blueprint of a general method" (Foucault 1979:138). A genealogy must follow the contingent, erratic and complex historical processes "that gave birth to those things that continue to exist and *have value for us*" (Foucault 1984a:81, emphasis added).

Finally, and most importantly then, a genealogy is an inquiry into financial history which is "a history of the present" (Foucault 1989a). It looks for and emphasises the weaknesses of present political rationalities, which are "not systemic contradictions, but rather, effects of fragmented histories, colliding discourses, forces that prevailed without triumphing, arguments insecure about themselves" (Brown 1998:45). The genealogy of finance that follows, then, will demonstrate that financial rationality is less sure of itself and its discursive groundings than linear histories allow. If the distinction between gambling and finance, for instance, remains tenuous and insecure, we may imagine consciously determining the boundaries after which legitimate finance becomes illegitimate gambling. If the definition of financial indicators can be shown to be arbitrary and unfounded in historical necessity, a redefinition of such indicators may be thought possible which includes, for instance, measures of child poverty. If the boundaries of the sphere of finance are shown to be less fixed and rigid, moreover, the legitimacy of broad public debates on financial issues may be restored. In this manner, the social and gendered effects of financial practices may be addressed. "If everything about us is the effect of accident rather than will or design," Brown (1998:36) says, "then we are, paradoxically, both more severely historical and also more malleable than we would otherwise seem. We are more sedimented by history, but also more capable of intervening in our histories."

The object of this thesis is to give an account of the historical imagination of finance as a rational, coherent and respectable sphere, in which, nonetheless, the 'irrational' exclusions and concealments are always present. It will do so by resisting linear and frictionless histories of

finance, which either disregard financial politics and controversies, or interpret these as inevitable and irresistible eruptions of the modern monetary order. The next chapter will begin by rereading the political struggles and debates surrounding the emergence of the national debt in seventeenth-century Britain. It will argue that the gendered juxtaposing of financial man's virtue and *Lady Credit's* irrationalism opened the possibility for the emerging financial sphere to be considered a natural and rational practice.

Notes to Chapter 1

[1] Michel Foucault (1989) [1980] 'The Masked Philosopher,' in *Foucault Live: Collected Interviews 1961-1984*, edited by Sylvère Lotringer. New York: Semiotext(e), p.305.

[2] OECD *Economic Survey of the United Kingdom*, Paris, June 2000:
http://www.oecd.org/eco/surv/esu-uk.htm
See also the *Financial Times*, June 11 2000, 'OECD's favourable marks for the economy.'

[3] Although the Blair government has publicly made the issue of child poverty in Britain a priority in its policies, it has recently come under severe criticism for the remedies it has offered to poor families with children. In April 2001, a committee of MPs published a report severely attacking the emergency loans scheme which is "intended as a lifeline for the poorest in society." Instead of helping financially excluded groups, the report argues, the social fund is "adding to the poverty and social exclusion of families with children by plunging them further into debt and denying them access to basic necessities" (Ward 2001:10). The government's emphasis on loan funds instead of benefits in its policies towards socially and financially excluded constituencies remains part of the concepts of economic performance and priorities being criticised here.

[4] Staniland (1985:100) documents that IPE became articulated as a strand of inquiry within international relations when material and political developments in the 1960s and 1970s "undermined some key concepts and assumptions of particular [international relations] approaches... [and] subverted the premises on which disciplinary separation itself [rested]." Thus, IPE became preoccupied with integrating the 'low' politics of international trade and economic relations into the traditional study of the 'high' politics of diplomacy and strategic affairs. Defining IPE as a coherent field of study is not the object of this section. However, works considered among its founding influences are Cohen 1977; Gilpin 1987; Strange 1988. Overviews of the history of IPE can be found in Dombrowski 1998; Germain 1997:1-12; Gill and Law 1988:1-24; Hettne 1995; Jackson and Sørensen 1999:175-216; Krasner 1996; Staniland 1985.

Gill and Law (1988:3) are right to point out that "the roots of IPE go back centuries" and cannot simply be located in the 1970s. This is supported by Staniland's (1985) study of the historical connections between IPE and earlier strands of political economy. Still, as Krasner (1996:108-110) points out, IPE became a sub-field of study within the discipline of international relations in the 1970s, when the importance of economic relations within the international order became increasingly recognised. Academic courses in IPE proliferated in this decade.

[5] *Encyclopaedia Britannica* online. Available at: http://www.britannica.com/

[6] A large section IPE literature notes this break with the Bretton Woods order, when finance was 'servant,' rather than 'master' of the international economic order (these terms are from Helleiner 1993). Other sources are, for instance, Cerny 1993, 1994, 1995; Helleiner 1994; Murphy 1994; Ruggie 1998, chapter 2; and the 1994 special edition of *Policy Sciences* 27 (4). Although this literature has offered important criticisms of the present economic order, it has also installed in IPE a profound 'Bretton Woods nostalgia,' by assuming the Bretton Woods era to be a kind of 'golden age.' It has to be recognised however, that the Bretton Woods era and Fordism more generally, had their own weaknesses and inequalities, for instance the gender inequality promoted by Fordism's concept of the family wage. The problematic representation of finance as an autonomous mastering force and the concomitant nostalgia for the Bretton Woods era will be further discussed in chapter 6.

[7] Thanks to Martin Coward for pointing out this particular criticism of Krasner to me. Important critiques of this article by Krasner can also be found in Campbell 1998c:5-8 and Tooze 2000. Tooze (2000:182) points out that Krasner's arguments are themselves "a statement of power – the power to define what is legitimate social knowledge," instead of the objective observations they purport to be.
[8] Krasner (1996:122) does admit to the existence of the literature on epistemic communities, but offers a very conservative interpretation of it. He praises epistemic communities researchers for having been able "to isolate the independent impact of ideas."

[9] Sources on epistemic communities include Helleiner 1994, chapter 9; Ruggie 1998, especially chapters 2, 3 and 7; Kapstein 1989; and the 1992 special issue of *International Organization* 46 (1) which includes articles by Haas, Adler and Kapstein.

[10] Ruggie (1998:90-91) does go on to say that brute facts are "mediated by concepts and theories," but does not address this issue further. In the following section he simply assumes that brute facts form the bases of causation, and are separate from, for instance, "beliefs, desires, hopes and fears" (Ruggie 1998:90-91).

[11] This literature includes, for instance, Chandler et al (ed.) (1991); *Gigerenzer et al (1989); Megill (ed.)* (1994); Poovey (1998) and Shapin (1994).

[12] Other sources included in Gramscian IPE are, for example, Agnew and Corbrige 1995; Cox and Sinclair 1996; Gill (ed.) 1993; Gill and Mittelman (eds) 1997; Hettne (ed.) 1995.

[13] Let me emphasise that this critique does not imply a irrevocable rejection of Gramscian IPE and the political agenda Cox, Gill and others have advanced. I agree with William Connolly (1995:208) who says: "I... suspect that Foucauldians and post-Soviet Marxists need each other, with the former exploring the logic of disciplinary power while pursuing a social ideal that significantly corrects the Marxian ideal of community, and the latter focusing critically on the dynamics of capital, commodification, and differential labour power in ways that remain highly pertinent."

[14] At this point in his text, May (1996:184-185) goes on to regret, rightly in my view, Strange's failure to engage with questions concerning power, knowledge and truth articulated by Michel Foucault. May, however, does not take this argument further, or elaborate precisely how Foucault's insights bear on Strange's concepts of power and knowledge.

[15] This argument has earlier been made by Saskia Sassen, who rejects the view that the global economy in general and financial markets in particular exist unhindered by geographic location and infrastructure. Sassen (1995:32) writes, "the global economy materialises in concrete processes situated in specific places, and that holds for the most advanced information industries as well." See also Sassen 1991; 1994.

[16] Thus defined, enquiry into the particular political rationality of financial practices has similarities with enquiries into structural power as articulated by Cox, Gill, Strange and others. Structural power is defined through its consensual rather than coercive nature, and comprises the powerful processes by which certain

interests are articulated as universal interests (for a definition of structural power see Gill and Law 1988:73-75). Still, one important difference is that a concept of political rationality places more emphasis on the weaknesses, uncertainties and insecurities of a given order, while concepts of structural power and hegemony seem to entail an overarching and strictly one-directional relationship to which resistance is often futile. These differences are further discussed later on in this chapter as well as in chapter 6. For a critique of Gramscian hegemony see Germain and Kenny 1998.

[17] Sources which apply Foucault's notions of power to the economic domain include: Burchell, Gordon and Miller (eds) 1991; Dean 1995; Hopwood and Miller 1994; Miller and Rose 1990; and the 1993 special issue of *Economy and Society*, 22 (3).

[18] However, in Foucault's work, 'modern' must be seen as an attitude instead of a clearly defined period of history (Campbell 1998a:214).

[19] Sinclair draws here on the work of Campbell (1996:24), who has argued for an inclusion of every day experience into the study of IR more broadly: "I contend that for international relations to be about world politics in our postmodern time it should incorporate a prosaics of everyday life and order to replace the Olympian detachment and reifications of the sovereignty problematic."

[20] Overviews of poststructuralism can be found in Shapiro and Alker (eds) 1996; DerDerian and Shapiro (eds) 1989; George 1994; and the 1990 special issue of *International Studies Quarterly* 34.

[21] Including Bakker 1994; Brown 1988; Koffman and Youngs (eds) 1996; Nelson 1996; Pettman 1996; Runyan 1997; Peterson 1992, 1997; Peterson and Runyan 1993; Tickner 1992.

[22] Cohen (1998) does discuss the difficult emergence of national currencies and notes that these are a much more recent phenomenon than is often assumed. However, he assumes the unproblematic existence of international currencies for centuries: "The first genuinely international currency, the silver drachma of Athens, established its predominance as early as the fifth century B.C.E" (Cohen 1998:29).

CHAPTER 2

Mastering Lady Credit:

Virtue and Fortune in Eighteenth-Century Finance

With what rimes and what verses shall I sing of the kingdom of Fortune and of her chances favourable and adverse? (...)
By many this goddess is called omnipotent, because whoever comes into this life either late or early feels her power.
She often keeps the good beneath her feet; the wicked she raises up; and if ever she promises you anything, never does she keep her promise.
She turns states and kingdoms upside down as she pleases; she deprives the just of the good that she freely fives to the unjust.
This unstable goddess and fickle deity often sets the undeserving on a throne to which the deserving never attains.
She times events as suits her; she raises up, she puts us down without pity, without law or right (...)
Usury and fraud enjoy themselves with their crew, powerful and rich.

Niccolò Machiavelli[1]

The Financial Revolution

The previous chapter has argued that the representation of financial history as a legend, in which the use of shells, the minting of coin, the invention of paper money and the creation of credit are seen as logical subsequent steps in monetary evolution, abstracts modern financial instruments from their political, and often violent, histories.[2] In contrast, this thesis starts from the premise that 'finance' as a distinct domain of human thought and action did not evolve naturally, fuelled by the increasing sophistication of Medieval marketplaces. Foucault (1994:166-167) has warned against "retrospective readings" of economic history which reconstruct "the enigmatic birth" of political economy as springing up in Western thought "fully armed and already full of danger, at

the time of Ricardo." Foucault (1994:167) points out that economic historians frequently assume that "a scientific economics had for long been impossible by a purely moral problematics of profit and income (theory of the fair price, justification or condemnation of interest)... But then the eighteenth century is supposed to have provided the essential distinctions and outlined some of the great problems that positivist economics subsequently treated with tools better adapted to the task: money is supposed to have revealed in this way its conventional – though not arbitrary – character." This, according to Foucault, is a retrospective reading by twentieth-century historians, for whom the distinction between the domain of the moral on the one hand, and the domain of the economic on the other, has become naturalised. Thus, they dismiss the moral and religious discourses surrounding the emergence of financial practices as historical aberrations, and delegate them to the footnotes.[3] In contrast, Foucault's argument implies that we cannot abstract the birth of financial networks from the moral, political and religious practices through which they have taken shape.

This chapter will look at the beginnings of finance through their historical and cultural articulations. The term 'finance,' derived from the French *finer*, means "to end, to settle a dispute or a debt [or to] pay ransom."[4] Thus, *finance* refers to a settlement with a creditor or the payment of a debt. During the sixteenth century, the term was used to denote the borrowing of money at interest, as in the following *OED* entry from 1552: "The Emperor... sought... to have what he could by finance and other means." Finance came to mean a tax, taxation, and, more generally, the revenues of a sovereign or state. While *finances* can refer to the pecuniary resources of a company or an individual, the *OED* notes that this term refers primarily to the resources of a sovereign state. Two themes thus stand out in these *OED* entries on finance. First, finance and credit are linked in the earliest uses of the term: 'to finance' refers to the ending or settlement of the relation between creditor and debtor. In this context Strange's (1990:259) definition of finance as "the system by which credit is created, bought and sold" seems particularly relevant. Secondly,

the *OED* emphasises the relation between finance and authority: 'finances' refers to a tax or the monetary resources of the sovereign, emperor or state.[5]

Thought of as the emergence of instruments of credit, which were tied to the possibility of the creation of revenue by the sovereign or state, it becomes clear that the history of finance is intimately connected to the reconstitution of politics and power in early modern Europe. In particular, rather than a natural or logical step in human history, the invention of credit, shares, stocks and other financial obligations is inextricably tied to European colonialism and the organisation and practices of conquest (Germain 1999:76-77). "The origins of these assorted financial innovations in Western Europe," Larry Neal (1990:9-10) writes in his history of financial capitalism, "derive fundamentally from the overseas discoveries and the emergence of long-distance trade. Not only were the mental horizons of Europeans broadened by the discoveries, but also their time horizons were lengthened by the duration of the voyages." Transformed perceptions of time were a condition of emergence for sophisticated financial instruments. Credit and shares made it possible to finance voyages and expeditions whose time spans and risks were unknown, involving complex new articulations of time and space which became translated into monetary values (Thrift and Leyshon 1997:294).

When in the early seventeenth century the Dutch East India Company (the *Verenigde Oost-Indische Compagnie*, or VOC) stipulated that subscribers to its shares could not demand their capital back but instead could retrieve their funds by selling the shares to third parties, the credit certificates, shares and tickets used to finance expeditions became marketable in themselves (Neal 1990:45). The Amsterdam *Beurs* (stock-market) emerged as a secondary market for the shares of the VOC. Similarly, in seventeenth- and eighteenth-century England, secondary markets in credit certificates grew up around the ventures of joint-stock companies such as the Royal Africa Company and the South Sea Company. It is important to note that in joint-stock companies, politics and economics, or state and finance, were inextricable. "National rulers," Burch (1994:50) points out, "solicited, promoted, and often created large (joint-stock) companies in order to

address the chronically destitute, nearly insolvent character of crown/national finances. The crown extended property rights and granted privileges (grants, charters, exemptions) primarily to induce companies to act on behalf of foreign policy interests." Or as Carswell (1960:53) puts it in his history of the South Sea Company, "politically speaking the South Sea Company was a marvellous synthesis of finance, commerce and foreign policy."

Joint-stock companies received monopoly concessions to conduct trade and conquest in the name of a state, and it was not rare for these monopolies to concern the slave trade. The Royal Africa Company (RAC) was chartered in 1672 with a thousand year monopoly on African trade, with the specific purpose to impede Spanish and Portuguese trade in Africa and to open the way for British slavers. The RAC was empowered to "deal in slaves, gold and silver, and to establish forts and factories at appropriate places on the African coast" (Palmer 1981:5). The monopoly charter meant that the RAC could seize foreign (mostly Spanish and Portuguese) ships in the name of the English crown.

Also the South Sea Company, the shares of which would incite one of the first instances of what we now call financial speculation, was a slaving enterprise. At the settlement of Utrecht in 1713, the British Crown was granted an *Asiento* contract or the right to supply the Spanish Caribbean islands with slaves for thirty years. Queen Anne sold the *Asiento* contract to the South Sea Company, which had been chartered in 1711 with a monopoly on trade with South America "forever" (Palmer 1981:10). The South Sea Company chartered private ships or fitted out its own ships for the slave trade, and in 1714 at least seven of its own ships sailed, "among them the *Hope* and the *Liberty*... with commissions for no less than 2,680 slaves. To finance them the company raised £200,000 in bonds" (Carswell 1960:66). Between 1714 and 1738, at least 134 slave ships of the South Sea Company sailed to the West African coast (Palmer 1981:31). This triangular trade, in which English ships sailed from the African coast to deliver slaves to the West Indies for Spanish and British plantations, and brought back bullion, spices, sugar and slaves to the ports of London, Bristol and Liverpool, was both made possible by innovations in long-term credit, and

fostered banking and financial trading networks in the homeports. Well-known British banking houses such as Barclay and Baring have their origins in the triangular trade (see Williams 1944).

Thus, a system of public borrowing was developed which allowed the English state to tap into the savings of its population in order to finance imperial conquest and the war against France. Susan Strange (1999:347) has argued that the international economy as we now understand it consists of the unique combination of "a political system based on territorial states" and an "economic system based on markets and profit." So defined, the invention of state credit and national debt in seventeenth-century Britain can be regarded as monetary transformations which inaugurated modern finance. "[T]he big breakthrough for states," Strange (1999:347) argues, "came at the turn of the [seventeenth] century with the introduction of a new kind of money – state promises-to-pay. Two Scots, John Law and William Paterson, both saw that by this means money could be created with which to replenish the resources of the state by issuing pieces of paper carrying the 'guarantee' of the monarch."[6]

In fact, P.G.M. Dickson (1967) argues that the second half of the seventeenth century saw the development of institutionalised finance and public credit in England on an unprecedented scale, causing a veritable 'Financial Revolution.' This revolution can be understood as a rapid and critical transformation of English society from a feudal aristocratic one to a commercial and trade-oriented one, and underpinned the development of London as the principal financial centre in the world. The financial infrastructure that was required for this large-scale government borrowing fostered financial innovations such as new partnership banks, new insurance offices and sophisticated trade in stocks and debt certificates (Dickson 1967:11). As Pocock (1975:426) explains: "the shares, tickets, or tallies entitling the possessor to a share of repayment from the public funds became marketable property, whose value rose and fell as public confidence in the state's political, military and financial transactions waxed and waned."

The birth of secondary markets in the shares, tickets and certificates of the national debt and joint-stock companies such as the South Sea Company was anything but smooth or

uncontroversial. Trading in the stock of the South Sea Company soared in 1719-1720 and the ensuing confusion generated the still current metaphor of a 'bubble' to make sense of financial trading. Much has been written about the nature, origins and causes of the South Sea Bubble.[7] The point to be stressed here, is that the South Sea Scheme was not a self-fulfilling financial crisis, the punctuation of which was inevitable (as the bubble-metaphor implies), but a political struggle over the proper meanings, legitimacy and possibilities of the new secondary markets in shares and credit. The sale and resale of credit certificates was highly controversial and created moral as well as legal problems. Rotman (1987) documents how the invention of anonymous and transferable paper money and promissory notes broke English law, which stipulated that a contract had to be between (two) named individuals. Legal turmoil centred on "whether or not, in other words, the practice of making bills (payable to bearer) transferable without a slow and expensive assignation, or even any endorsement, should be permitted" (Rotman 1987:49).

Thus, no logical or evolutionary trajectory for the development of financial thought or rationality was implicit in the monetary innovations. Even more than the invention of financial instruments, then, the financial revolution must be thought of as the articulation of moral and political spaces in which these instruments became possible and condoned. Such approach places the political debates surrounding credit at the heart of the development of financial institutions, instead of being secondary to 'objective' economic or financial transformations.

This chapter centres on the political and moral discussions which accompanied the financial revolution. The following section will argue that Daniel Defoe's contribution to these debates provides a unique insight into the creation of moral and social space in which the new financial instruments could become legitimate and condoned. I will analyse Defoe's *Lady Credit* as the irrational but tempting force in finance, not unlike the ancient goddess *Fortuna* who ruled capriciously over the affairs of men. The following sections will examine how Defoe and others prescribed possibilities for mastering *Lady Credit*, revolving around virtuous government of self, business and family, epitomised by accounting as double-entry bookkeeping. The chapter will

conclude by arguing that these historical representations still underpin the way we make sense of financial crisis today, as exemplified by debates surrounding the recent Asian financial crisis.

Credit and Fortuna

At the time of their invention, paper money and credit were regarded as morally conspicuous instead of naturally beneficial. The concepts of promise and pledge underlying credit were seen to deliver England to the whims and fancies of its emerging financial class. Thus credit became a focus of political struggle and satirical debate in this period. Pocock (1975:423-505) documents a peak in these 'paper wars' between 1698 and 1734. The paper wars were conducted by a number of legendary British authors, including Daniel Defoe, Jonathan Swift and Alexander Pope.[8] These debates have generally been understood as expressing the political confusions around the transition from feudal society, in which wealth was visibly embodied in land, to a commercial and trading society, in which wealth was more intangibly located in the mechanisms of credit-creation (Pocock 1975, 1985; Nicholson 1994; Sherman 1996).

This chapter focuses on Daniel Defoe's contribution to the paper wars and his imagination of credit as a "female inconstant" (Nicholson 1994:10). Catherine Ingrassia (1998:24) has documented how public discussion surrounding the new credit structures and the South Sea Bubble centred around sexual metaphors and female allegorical "figures of disorder." According to Ingrassia, the new financial activities unsettled the entrenched gender orders, exemplified by the many women who invested in stocks, shares, lottery tickets and other paper instruments of wealth. The desirable and seductive wealth of speculation became represented by images of women and goddesses, frequently of loose sexual morals. Descriptions of credit, Ingrassia (1998:26) argues, embodied "many associations of negative and stereotypically female qualities [such as] avaricious sexuality, emotional instability [and] hysteria."

The representation of credit as an "inconstant, often a self-willed but persuadable woman" was used by both the opponents and defenders of the new credit structures, and was not an invention of Defoe's (Nicholson 1994:xi). In 1698, political economist Charles Davenant was the first to project credit as an autonomous and inconstant agency. "Of all beings that have existence only in the minds of men," wrote Davenant, "nothing is more fantastical and nice than Credit; it is never forced; it hangs upon opinion, it depends upon our passions of hope and fear; it comes many times unsought for, and often goes away without reason, and when once lost, is hardly to be quite recovered" (quoted in Pocock 1975:439). Similarly, in 1711 Joseph Addison wrote in *The Spectator*:

> [When] I returned to the Great Hall [of the Bank of England]... to my Surprize, instead of the Company that I left there, I saw towards the upper end of the Hall, a beautiful Virgin seated on a Throne of Gold. Her Name (as they told me) was *Publick Credit*... Both Sides of the Hall were covered with such Acts of Parliament as had been made for the Establishment of Publick Funds... Behind the Throne was a prodigious Heap of Bags of Money... The Floor, on her right Hand and on her left, was covered with vast Sums of Gold that rose up in Pyramids on either side of her (quoted in Dickson 1967:xxi, emphasis in original).

As a final example, Jonathan Swift's *Voyage to Laputa* (the third book of *Gulliver's Travels*) is reputed to be inspired by the Spanish word for whore. Swift was a fierce opponent of public credit and *Voyage to Laputa* represents Gulliver's trip to a land driven to madness by the desire for constant enrichment, jeopardising all value systems. *Laputa* thus symbolises another form of compromised morality for the sake of instant wealth (Nicholson 1994:102).

With this rhetoric, the paper wars fought in the pages of *The Spectator* and *The Tatler* adhered to a tradition of sexualised public discourse. For instance, in the early seventeenth century Francis Bacon had constructed 'Nature' as a female which had to be subdued and mastered by the male scientific mind. "I am come in very truth," Bacon instructed the scientific observer "leading you to Nature with all her children to bind her to your service and make her your slave" (quoted in Lloyd 1984:12). Evelyn Fox Keller (1985:33-42) has argued moreover that Bacon's projection of Nature as a female to be mastered and controlled underlies modern conceptions of science and scientific facts.

Defoe's sexualised references in his many writings on credit were thus not original nor unique. What *was* unique about Defoe's work was that he used these sexual metaphors in order to articulate a new conception of morality in which the nascent credit structures would be able to flourish. He denied that there was any need to return to a "precommercial morality," as many of the paper war participants including Swift desired (Pocock 1975:435). In the place of the visibility and sturdiness of wealth embodied in land, Defoe conceded the possibility of wealth based on circulation and credit. Money-as-pledge could provide a basis for sturdy financial structures, Defoe argued, on the precondition of a gentlemanly ethic. Thus, Defoe provided a uniquely modern defence of investing society preceding the work of Adam Smith that is often taken as a starting-point for modern economic rationality (f.i. Williams 1999). As such, Defoe's work is well positioned to give us insight into the discursive foundations of the modern financial economy as defined by Strange (1999).

Defoe's personification of credit embodies all the irrational, fantastical, passionate and irresponsible elements that Swift and other participants in the paper wars attributed to the new credit-based economy. Defoe's introduction of *Lady Credit* in a 1706 issue of his *Review of the State of the English Nation* is worth quoting at length to consider her complicated and ambiguous character:

> Money has a younger Sister, a very useful and officious Servant in Trade, which in the absence of her senior Relation, but with her Consent, and on the Supposition of her Confederacy, is very assistant to her;... but if she be never so little disappointed, she grows sullen, sick, and ill-natured, and will be gone for a great while together: Her name in out Language is call'd CREDIT, in some countries Honour, and in others, I know not what.
>
> This is a coy Lass, and wonderful chary of her Self; yet a most necessary, useful, industrious creature: she has some Qualification so particular, and is so very nice in her Conduct, that a World of Good People lose her Favour, before they well know her Name; others are courting her all their days to no purpose, and can never come into her Books.
>
> If once she be disoblig'd, she's the most difficult to be Friends again with us, of any thing in the World; and yet she will court those most, that have no occasion for her; and will stand at their Doors neglected and ill-us'd, scorn'd and rejected like a Beggar, and never leave them (Defoe 1706a:17-18; quoted in Pocock 1975:452-453).

In this introduction, *Lady Credit* displays a whole range of potentially unpleasant feminised characteristics. Although she is fundamentally good-natured, nice and useful, she is also stubborn

and sulky. She is a 'Coy Lass,' meaning that she is shy and quiet in a tempting way; she is attractive and innocent, but mature enough to know how to use her attractiveness, coquettishly inviting the public men to play. In typical female fashion, she desires those who 'have no occasion for her,' while ignoring the men who court her 'all days.'

Lady Credit's fickle and unpredictable behaviour were a consistent theme in Defoe's writings on finance, and he tells a story of a sexualised warfare in which she has to be conquered and possessed. Thus, the image of credit as a spoilt mistress returns in various issues of the *Review*, for instance in Defoe's (1709b:126) discussion of her behaviour during the Reign of Queen Anne, when the Lord Treasurer "made her the compliment... effectually to convince her, that her Majesty *had no Occasion for her*— This is one of the best ways to get full Possession of her; for as once to want her, is entirely to lose her; so once to be free from Need of her, is absolutely to possess her" (emphasis in original). On another occasion, Defoe (1709a:123) advises those who desire her not to spoil her: "Pay Homage to this Idol, I say, and be very tender of her; for if you overload her, she's a coy mistress, she'll flip from you without any warning, and you'll be undone from that moment."

By drawing out the ambiguous and fickle character of *Lady Credit*, it can be made clear not only how Defoe and his contemporaries perceived the problematic nature of institutionalised credit, but also how a moral justification for credit, based on a long lineage of political thought concerning public virtue, was constructed. In the enormous amounts of Defoe's writings, *Lady Credit* appears alternately as a innocent lady, a virtuous virgin or a gentlewoman on the one hand, and a spoilt flirt, a demanding mistress, and a prostitute on the other. She displays various degrees of (sexual) activity, from being an "absolute and despotick" governess (Defoe 1706a:18), to being a passive victim of the concoctions of various political fractions. Pocock (1975:454) has traced *Lady Credit's* literary development from inconstant mistress to a "stabilising, virtuous and intelligent agency." In contrast, Sandra Sherman (1996:51) has suggested that credit eventually becomes and remains a whore in Defoe's writings (see also Backscheider 1981:95). However, *Lady*

Credit's true nature is best understood by her ambiguousness and malleability; if she has a distinct essence at all, it is entirely informed by her inconsistencies.

The inconsistent and malleable essence of *Lady Credit's* character can be elaborated and understood in the historical context of political theory by re-examining Pocock's (1975:453) suggestion that *Lady Credit* is a reincarnation of the ancient goddess *Fortuna*. Fortuna, the mistress of chance and luck, has a long historical lineage; Aristotle attributed to her the task of doling out earthly goods such as wealth, health and beauty. Her main characteristics were capriciousness and fickleness, and although man could attempt to please and honour her, he was never guaranteed success. Thus, she was at once impartial and unfair: all were equal before Fortuna, but she gave no special rewards for those who worked hard, or were of good moral standing (Daston 1988:151-152). Her unfair, wilful and untrustworthy character is described in Machiavelli's 'Tercets on Fortune' quoted at the beginning of this chapter. Machiavelli does not only sing of her unpredictability and her control of time, giving her the power to "[time] events as suits her; she raises up, she puts us down without pity, without law or right," but he also alludes to her association with the moneylenders, and "usury and fraud enjoy themselves with their crew, powerful and rich" (Gilbert 1965:746-747). Machiavelli's poem goes on to say: "Above the gates [of Fortune's palace] that never, they say, are locked, sit Luck and Chance, without eyes and without ears. Power, honour, riches and health are ready as rewards; as punishment and affliction there are servitude, infamy, sickness, and poverty. Fortune displays her mad fury with these distresses; the gifts she offers to those she loves" (Gilbert 1965:747).

Fortuna's historical lineage has resulted in contrasting images of her, tied to different conceptions of human agency, or, more specifically, different degrees of human autonomy in face of her powers. For instance, in the *Divine Comedy*, Dante portrays Fortuna as a true goddess, who carries out her task of handing out external goods with "disinterested tranquillity," thus leaving no possibility for human defence against, or even human understanding of, her actions (Cioffari 1947:3). Later, in Boccaccio's *Decameron*, Fortuna not only takes on a cunning and mischievous

streak, but she also becomes associated with the developing financial sphere, favouring "the business of lending at usury" (Cioffari 1947:3). Eventually, in Machiavelli, she ceases to be an instrument of Divine Will (Cioffiari 1947:6). More precisely, as Hanna Pitkin has pointed out, Fortuna loses many of her Medieval god-like dignities and becomes more amenable to human intervention. What remains from the Medieval tradition of Fortuna's image, Pitkin (1984:153) argues, "is the image of fortune as a woman, mostly in juxtaposition to autonomous human effort, often explicitly to *virtù*. Although still a superhuman figure of mythical proportions, fortune can no longer be regarded as a goddess in any ordinary sense. She is not to be worshipped, supplicated, treated with reverence, nor does she represent any transcendent order. Rather, she acts on the basis of familiar human motives, impulses and desires, by no means always admirable."

There are distinct similarities between *Lady Credit* and Fortuna, these two despotic female rulers over men's affairs.[9] Defoe (1709a:123) imputes *Lady Credit* with Fortuna's classical role of distributing earthly goods, and writes: "I cannot now enter into [*Lady Credit's*] private Recesses, where she concerns her self with Families, Persons and Things— Long Accounts might be given of her there; there she blesses and blasts just as she pleases; she tyrannises over Youth, Beauty, Vertue, Estate; she makes honest Women Whores and Whores honest Women; by her the Homely get Husbands while all men shall shun the Fair." Moreover, like Machiavelli's complex Fortuna, *Lady Credit* holds ground between a "sexually attractive maiden" and a "dangerous matriarch" (Pitkin 1984:137). Both Defoe and Machiavelli tell a story that begins with the woman's state of purity and innocence— she is, in other words, (still) a virgin. The main characteristic of this virgin is a tempting passivity, she is "somehow simultaneously... chaste and passionate," she is the "object of men's desire, conquest or possession" (Pitkin 1984:111). The tempting power of the innocent virgin, Pitkin (1984:111) points out, "*is like the power of gold*," "he who deals with [her] gets profit and vexation together. But it's a fact that there's no honey without flies" (emphasis added). *Lady Credit* similarly starts her career as a young and innocent virgin,

while the suspense of lurking disaster is already tangible during her introduction in the 1706 *Review*. Not surprisingly, then, *Lady Credit* matures into the threatening and conniving woman that also characterises Machiavelli's Fortuna. They both are "fickle and inconstant... changeable, capricious, unreliable, not to be trusted, sometimes downright perverse in [their] desire to violate expectations and alter established patterns" (Pitkin 1984:154).

As a direct result of Fortuna's more humane demeanour in Machiavelli's writings, man and the goddess became engaged in a sexual conflict in which *virtù* becomes the means by which he can control and dominate her. By ascribing to *Lady Credit* Fortuna's qualities, Defoe opened the possibility for the financial sphere to become respectable— in contrast to Swift's *Laputa*, where all morality had been irredeemably lost.

Mastering *Lady Credit*

In spite of *Lady Credit's* complexity and her potentially dangerous nature, Defoe asserts that she is indispensable to the well-being of English Nation. "What has this invisible Phantom done for this Nation[?]" Defoe (1709a:122) asks, and goes on to answer, "She cuts all the Notches in your Tallies... ; your Exchequer Bills have her Seal to them... ; 't is by her you raise Armies, fit out Fleets, cloth your Soldiers, establish Banks, sell Annuities, pay Equivalents, and in short by Her... by this Invisible, *Je ne Sexy Quoi*, this Non-natural, this Emblem of a something, tho' in itself nothing, all our War and all our Trade is supported." Thus, Defoe suggests that *Lady Credit* not be abolished or banned, but rather be actively mastered and controlled. She is neither essentially a virgin nor a whore, but she is what financial man will make of her. If her essence is malleability, it becomes the responsibility of the financial trader to make an honest woman out of her.

A short consideration of Machiavelli's recommendations to man in his struggle with Fortune illustrates how his conceptions of virtue foreshadow Defoe's. Machiavelli's 'Tercets on Fortune' contemplate the ways in which man can counteract Fortune's mad fury and violent reign.

"Within her palace," Machiavelli (in Gilbert 1965:746) writes, "as many wheels are turning as there are varied ways of climbing to those things which every living man strives to attain." In the Middle Ages, Fortune was often depicted with a wheel or standing on a ball, which signified her instability and unpredictability (Patch 1967:147-177). Machiavelli's depiction of many wheels opens the possibility for man's cunning and intelligence to foresee Fortune's changing moods, which cause her to "reverse [the wheel's] course in midcircle," so that "a man who could leap from wheel to wheel would always be happy and fortunate" (Gilbert 1965:747). Moreover, Machiavelli's poem asserts that the fate of great historical figures teaches "how much he pleases Fortune and how acceptable he is who pushes her, who shoves her, who jostles her" (Gilbert 1965:748-749). Thus, man must not be complacent in his struggle with Fortuna, but must actively attempt to master and control her; pushing and shoving her.

This is also the advice Machiavelli gives to *The Prince* [1532], where he pits the virtues of foresight and prudence against the potentially ruinous and always unpredictable ways of Fortune. "[W]hen times are calm," writes Machiavelli (1997:91) men must "make provisions, with both dikes and levees." Man must show virtuosity, not so much to passively follow Fortuna's cues, as to pre-empt and cunningly foresee her actions. As Brown (1988:80) has argued, Fortuna represents man's inadequate grasp of his circumstances. Thus, Machiavelli emphasises knowledge and expertise as virtues through which Fortuna can be mastered. *The Prince* must plan for war in time of peace, and never be lazy and complacent in his position; he must know and explore his own lands, "learn the nature of sites and come to know how the mountains rise, how the valleys open, how the plains lie, and to perceive the nature of the rivers and the swamps, and to put the greatest care into this" (Machiavelli 1997:55). The solid and historical knowledge required of a successful *Prince* can be attained, according to Brown (1988:85), by clearing the mind of "all that makes it 'soft' or 'effeminate.'" Machiavelli's confrontation of Fortune and virtue led him to value the virile qualities of "skill, courage... and virtuosity" (Walker 1989:36), while abhorring weakness, passivity and indecisiveness (Pitkin 1984:50; Brown 1988:85).

In Defoe's sexualised warfare between *Lady Credit* and her suitors, the Machiavellian virtues of foresight, knowledge and strength emerge as means through which credit can be mastered. As mentioned, *Lady Credit* will be possessed and conquered only by those who pretend to 'have no occasion' for her. Defoe (1987 [1726]:233) advises cunning tactics in the treatment of *Lady Credit*, and writes: "Credit ought to be the tradesman's *mistress*... and yet she has one quality, in which she differs from most of the ladies who go by that name— if you court her, she is gone; if you manage so wisely as to make her believe you really do not want her, she follows and courts you." Most importantly, Defoe argues that the construction of foundations and 'regular structures,' such as honour and mutual trust, will underpin the emerging financial sphere. "If you will entertain this Virgin," writes Defoe (1710b:463), "you must Act upon the Nice Principles of Honour and Justice; you must preserve Sacred all the Foundations, and build regular structures upon them; you must answer all Demands, with a respect to the Solemnity, and Value of the Engagement; with respect to Justice; and honour and without any respect to Parties— If this is not observed, credit will not come" (quoted in Pocock 1975:455). Defoe emphasises that financial man must display moderation and (sexual) restraint (Hirschman 1997:63-66). An honourable marriage will be able to guarantee the respectability of *Lady Credit.* If she marries, according to Defoe (1710a:222), "a Young Man full of Application, sober, sensible, and honest, that lays his Bones to his Work, and his Head to his Business," she will reward him well: "She'll support him, she'll carry him through the World upon her Shoulders— When he walks, she leads him; when he sleeps, she awakens for him, and when he swims, she holds him by the Chin."

The virtues of strength and activity required of financial man to master credit must be read as the strength to *resist her temptations*. Financial man must never forget that *Lady Credit* is a cunning temptress, but that disaster looms in her wake. Defoe (1706c:25) emphasises caution and the strength of moderation, and advises the young tradesman thus: "Caution, therefore, is the best advice can be given to a young Tradesman; and Moderation is a useful Vertue in Trade... the Tradesman has the most need of that Petition in the Lord's Prayer, of any Man living, *Lead me not*

into Temptation" (original emphasis). Defoe (1706c:26-27) denounces those who sink deeper and deeper into debt because they desire "luxurious Extravagancies in eating and drinking... ; or in Magnificent Equipages... ; or in Drunkenness and Play," and asserts that ruin will be the effect of "Luxury, Gaming, Lewdness, and all sorts of Vices." Not only does *Lady Credit* threaten financial man's self-control and his mastery of his passions, so also does the desire for luxury and wealth threaten to infect him with feminine softness and complacency regarding his business (Pitkin 1984:117). Because it is not only the woman but man's *own lust* which undermines his self-mastery (Brown 1988:90), mastering and submitting *Lady Credit* requires first and foremost a mastering and submitting of the self.

Indeed, the confrontation of *Lady Credit* with financial man's *unrestrained* lust and desires proves disastrous. To Defoe (1709a:124), stock-brokers who sold credit-certificates for gambling purposes, were evil incarnate:

> a Vermin never heard of before, Creatures not of GOD's creating, nor form'd in the World by usual generation, but sprung from the Corruptions of the National Honesty, and vivify'd by the contagious Fermentation of the publick Distempers... they [are] called stockjobbers.
>
> [T]he first Violence they committed was a downright Rape... — [*Lady Credit*] was no sooner come over [to England], but these new-fashion'd Thieves seiz'd upon her, took her Prisoner, toss'd her in a Blanket, ravish'd her, and in short us'd her barbarously, and had almost murther'd her.

Defoe portrays *stockjobbers*, which is how brokers and middlemen in the London City were then commonly called, as the rapists of *Lady Credit*. They take advantage of her flirtatious behaviour, spoil and tempt her, with the disastrous consequences of nearly killing her. "The Stock-Jobbers, like Quacks and Mountebanks," writes Defoe (1709b:127), "are every day tampering with [*Lady Credit*]; they flatter her with fine Words, feed her with Sugar Plumbs as they do Children, and gorge her with luscious diet— but the Design is murtherous and villainous, for they only seek to kidnap her into their Power again, that they may dishonour and debauch her." It is through this sexual violence that credit is made a whore and her innocence is violently, if not permanently, lost, according to Defoe (1706a:19): "to recover Credit to any place, where she has been ill Treated,

and perswade her to return, is almost as Difficult to restore virginity, or to make a W— re an honest Woman."

Defoe's violent attack on stockjobbers further emphasises the controversial nature of the financial sphere at the time. Even if Defoe generally sought to make the financial sphere politically and morally acceptable, in opposition to those who nostalgically longed for the past times of the landed aristocracy like Swift, he still could not deny that stockjobbing was corruption (Pocock 1975:449). Indeed, it was precisely by denouncing these practices that Defoe could start to make the general sphere of finance and credit respectable (embodied in the honest marriage of *Lady Credit*).

Accounting as a Technology of the Self

I have argued that in order for financial man to resist the temptations of *Lady Credit*, he must first and foremost master and submit himself and his own lust. The authority and autonomy required to govern others, as Foucault (1991b) has argued, is fostered by requirements of how to govern oneself. This is a specifically masculine practice in Defoe's writings, or what Lois McNay (1994:151) has called a "virile self-mastery... which involved a struggle against the immoderate and womanly side of one's character." Man needs to discipline and renounce his internal weaknesses and desires before he can be fully human and autonomous (Pitkin 1984:136). In the *Compleat English Gentleman*, Defoe stresses that man needs to learn to govern himself before he is able to govern his subordinates; his wife, children and household. "If the gentleman we are treating of can not govern himself," Defoe (1890:232) asks, "how should we expect any good oeconomy in his household? how shall he direct his family or mannage his fortune?" Defoe (1890:234) stresses that the gentleman is not fully autonomous when given over to desires of luxury and wealth: "It is a great mistake to say that a vicious life is consistent with a *compleat* gentleman" (emphasis added).

The way to self-mastery and good government, Defoe and others propose, is through meticulous bookkeeping. The combination of calculation and foresight will foster an ethical relation with the self that makes possible the mastering of *Lady Credit*. It should never be below the "gentleman of fortune," Defoe (1890:244) points out, "to meddle with learning and books... also to audit their own accounts, let their own lands, mannage their own revenues." Defoe's insistence on the punctual payment of commercial commitments can be read as a way of keeping *Lady Credit* and all her temptations in check. "The great Injury to Trade," Defoe (1706b:22-23) argues, "is the little Regard the Tradesmen in England have to the Punctual Compliance with their Times of Payment... I shall make the Essay, at Reducing Credit to proper Periods, Payments to punctual Compliance; and so make the Laws of Trade, as sacred as those of the Nation." The mathematisation of one's commitments (punctual payment) makes possible an active and anticipating relationship to the world. Through calculated foresight man no longer needs to resign himself to the decrees of providence and the blows of fate, but gains active responsibility over one's affairs, even in times of misfortune (Ewald 1991:207). Because Fortuna's irrationality also signifies the unpredictability of secular time (Pocock 1985:99), the careful keeping of books becomes a way of mastering credit, mastering the self, and eventually, mastering time.

It is important to understand how this ethical relation to the self required for the mastering of credit subsequently holds out the promise of undistorted access to economic truth. Foucault (1988c:16-19) has argued in his later work that self-government has a particular relationship to truth and truth-telling. If one has to govern oneself in order acquire the moral authority to govern others, Foucault and Sennett (1982:10-11) have shown that this is achieved by a kind of courageous truth-telling, or a Christian duty to truth: "self technology implies a set of truth obligations: learning what is truth, discovering the truth, being enlightened by the truth, telling the truth... Everyone in Christianity has the duty to explore who he is, what is happening with himself, the faults he may have committed, the *temptations* to which he is exposed" (emphasis

added). This duty to truth, then, becomes a way in which the temptations of *Lady Credit* can be resisted: owning up to one's desires, truthfully exposing them, is a first step in renouncing them.

Truthful exposure of oneself and one's desires is precisely how Defoe conceptualises accounting and bookkeeping. Defoe discusses bookkeeping as a mechanism through which an undistorted truth will be revealed to the tradesman about himself and his business. If the tradesman does not keep his books, Defoe (1987:188) warns, "then he knows nothing of himself, or of his circumstances in the world; the books can tell him at any time what his condition is." Moreover, to Defoe accounting and the 'casting up of books' are moral technologies that will not only reveal the truth of the tradesman's circumstance, but that will also guarantee the cleanliness of the tradesman's conscience. "A tradesman's books, like a Christian's conscience, should always be kept clean and clear," writes Defoe (1987:188), "and he that is not careful with both will give but a sad account of himself either to God or man." To Defoe, honesty and precise bookkeeping are signs of strength and courage— they are virtues through which the tradesman can resist credit's temptations. "As a profligate never looks into his conscience, because he can see nothing there but what terrifies and affrights him," writes Defoe (1987:197), "so a sinking tradesman cares not to look into his books, because the prospect there is dark and melancholy. 'What signify the accounts to me?' says he, 'I can see nothing in the books but debts that I cannot pay'... Whereas, in truth, the man understood his books well enough, but had no heart to look in them, *no courage to balance them*" (emphasis added).

It was not just Defoe's texts that effected this critical link between accounting, truth and virtue. Defoe's work can be seen in the context of the consolidation of double-entry bookkeeping as an economic technology in eighteenth-century England. Because it enters each transaction into the books twice (on the debit and on the credit side) double-entry bookkeeping became constructed as the epitome of reliable calculation and the undistorted access to external commercial reality (Sherman 1996:131-138). The appeal to truth and reality forms a consistent theme in accounting manuals of the time. It was by this scientific mechanism that the tradesman

would find his way through trade networks and dispel confusion, as poetically advised in Colinson's accounting manual of 1683: "This is the kind Ariadne's silken thread; Conducts them through the Labyrinths of trade; While *Colinson* like *Theseus* doth devour; CONFUSION that monstrous minotaur" (Robert Colinson's *Idea Rationara, or the perfect accomptant*, 1683, quoted in Winjum 1972:58).

However, despite the accountancy manuals' emphasis on accessing a prior economic reality, Poovey argues that early modern bookkeeping, which forms the basis of current accountancy practices, was a rule-governed kind of writing which actualised and objectified its discursive constructions. Bookkeeping stipulated fictional categories, including 'Stock,' 'Profit' and 'Money,' which did not directly correspond to actual events or sums, and which were transcribed from one ledger to another in a reifying and abstracting manner. This "fiction of total disclosure," Poovey (1998:59) writes, "underwrote the creditworthiness [of the merchant] by proclaiming his credibility." Double-entry bookkeeping had both a disciplining and a credentialing effect: it disciplined those writing in the books while according them credibility. In this manner, credit and virtue were joined.

Similarly, Steven Shapin (1997:xxvi) has argued that in seventeenth-century England, the *gentleman* was a "paradigm of the type of individual one could trust to speak the truth." And there "was no truer gentleman," Shapin (1997:64) goes on to argue, "than one who was sovereign over his own passions, and who displayed his calm indifference to attempted injury and insult." In contrast to women, servants and "the vulgar," who were assumed prone to "undisciplined and inaccurate perceptions," the gentleman was assumed to have outstanding "perceptual competence" (Shapin 1997:75-77). Gentlemanly self-mastery was fostered by the rules and abstractions of bookkeeping, as well as by solitude and serious demeanour. Poovey (1998:34) recounts how 'privacy' emerged as a class-specific concept which promised to facilitate the husband's administration and governance of the household, embodied in architectural innovations such as the closet and the study. Roger North's *The Gentleman Accomptant* (1712) connects these

requirements of solitude, truth and governance, when he describes the process of accounting as "an Act of the Mind, intent upon the Nature and the Truth of Things" requiring "the solitude of a Compting-House, or the Retirement from all Manner of Interruption" (quoted in Sherman 1996:131). In double-entry bookkeeping, thus, undistorted access to financial truth became possible as a function of a masculine demeanour that included austerity, self-mastery and the disciplining of the inner enemy of desire for luxury and wealth. Chapter 4 will discuss how later notions of 'mechanical objectivity' emerged in the nineteenth century, which reformulated and departed from seventeenth-century gentlemanly truth production.

In conclusion, then, the articulation of Fortuna on the one hand and the virtuous gentleman on the other effects a division in which irrationality and fantasy are split off from truth and rationality, and in which the former are defined as external to the financial sphere. Defoe and other contemporary writers on the subject of double-entry bookkeeping set up two distinct spheres, in which capricious, unpredictable, irrational and inconsistent Fortuna/Credit is articulated in opposition to virtuous, honest, reliable and rational financial man. Fortuna's irrationality also signified the unpredictability of secular time, and according to Pocock (1985:99) she embodies the "random and the recurrent, the lunar and the cyclical... and the contingent with which virtue... contends." Mastering Fortuna was thus a way of mastering the future, by reducing it to orderly slots of 'punctual payment.' Finally, mastering Fortuna holds out the promise of undistorted access to economic reality and truth. In other words, if she embodies all that is irrational and fantastical in the economic sphere, submitting her is the means through which economic truth can be generated. As Pocock (1975:457) concludes in his study of the eighteenth-century 'paper wars': "Virtue must involve the cognition of things as they really were; the power of Credit was irredeemably subjective and it would take all authority of society to prevent her from breaking loose to submerge the world in a flood of fantasy."

Lady Credit and the Asian Crisis

Defoe formulated a financial rationality which preceded the birth of economic man, usually located in the late eighteenth century with the work of Adam Smith and David Ricardo. Defoe's articulations of financial truth must be seen in the context of the political upheavals surrounding credit and paper money, as well as the birth of modern bookkeeping. Seen in these contexts, *Lady Credit* is not just a metaphor or linguistic ornament but at the core of modern financial understandings. Before the following chapters go on to discuss how the moral and political discourses of the paper wars were rearticulated in nineteenth-century controversies over financial trading, the remainder of this chapter will discuss the current relevance of the seventeenth-century gendered representations of credit.

It is my contention that the gendered discourse through which Defoe and his contemporaries made sense of the emerging credit economy still informs representations of financial crises today. For example, when in 1997 the rapid and largely unexpected devaluation of the Thai currency sparked what has become known as the Asian Financial Crisis,[10] Harvard economist Jeffrey Sachs (1997:26) argued in the *Financial Times* that the crisis was caused by "two optical illusions" that had "channelled money into the wrong investments." These so-called optical illusions were overvalued currencies and inadequate banking controls in the crisis countries. Sachs (1997:26) furthermore argued that these factors had produced "highly distorted incentives" for financial players, and that "[t]he recent currency crises in emerging markets provide a salutary wake-up call to over-exuberant money managers." Desires for short-term gain have clouded the investors' understanding, Sachs (1997:26) concluded, making them "reckless," and forgetful of "basic macroeconomic truths."

Sachs's over-exuberant money managers during the Asian crisis are victims of a modern incarnation of *Lady Credit*. A parallel exists between Sachs's financial managers influenced by optical illusions chasing "high rates of return," and Defoe's financial men influenced by *Lady Credit* chasing luxuries and wealth. Sachs's understanding of the financial crisis as fuelled by

temporary insanity is not unique. On the contrary, despite disagreements concerning policy action required by the crisis, a relative consensus on its causes exists. This consensus condones the argument that financial agents were temporarily bedazzled. For instance, the *New York Times*' analysis of the "path of the crisis" has asserted that "Thailand ... [was] the victim of [its] own success which bred hubris and carelessness towards risk" (Kristof 1999:A9). *Hubris* signifies easy profit leading to recklessness, which will invariably be punished by the gods. Like *Lady Credit's* temptations, hubris tells a moral story of desire and punishment. It is implied that the crisis was largely inevitable and the just desert for abandoning cool-headed calculation.

IMF managing director Stanley Fischer discussed the Asian crisis in similar moral terms. In a speech to a Bankers' Association, Fischer (1998:2) assessed the crisis to be caused by an "imprudent search for high yields by international investors without due regard to potential risks." Fischer's argument combines temptation by financial gain with the loss of virtue and prudence, leading to disregard for economic truth. As a final example, MIT economist Paul Krugman, although in disagreement with Sachs and Fischer on the appropriate role of the IMF in the wake of the crisis, used the same formulations to explain its causes. In a conference paper, Krugman (1998a:3) argued that the Asian crisis cannot be explained by economic models for currency speculation, but is best seen as "brought on by financial excess and then financial collapse... the Asian story is really about a bubble in and subsequent collapse of asset values in general." Krugman's explanation retells the moral tale of imprudence, excess and necessary punishment. The notion of a bubble in prices which he uses implies a deviation from economic truth (true prices) caused by financial excess.

Orthodox explanations of the Asian crisis, thus, imply that in times of crisis financial man loses control over his passions. All authors cited above emphasise the imprudence and irresponsibility of financial agents which are caused, as I have argued, by the temptations of *Lady Credit* or the desire for luxury and easy profit. As Ingrassia (1998:19) argues, this argument accords diminished responsibility to financial participants, who can claim to have acted in a "moment of

temporary insanity and uncontrollable excitement." In his essay, Sachs (1997:26) called for a return to economic truth and virtue by concluding that financial agents will serve a "public and a private purpose" if they make "prudent adjustments" and "recall the basic macroeconomic truth." Krugman (1998a:6; 1998b:19) moreover pointed to the importance of dampening "excessive investment," correcting "Panglossian values" and preventing further "reckless behaviour." These calls for moderation and self-control in order to return to economic fundamentals parallel Defoe's articulations of virile self-mastery which guarantees economic truth. In Defoe's terms, if financial man manages to master the internal temptations that *Lady Credit* generates, the financial sphere will be one of smooth and neutral functioning.

What is the political significance of the sexualised struggle informing contemporary understandings of financial crisis? Its implications for governance and authority in the financial sphere are twofold. Firstly, the argument that situates financial crises in the realm of delusion and madness renders possible the assumption of 'normal' market operations. By locating financial crisis in the aberrant domain of mad behaviour, the normal, regular and sane workings of financial markets are reaffirmed. Irrationality, excess and greed are located externally to the financial system; they may disturb the system from time to time, but have no proper place in it. Thus the financial system is imagined as a coherent and rational whole. Sachs's arguments, for instance, presuppose the unambiguous existence of 'proper investments' and 'right incentives' that would have ensured sane (i.e. non-crisis) outcomes. Krugman similarly asserts the existence of 'normal investments' and 'correct values.'

Through these shared assumptions of an unproblematic economic reality, financial politics are reduced to a technical rationality which makes possible a particular mode of governance. The authors cited above might not completely agree with each other, but their shared terms of understanding make available a limited policy choice which precludes real challenges to financial authority. Most importantly, questioning the value and validity of international debt and other financial instruments is rendered impossible. International intervention in the Asian crisis

countries has prioritised international debt honouring and has secured modern financial rationality through for instance the imposition of international accounting standards (Wade and Veneroso 1998a:11-12). Honouring debt repayments was precisely how Defoe articulated the core of his accounting ethics.

Secondly, this prior economic reality which is assumed in discourses of crisis is underpinned by a specific and distinctively masculine conception of agency. I have argued that economic truth was assumed attainable through a masculine self-mastery and through the gentleman's perceptual accuracy, in contrast to women and servants. This gendered agency in turn makes possible a disinterested posing of financial governance, which excludes areas of inquiry which have traditionally been labelled feminine.[11] Feminist economists such as Julie Nelson have drawn attention to the masculine bias which pervades economic science and the measurement of economic indicators. They argue that these distortions in economic theory undermine women's economic opportunities and equality (Nelson 1996; Nelson and Ferber 1993; Kuiper and Sap 1995). They propose a rethinking of economic modelling in order to "remedy the biases that may arise from an unexamined emphasis on masculinity," and attain a fuller objectivity (Nelson and Ferber 1993:11).

Although similarly concerned with feminised exclusions from economic discourses, my analysis implies that the objectivity of finance *cannot* be remedied by the inclusion of *Lady Credit's* qualities into its analyses. This is precisely because objectivity *itself* presupposes the masculine asceticism of the scientist (Keller 1985). As Brown has emphasised, the issue is less to do with feminine activity than with manhood and masculinity. Brown (1988:12) argues for a feminism which goes *beyond* "identifying ways in which women have been denied political or even human status and ways in which this denial is locked into various theoretical constructions," towards an understanding of how political and economic theory "is saturated with highly problematic, often dangerous, ideals and practices of manhood." This approach means that gender cannot simply be "grafted onto existing explanatory approaches" but requires more radical, epistemological changes

(Hooper 1999:475). Butler (1992:13) argues that such epistemological changes must begin at the level "at which the subject and its agency are articulated and made possible." The construction of agency, Butler (1992:9) argues moreover, "is fully embedded in organising principles of material practices and institutional arrangements." Thus, Brown's and Butler's feminism suggests that only an analysis of the politics of identity construction can pose a radical challenge to political, or in this case financial, practices and arrangements.

This thesis' investigations into financial history question financial authority precisely at the level of identity construction. The masculine concept of agency provided by Defoe and embedded in the work of Sachs and others obscure the violent foundations of such an identity and enable the unquestioned perpetuation of financial authority. Defoe's gentlemanly ethic by which credit became legitimised is inseparable from the symbolic and institutional practices of European colonialism in which "the 'English gentleman' positioned himself at the top of the [global] hierarchy, as self-disciplined, naturally legitimate ruler and protector of morals" (Hooper 1999:482). Autonomous agency in finance was constructed through the exclusion of not just the feminine (or those characteristics associated with *Lady Credit*), but also the colonial other (Butler 1992:12). More precisely, the stabilised masculine identity of financial man is dependent upon complex exclusionary practices "in which resistant elements to a secure identity on the 'inside' are linked through a discourse of danger with threats identified and located on the 'outside'" (Campbell 1994:149). The inconsistencies and contingencies inherent in financial rationality are recast as external to finance through these discourses of danger and temptation.

The complex differentiations which stabilise financial man's identity are particularly important in considering mainstream accounts of the Asian crisis. Historically, colonial others have often been sexualised and British imperialism imagined Asia as "an exotic, sensual and feminised world" (Hooper 1999:482). The imagination of Asia's otherness included, according to Edward Said (1994:57), "the motif of the Orient as insinuating danger. Rationality is undermined by Eastern excesses, those mysteriously attractive opposites to what seem to be normal values."

Thus, Asia has been cast as at the same time a geography to be conquered and a temptation to be resisted. Such ambiguous challenge to Western rationality parallels credit's temptations, and the feminisation of Asia has arguably proceeded along similar lines as the feminisation of credit. According to Jongwoo Han and Lily Ling (1990:60), the region acquired "a feminised status that varies between innocent young maiden... and demon bitch goddess."

More recently, Asian countries such as Korea have been 'feminised' in globalisation discourses for lacking industrial 'manhood' (Han and Ling 1998:61). Economic discourses have portrayed Asia as "dormant, isolated and backward" and in need of economic penetration by Western technology and industry (Han and Ling 1996:60). This is poignantly exemplified by Charlotte Hooper's (2000:68-69) analysis of an article in *The Economist*, which argued that the "rich resources" and "natural beauties" of Myanmar were "ripe for rape." Hooper (2000:69) concludes: "[t]his imagery draws directly on racist and sexist colonial discourse about white male exploration and adventure in 'virgin territories.'"

Thus, it can be argued that the Asian crisis was the result of a *dual* temptation to Western money managers. Not only did *Lady Credit* dazzle investors with promises of high profits, but credit's temptations were exacerbated by the lack of proper industrial development and financial regulation in Asian emerging markets. Such dual danger has led to economic excess and the undermining of financial rationality and prudence. "In Asian countries," Krugman (1998b:19) observes, "too many people seem to have been granted privilege without responsibility" leading to "highly speculative real estate ventures and wildly overambitious corporate expansions." The crisis was partly blamed on inadequacies and corruption in Asian capitalism ('crony capitalism'). One author goes as far as to blame Asian "backward schools" which "failed to develop innovative, imaginative technicians and managers with creative thinking skills for success in fast-paced, constantly changing knowledge-based societies" (Rosenberger 1997:227).

Thus, the portrayal of Asian economies as inadequate and underdeveloped reaffirms the appearance of the inherently contestable identity of financial rationality as a natural and coherent

entity. This in turn has made possible Western policy interventions in Asia, or the further penetration of Asian economies by Western capital (Han and Ling 1998:60).

Conclusion

This chapter has illustrated the historical contingencies in the formulation of financial concepts that are at the basis of our understanding of financial crises today. Rather than a natural economic progression, the invention of paper instruments of credit took shape through historical struggle and political discussion. I have suggested that Daniel Defoe's writings start articulating a new moral space in which credit certificates, stocks, shares and other paper instruments could become virtuous and condoned. However, the discursive split between irrationality and rationality, or between fortune and virtue, effected by Defoe's writings, can never be completely secured or stabilised. In other words, the mastery of *Lady Credit* is never complete and financial man is never safe from her temptations and the internal desires and weaknesses she generates in him. This discursive tension becomes most apparent in times of financial crises when the integrity of the system needs to be reaffirmed by the retroactive identification of financial irregularities, as I have argued with respect to the Asian Crisis.

The next chapters will continue to interrogate the problematic boundaries between virtue and fortune which underpin the possibility of financial rationality. The core moral problematic of financial practices was displaced from credit to more complex financial instruments, such as futures and options. I have shown how Defoe considered stock brokers the rapists and abusers of *Lady Credit*. He fiercely opposed the surge in secondary trading associated with the South Sea Bubble, and objected to the lack of business commitment promoted by anonymous and transferable shares. In an essay written in 1712, Defoe (1843:11) complained that South Sea trade was "tied down to a rabble of casual subscribers, neither inclined to, capable of or in the least having a genius to trade." The proper way for the South Sea Company to do business, according

to Defoe (1843:11), was to operate "under the protection of, in the name, and by the power of her Majesty [and] seize, take, and possess, such port or place, or places, land, territory, country or dominion, call it what you please, as we see fit, in America, and keep it for our own."

In fact, a law against stock-jobbing was passed in the aftermath of the South Sea Bubble in 1734. Sir John Barnard's Act, or the "Act to prevent the Infamous Practice of Stock-Jobbing," outlawed short-selling, the selling of shares or produce one did not own, under a penalty of £100. The preamble to the law stated that "great inconveniences have arisen, and do daily arise, by the wicked, pernicious, and destructive practices of stock-jobbing whereby many of His Majesty's good subjects have been and are diverted from pursuing and exercising their lawful trades and vocations to the utter ruin of themselves and their families, to the great discouragement of industry, and to the manifest detriment of trade and commerce" (quoted in Fayant 1913:45).

While, as I have demonstrated, there is a continuity between Defoe's articulations and contemporary understandings of financial crisis, there is not a linear and unproblematic progression from Defoe's writings to current practices. Defoe's passionate defence of public credit and his sophisticated formulation of financial virtue did not extend to many of the financial instruments which we now regard as natural and unproblematic. The next chapter will document how gambling and speculation came to form the core problematic of emerging financial networks, and how moral, legal and political spaces for share and futures trading were slowly pried open.

Notes to Chapter 2

[1] 'Tercets on Fortune,' [date unknown], in Allan Gilbert (editor and translator), 1965, *Machiavelli: the Chief Works and Others, Volume 2*, pp.745-747.

[2] Some sources on the history of money similarly portray the emergence of monetary instruments as an evolutionary and progressive history. For instance, Weatherford's (1997) *The History of Money* suggests a linear progression from commodity money to paper money to electronic money. As I have argued in the previous chapter, my purpose is precisely to resist such a linear and smooth history, as it accords a naturalistic and deterministic legitimacy to current financial practices.

[3] P.G.M. Dickson's 1967 *Financial Revolution* is a good example of such retrospective reading. Although Dickson documents in detail the political discussions and government involvement in the emerging practices of trading securities and other paper instruments of credit, he mentions the moral and religious controversies that were part and parcel of these developments only in passing. Most of his work concerns itself with reconstructing "how the market actually worked" at the time, and discusses financial instruments, prices, interest rates and institutional developments (Dickson 1967:33). In fact, Dickson (1967:32) expresses incredulity at the contemporary controversies, when he writes: "Finally, it is worth noting that while few aspects of the Financial Revolution were of greater political and economic utility than the development of a market in securities in London, none united contemporary opinion more against it." Thus, Dickson assumes the proven utility of securities trading, and considers the critiques of financial practices mainly as remnants from the Middle Ages.

[4] Quoted from the entry on *finance* in the *Oxford English Dictionary Online*, 2001. All other meanings for *finance* referred to in this paragraph are also quoted from the online OED.

[5] More generally, it should be emphasised that any monetary form requires authoritative backing for its functioning. While it is often assumed that money and coinage emerged naturally, in order to lubricate commerce and store value, it must be remembered that monetary instruments cannot function without expectations that the instrument (whether it be coin, gold or paper) will retain its value over time and space. These expectations are fulfilled through authoritative backing of a currency, whether by a king, emperor, bank or state (see Dodd 1994, especially pp.ix-xxviii).

[6] This is not to say that financial networks did not exist before the seventeenth-century emergence of the British national debt. On the contrary, relatively sophisticated banking networks existed as early as fifteenth-century Florence, at which time Italian bankers gave their name to Lombard Street, the main street in London's financial district (Kindleberger 1993:43-46). Moreover, from the sixteenth century onwards it becomes possible to observe a steady and consistent growth in the mobility of funds between European cities (Germain 1997:34-44). However, I accept Strange's argument that it was the unique combination of credit and authority which inaugurated modern finance. "[I]t was only after 1700," Strange (1999:348) concludes, "that the practice took hold of borrowing from society by issuing paper money or government promises-to-pay."

[7] It is generally agreed that the Bubble originated when the South Sea Company's directors proposed to take over the British national debt (which was in the form of illiquid annuities) by transforming it into stock of the South Sea Company (in the form of tradable paper shares). Thus the national debt would become privatised as well as tradable. The British Court and Parliament were heavily involved in the South Sea Scheme, accepting bribes as well as purchasing South Sea shares. The price of the South Sea shares surged and reached a peak in 1720, before collapsing as a result of loss of public confidence in the South Sea Scheme.

Secondary sources on the scheme have debated whether the bubble was 'rational' (Carswell 1960; Garber 1990; Neal 1990) or whether the bubble was an early manifestation of financial exuberance and irrationality (Chancellor 1999; Mackay 1995). A detailed debate of the South Sea Bubble is beyond the scope of this chapter (see Dickson 1967:90-156), but the point to be stressed is how interpretations of the history of the South Sea Company have advanced their own political agendas (rational, efficient markets versus cycles of irrational exuberance), thus demonstrating that we are all 'historians of the present.'

[8] Other participants in the paper wars were the poets Richard Steele and John Gay. The political magazines *The Spectator* and *The Tatler* were important venues for the debates. I have no space in this chapter to discuss in detail the various arguments made in the paper wars. For reasons outlined below, I will concentrate on Daniel Defoe's writings. Detailed accounts of the paper wars can be found in Pocock 1975:423-461 and in Nicholson 1994.

[9] In contrast to Pocock, Sandra Sherman has argued that crediting *Lady Credit* with divine ancestry is far too flattering for this overt sexual being. Sherman (1996:42-43) argues that a goddess would never display credit's "erratic sexual deportment" or live the degenerate life of a courtesan, tempting and rejecting her

suitors. This chapter, however, accepts Pocock's argument that credit's association with goddess Fortuna upholds very well, as long as Fortuna is conceptualised in a Machiavellian manner.

[10] The crash of the Thai *Baht* sparked currency crashes as well as stock market panics in Asian countries such as Indonesia, South Korea and Hong Kong. The Asian crisis has stimulated intense debates on the nature of the present global financial system. Some see this crisis as symptomatic of systemic instability that jeopardises the entire financial system, others have identified serious but localised flaws in the "international financial architecture" that can be fixed (Goldstein 1998:67). The view that the Asian crisis is indicative of inherent systemic weaknesses can be found in for instance Wade and Veneroso 1998a; 1998b. The view that flaws in the financial architecture can be fixed is to be found in for instance Goldstein 1998; Rosenberger 1997.

The precise debate on the causes of the crisis are outside the scope of this chapter. Suffice it to say that observers from opposites of the political spectrum agree that what all the 'crisis-countries' had in common was an overvalued currency and a history of over-hasty financial deregulations. The overvalued currencies are argued to have led to large inflows of money from abroad from investors in search of quick and easy profits. The rapid financial deregulations have led to inadequately monitored and controlled banking systems in the Asian countries themselves (this debate is summarised in Strange 1998:78-96).

[11] I would like to emphasise that this chapter makes no claim concerning the essential being of women and men, but rather wishes to comment upon the manner in which the essential being of women and men is constructed in a modern and scientistic discourse. Thus it is possible for a woman to be praised for the masculine practice of self-assertion while surrounded by hysterical males in a financial panic. This recently happened in the *Independent* when one fund manager commented as follows on financial advisor Abby Cohen's behaviour during the Asian Crisis: "She was a voice of reason in a sea of panic" (quoted in Usborne 1999).

CHAPTER 3

Finance, Gambling and Speculation:

The Bucketshop Debate in Nineteenth-Century US

Muse rise! With satire cloath'd in verse so glib
assist to lash the *speculating tribe*;
To them in honest verity declare
What common sense and reason say they are;
A set of sharks, that flouncing in the flood,
Suppose all kind of fish their proper food: (...)
A set of chaps, that Fortune's goods engross,
And draw their happiness from other's woes.

The Glass, or, Speculation: A Poem, 1791.[1]

He who sells what isn't his'n
Must dig it up or go to prison.

Nineteenth-century US saying.[2]

Casino Capitalism

In April 1998, a Moscow Court declared certain types of financial instruments in breach of Russian anti-gambling laws. The court argued that a certain type of derivative, called a 'non-deliverable forward contract,' was best viewed as a betting contract as it did not lead to any exchange of underlying assets, and was therefore not enforceable under the Russian Civil Code. Afraid that this court decision would deter foreign investors, the Russian Central Bank hurried to defend derivatives trading to Russia's supreme arbitration court. The Central Bank argued that forward contracts were a legitimate part of the banking system and made it known that a breach of this kind of contract could lead to the revocation of banking licenses. Still, the exact basis for the legitimacy of non-deliverable forwards remained unclear in the Bank's argument. A Western

lawyer working in Moscow admitted: "You can see the court's decision that forward contracts are a...gamble. But they are done all over the world and they should be done in Russia. The central bank is absolutely right" (Thornhill 1998:2).

The association between finance and gambling is not unique to the Moscow court's decision. On the contrary, many examples can be found in present and past financial debates in which the demarcation-line between gambling and financial practices is ambiguous and hotly debated. This chapter will explore how the lack of a conceptual distinction between finance and gambling in the eighteenth and nineteenth centuries increasingly became an obstacle to the respectability of trading in stocks, shares and credit certificates. A separation between gambling and finance became thinkable only through a prolonged political and cultural struggle surrounding the meanings and boundaries of 'the financial' and the character and behaviour of 'financial man.' This chapter presents a detailed account of these debates, in which, I argue, the increasing denunciation and demonisation of gambling served to accord legitimacy to its discursive double, speculation.

Of particular importance in this regard is the US 'bucketshop debate,' which took place in the second half of the nineteenth century. This was a public debate over the legitimacy of financial trading in general, and futures and options in particular, fought in the pages of newspapers and popular magazines. The existence of so-called bucketshops, small scale betting shops in which the public could bet on the movement of stock prices without actually purchasing stock, complicated the articulation of a dividing line between gambling and speculation. The bucketshop debate was also a legal debate, and numerous court cases on state and federal levels were decided on the enforceability of futures contracts between, roughly, 1850 and 1930. As I will argue, these cases are important because they legally inscribed, objectified and reinscribed the boundaries between gambling and finance. In some cases, the courts thus enshrined financial concepts that are still used today.

The purpose of this historical discussion is to repoliticise the distinction between gambling

and finance. As I will discuss below, the separation between gambling and finance – with speculation as uneasy middle-ground – is directly related to social and moral questions concerning the legitimate bases for making profit. Rather than establishing the precise *meaning* of speculation (as distinct from gambling), this chapter wishes to reopen questions concerning the legitimacy of speculation as a basis for profit-making in modern capitalism. That such questioning is both possible and timely is demonstrated by an increasing number of recent cases in which the legitimacy of speculation has been publicly questioned. To some extent, financial globalisation and liberalisation have revived the problematic distinction between gambling and finance.

In Japan for instance, recent financial liberalisation has meant relaxation of its strict gambling laws as well as financial deregulation. Until Japan's 'Big Bang' programme of financial deregulation, over-the-counter options as well as some sophisticated financial derivatives were prohibited by the country's criminal code for breaking gambling laws (Robinson 1997a:34; Robinson 1997b:IV). Although there have been no actual lawsuits with regard to the breach of gambling laws by derivatives trading in Japan, the *Financial Times* has argued that these "regulatory irritants" have forced Japan to remain in the "derivatives second league" and have moved Japanese derivative trading offshore, particularly to Singapore (Tett 1998:6).

In Britain, derivatives contracts entered into by the London borough Hammersmith and Fulham were declared null and void by a ruling of the High Court in January 1991 on the grounds that trading for speculative purposes was beyond the powers invested in local governments (Tickell 1998). Hammersmith and Fulham had been investing council money in complex financial instruments, including *swaps*, since 1983. At the height of its trading activity, Hammersmith and Fulham accounted for half a percent of all the *swaps* trading globally. In 1988, the Audit Commission, which is responsible for overseeing the expenditures of local governments in Britain, questioned whether the Hammersmith and Fulham derivatives trading was lawful and decided to seek a legal ruling in the matter. As a result, the 1991 High Court ruling declared *swaps* dealing *ultra vires* for local government. Although the Hammersmith and Fulham *swaps* affair did

not actually evoke notions of gambling, it did establish a dividing line between trading derivatives for "formal risk management" and "trading for profit." The High Court ruling effectively argued that speculative profit making is inappropriate for local authorities trading with public money (Tickell 1998:872-873).

Within the IPE literature, attention to the problematic nature of the distinction between gambling and finance has been drawn most notably by Strange's (1986; 1998) critical accounts of financial globalisation. Strange argues that the newly deregulated financial markets resemble a giant casino, in which financial institutions such as banks and pension funds gamble with public money. The collapse of the Bretton Woods system of fixed exchange rates in the 1970s has increased uncertainty in the international financial system. The response to this increased uncertainty, according to Strange, has been increasingly complex strategies of risk-management, insurance, hedging and speculation. Paradoxically, these increasingly complex financial strategies have fuelled financial uncertainty and volatility rather than dispelled them. Increased uncertainty, concludes Strange (1986:119) in *Casino Capitalism*, "has started a vicious circle of risk-averse responses, which in turn have added to... volatility... and the faltering confidence in the long-term viability of the global financial system."

Despite its importance, Strange's argument obscures the fact that the association between gambling and finance is not specific to the late twentieth-century financial sphere, and that no 'natural' distinction between the concepts can be assumed. As this chapter argues, the distinction between gambling and finance was not stabilised until the early twentieth century, when risk was codified as a calculable entity. In order to make this argument, the chapter will begin with a discussion of lotteries as a form of government finance in early modern England. It will then address in some detail the US bucketshop debate and the legal controversies surrounding futures trading. The final section of this chapter will discuss the construction of risk as a calculable entity. The chapter will conclude by emphasising that the demarcation between gambling and finance remains an unstable one, and above all, a political one.

The Moral Problematisation of Gambling

Finance and gambling are both strategies of confronting chance and uncertainty, and as such had no conceptual difference in early modern Europe. A number of practices which we would now consider to be firmly in the realm of finance, including government borrowing, insurance and stock trading, emerged in a network of activity which also boosted what we would now call gambling practices. This section discusses the early modern practices in which finance and gambling remained undistinguished, before going on to show how the attack on gambling became a means though which finance distinguished itself as a morally responsible sphere of thought and action. In other words, it was only through creating a contrast with gambling that finance was able to emerge as a respectable element out of early modern networks of monetary activity.

In the previous chapter I discussed the controversial birth of public credit in England, and argued that the financial revolution cannot be considered as the natural emergence of modern financial rationality. This is illustrated by the fact that the organisation of large-scale state lotteries was an important aspect of the financial revolution. Prior to the financial revolution, in Medieval and early modern Europe, lotteries were used regularly for the financing of public works and colonial settlement (Brenner and Brenner 1990:8-11). Lotteries were more suitable for the raise of public moneys than loans because, as Ian Hacking (1975:111) points out, "usury was suspect and not a proper business for the state." In the cities of Holland and Flanders, for example, lotteries were organised as early as the fifteenth century for the raise of specific expenditures. The Dutch town Middelburg financed its fortifications by lottery in 1615, while Amsterdam raised money for the building of a hospital in 1592. Italian city-states such as Venice, Florence and Milan likewise used lotteries for the raise of public money, and the museums of the Vatican were financed by the 'Lottery of Roman States.' In England, Queen Elizabeth chartered a lottery in 1569 for financing public works including the improvement of harbours. This lottery could render the lucky winner free from arrest for seven days (except for major crimes), as well as offering monetary prizes. In the early seventeenth century, James I authorised a number of lotteries in order to finance

settlements in colonial Virginia. Smaller and more local lotteries were held in England throughout the seventeenth century, but in 1621 Parliament temporarily halted national lotteries in order to address the "inconveniences and evils" caused by these events (Brenner and Brenner 1990:10).

When English governmental lotteries were resumed through an Act of Parliament in 1694, they were transformed from incidental fund-raising for specific projects to a solid basis for the creation and the management of a national debt in the absence of large-scale taxation. R.D. Richards (1934:58) points to three purposes of the eighteenth-century English state lotteries: they were used to raise state loans, they were used to raise state revenue (including revenue to pay the obligations of previous lotteries), and they were used for the financing of special projects. The creation of regular lotteries, then, should be considered *part of* the financial revolution instead of as a perpetuation of archaic monetary practices. While the National Lottery in Britain, reintroduced in 1993, again fulfils the function of financing special projects, such as museums, lotteries are not regarded as a regular and legitimate part of modern financial rationality. For example, when in 1998 municipal governments in Colombia organised lotteries to raise revenue to pay their staff, the *Financial Times* wrote: "It was clear something was wrong when municipal governments in southern Colombia began organising impromptu lotteries to cover their payroll obligations... Throughout Colombia, regional governments are having to adopt radical – and sometimes unconventional – measures to avoid declaring bankruptcy" (Thomson 1998:4).

However, between 1694 and 1826, around 170 state lotteries were launched in London. Initially, these took the form of so-called lottery-annuities, in which all tickets-holders were entitled to a periodic payment, but in which special money prizes were awarded to a small number of ticket holders. Annuities are contracts where the buyer (the annuitant) pays a fixed sum in return for regular payments over a designated period, usually the lifetime of the annuitant or a third party. Annuities were closely associated with gambling, as the buyer of the annuity was effectively gambling s/he would live long enough to recoup the original payment and more (Daston 1988:121). The first large scale state lottery-annuity was the Million Adventure of 1694,

which formed part of an overall plan by the Chancellor of the Exchequer to finance the war against France. The Million Adventure raised a total of £1,000,000 by the sale of £10 tickets; each ticket holder was entitled to an annuity of 10 percent over 16 years. In addition, there were 2,500 winning tickets which received additional prices between £10 and £10,000. As a result, the state had to return £2,200,000 for the loan of £1,000,000 (Richards 1934:58-59). As Hacking (1975:111-121) points out, it was not unusual for governments to be so unfortunate in the construction of lotteries. At least the Million Adventure limited its annuity payments to sixteen years: most annuities ran until the death of the annuitant, regardless of the age of the buyer, making these schemes potentially disastrous for the contracting party.

From 1710 onwards, the English state lotteries were managed by the Bank of England, which introduced 'pure' lotteries because the annuity schemes were proving far too costly for the state. In 1719 the George I lottery was authorised, in which there was a number of blank tickets not entitled to any prize or periodic payment. Only fortunate tickets earned a yearly income and a chance of an additional prize. The transfer of the responsibility for lotteries from the Government Lottery Office to the Bank of England marks the emergence of the Bank as the manager of the national debt. The Bank would play an increasingly important role in the management of government lotteries and annuities, and by the 1760s the Bank was managing around seventy percent of the national debt (Bowen 1995:10; Richards 1934:60-73).

Despite the introduction of blank tickets in the lotteries, their popularity increased considerably during the eighteenth century. If the Elizabethan lottery of 1569 had to be extended in order to sell more tickets, the lottery 'Adventures' of 1711 and 1712 were very popular and over-subscribed (Daston 1988:143; Richards 1934:60). In 1753, the popularity of the lottery organised to buy and house the collections of the British Museum led to fraud and political upheaval. As a ticket-seller testified during the Parliamentary enquiry into the events surrounding the Museum Lottery: "People broke in on me, above me, behind me, and in at the Windows, with Ladders; the Partitions of my desk were broke down, while I lay exposed to be plundered of all

my money, which was quite open" (quoted in Daston 1988:143-144). During the second half of the eighteenth century, the drawing of the national lottery was a very popular annual event which took several days. A lively secondary market in lottery tickets emerged, and it became possible to make side bets on the outcome of the draw, which were known as insurance (Munting 1996:56). Moreover, as the usual £10 tickets of the state lotteries were too expensive for the general public, smaller unofficial lotteries were organised, which were drawn more often than the state lotteries. The state suppressed these and other private lotteries, albeit not very successfully. Private lotteries had been forbidden with the same Act of Parliament that authorised state lotteries in 1694. Although legislation against private lotteries was reinforced in 1711, 1719 and 1722, the state was never able to fully prevent them.

State lotteries were not the only eighteenth-century practice in which no boundary between finance and gambling existed. Early insurance incorporated elements which we would now consider to be gambling practices, and insurance offices were a mix of communal provision societies and gambling houses. For instance, Lloyd's of London, the best known contemporary insurer, started out as a so-called Coffee-House where well-off citizens gathered to do business. Lloyd's was a meeting point for sailors and ship-owners who contractually agreed to support each other financially in case a ship of one of the signatories was lost or damaged. Lloyd's moreover sold protection against floods, storms and fires.

However, no conceptual difference existed between these contracts (examples of what we now consider legitimate insurance), and other strategies of wagering on uncertain outcomes (which we now consider to be firmly in the realm of gambling). For instance, at Lloyd's and similar offices it was possible to buy insurance against lying and losing at the lottery. It was moreover possible to place bets on the outcome of battles, the longevity of celebrities, the succession of Louis XV's mistresses and the outcome of trials (Daston 1988:163-182). In 1771, bets placed at Lloyd's and other underwriters on the true sex of Charles de Beaumont, a French diplomat, approximated £60,000. Although de Beaumont declined to provide the proof necessary

to resolve speculations concerning his gender, in 1777 a court ordered an underwriter to pay out to a bettor who had gambled that the diplomat was, in fact, a woman. The court did however express "grave reservations about the propriety of such bets" (Clark 1999:48).

Early life insurance frequently took the form of a policy on the life of a *third* party, sometimes a person who owed the insurer money, but often a stranger – a prince, king or pope. Travelling merchants gambled with their own lives by placing bets on their safe return, bets were placed on the survival of generals in battle, and in 1765 bets were placed on the survival of eight-hundred German immigrants who had arrived in Britain and were abandoned without food or shelter. But also insuring one's own life and the lives of loved ones incorporated gambling elements. Mutual aid societies offered a combined attraction of safety and wagering. An early form of mutual aid was a 'tontine,' a pool to which members contributed a small amount periodically. The last surviving member of the tontine was entitled to the total amount of all contributions, and members thus effectively gambled on each other's deaths (Zelizer 1983:67-73; Daston 1988:165-166).

Clearly then, eighteenth-century monetary networks *incorporated a wealth of practices for* the wagering on uncertain events, whether it be death, fire, lottery draws, marriages or births, in which no distinction between finance and gambling was made. How, then, did finance and gambling become assigned to different moral and legal spheres by the early twentieth century? How was it possible for gambling to become condemned as immoral, idle and blasphemous, while its kindred practices, such as insurance and speculation, became praised for inculcating prudence and foresight?

What we see during the course of the eighteenth century is the moral problematisation of gambling in a Foucauldian sense. In *The History of Sexuality*, Foucault suggests that it was precisely in the absence of legal interdictions or absolute prohibitions that moral discourses were formed around certain sexual practices. "It is often the case that the moral solicitude is strong precisely where there is neither obligation nor prohibition. In other words, interdiction is one thing, moral

problematisation another," writes Foucault. "It seemed to me therefore, that the question that ought to guide my inquiry was the following: how, why, and in what forms was sexuality constituted as a moral domain... Why this 'problematisation'?" (Foucault 1984b:10). A similar argument can be made with respect to gambling: the moral problematisation of gambling took place in the absence of strict obligations and interdictions with respect to gaming practices, and sought to moderate, regulate and condition these practices. The problematisation of gambling established at the same time a "pattern of normalisation," which made possible, as I will argue, the emergence of speculation as a legitimate practice (Foucault 1984b:12).

During the course of the eighteenth and nineteenth centuries, then, there was a proliferation of moral discourse on the subject of gambling. Gambling had not always been condemned in Christian teachings, and the Bible records passages in which the drawing of lots was used to discover God's will when appointing functionaries or determining guilt (Brenner and Brenner 1990:1-7). The church itself regularly used lotteries for financing special projects, and the Archbishop of Canterbury was among the commissioners of the Westminster Bridge in London which was financed by a series of lotteries between 1737 and 1741 (Richards 1934:65-66). But increasing religious condemnation of gambling can be observed during the period of the state-lotteries, and the reliance on chance came to be seen as an attempt to escape or overturn divine providence (Daston 1988:150-163).

For instance, in 1790, Charles Moore, a vicar in Kent, published a *Full Inquiry into the Subject of Suicide*, to which he added, "as being closely connected with the subject," a *Treatise on Gaming*. Concerning the lotteries Moore (1790:359) wrote:

> If it should also be a principal view in every good government, to bestow its favours and rewards on industry, and to discourage idleness, to promote virtue and to discountenance vice, then do lotteries seem purposely contrived to confound and frustrate these ends. The profit or reward is indiscriminately held out to the industrious citizen and to the drone, to the foolish and the wise, the worthless and the valuable, the virtuous and the vicious; and perhaps he alone is crowned with success, who is on every account least deserving of his good fortune.

Moore's argument illustrates what became the core of the moral problematisation of gambling in the eighteenth and nineteenth centuries. As Daston (1988:148) argues, by asserting

that the lotteries and other gambling practices were "severing the link between merit, skill,... hard work and temporal rewards," the unproblematic existence of such link was constructed and propagated by gambling reformers. Lottery participation by the poor and the working classes was perceived as especially problematic, and it was claimed that the very bases of eighteenth-century social-economic organisation in England were being jeopardised by the capriciousness of lottery outcomes. Lottery critics claimed that their concerns were for the poor, wishing to protect them from false hopes and financial ruin caused by lotteries, but at the same time decried the potential subversion of the rigid class order (Daston 1988:149). Fortuna, the goddess of chance, who was regarded as the natural ally of gamblers, became considered a pagan goddess who is unfair and favours the undeserving (Patch 1967:48; Daston 1988:151-154). As a popular song of 1790 went:

> The Name of a Lott'ry the Nature bewitches,
> And City and Country run Mad after Riches: (...)
> The Footman resolves, if he meets no Disaster,
> To mount his gilt Chariot, and vie with his Master.
> The Cook Maid determines, by one lucky Hit,
> To free her fair Hands from the pot-hooks and Spit:
> The Chamber-maid struts in her Ladies Cast Gown,
> And hopes to be dub'd the Top Toast of Town.
> (quoted in Daston 1988:146-147)

The evil of gambling was inserted into a web of meaning which linked gambling to other vices, including drunkenness, crime and prostitution. Lottery critics complained that the prolonged lottery draws, as well as frantic side-betting, were distracting Londoners from their proper labours and were accompanied by loudness, drunkenness, riots and pickpocketing in the area of Guildhall where the draws took place (Munting 1996:57). As Moore (1790:359) put it: "Whoever wishes to know what are the 'blessings' of a lottery, should often visit Guildhall during the time of its drawing; when he will see thousands of workmen, servants, clerks, apprentices, passing and repassing with looks full of suspense and anxiety, and who are stealing at least from their master's time, if they have not also robbed him of his property, in order to enable them to become adventurers." Another anti-gambling author asserted: "'tis easy to infer that Gaming brings People into ill Company. 'Tis an Inlet to Drinking and Debauchery... your gamesters are

commonly finish'd Rakes, and their Morals are as bad as their Mystery" (Collier and Goldsmid 1885:33). It was argued that gambling men lost all sight of their familial and professional responsibilities, were consumed by their gaming passions and wasted their time. When engrossed in gambling activities, Collier and Goldsmid (1885:28-35) wrote, "a Man can't manage with that Steadiness and Force he would do otherwise. For when the Head runs Muddy, the Sight grows dim, and the Judgement is proportionately Disabled... when he is sunk at Play, there's no emerging, no Physick will reach his Distemper... the Evil is irrevocable and past Redemption."

Particular concern was expressed over gambling by women; it was feared that women gambled with the household money and forsake the running of the house and the care of their children (Munting 1996:26). Moore (1790:369) devoted an entire chapter of his *Treatise on Gaming* to 'Gambling among Females,' and wrote: "For tell me, ye daughters of eager play, does not its desire increase with its gratification? Does not every domestic employment in consequence pall and tire?... Is there music any longer in the prattle of your babes?... or do you... count the tedious moments till the hour of play arrives, and fly from home?" Sometimes, gambling women were blamed for the proliferation of gaming in society, by failing to set a good example. "Have we not heard of Ladies losing hundreds of Guineas at a Sitting?," wrote Collier and Goldsmid (1885:19), "And when the Women are thus Courageous, the Men conclude their own Sex calls for a bolder Liberty: That they ought to go farther in Danger, and appear more Brave in the Methods of Ruin." Like the practice of stock-jobbing, the excesses of gambling were associated with female unruliness and prostitution. "How can due respect await the characters of those women, who make no scruple of thus spending whole nights with men over the gaming-table?," asked Moore (1790:369-370), "the 'man' that plays beyond his income pawns his estate; the 'woman' must find something else to mortgage, when her pinmoney is gone. The husband has his lands to dispose of, the wife her person."

In response to the increased opposition to lotteries and gambling, the government appointed a Select Committee of Parliament in 1808 with the mandate to "inquire how far the

evils attending Lotteries have been remedied by the laws passed" (Richards 1934:75-76). The Committee was unambiguous in its findings and reported in that same year that "the foundation of the Lottery is so radically vicious....that under no system of regulations which can be devised will it be possible for Parliament to adopt it as an efficient source of Revenue, and at the same divest it of all the evils and calamities of which it has hitherto been so baneful a source" (quoted in Richards 1934:75). Despite the report, the government was reluctant to give up this very profitable source of income, and it took another fifteen years before the lotteries were outlawed. In 1823, the Lottery Act was passed which provided for the outlaw of state lotteries after the last draw in 1826. The following 'memoriam' was written for the occasion:

> In Memory of
> THE STATE OF LOTTERY
> the last of a long line
> whose origin in England commenced
> in the year 1569 (...)
> As they increased, it was found that their
> continuance corrupted the morals,
> and encouraged a spirit
> of Speculation and Gambling among the lower
> classes of the people (quoted in Brenner and Brenner 1990:12).

Life insurance had already been restricted and regulated some fifty years earlier, when the Gaming Act of 1774 stipulated that the policyholder had to demonstrate a legitimate interest in the life of the insured. Betting on the lives of third parties thus became outlawed, although, as Clark (1999) demonstrates in his history of British life insurance, legal ambiguity over what this insurable interest constituted persisted for some decades. The next chapter will return to the issue of insurance, to discuss how statistics and the articulation of a calculable future succeeded in making insurance respectable.

The point to be stressed here, is that the moral problematisation of gambling and the proliferation of discourse on the subject, defined, classified and channelled the network of emerging monetary practices. Rather than understanding the Gambling Act, for instance, as a pure prohibition in the sphere of gambling, it can be interpreted as a code which regulated, modified and normalised certain practices hitherto indistinguishable from gambling (Daston

1988:175-176). This is how Foucault understands the operation of power with respect to the moral problematisation of sexuality. Rather than belonging "primarily to the category of repression," Foucault (1998:10) writes, power operates in the sphere of sexuality as a regime of knowing and speaking. In this respect, what becomes important in the history of sexuality is "to discover who does the speaking, the positions and viewpoints from which they speak, the institutions which prompt people to speak about it and which store and distribute the things that are said" (Foucault 1998:11). Using Foucault's questions to study the history of finance can shed light on the way in which the moral problematisation of gambling eventually rendered possible the construction finance and gambling as two separate spheres. As I will argue in the next section, the end of the state-lotteries did not end the political controversies over the gambling elements in monetary transactions. On the contrary, the nineteenth century saw a proliferation of texts concerning the immorality of the so-called "gambling in the forms of trade" (Dewey 1905).

The United States Bucketshop Debate

In the previous chapter I argued that Daniel Defoe portrayed stock-jobbers as the rapists of *Lady Credit*, whose innocence would be permanently lost as a result. Despite Defoe's support of the new credit structures, he condemned short-term buying and selling of shares and credit certificates, undertaken with the hope of making a profit. Defoe's objections to stock-jobbing extended to the secondary markets in lottery tickets, and he accused stock-jobbers of buying up all the tickets in order to sell them at a profit. "In the first *Lottery*," Defoe (1711:223) wrote, "the People receiv'd a great Disgust at being Stock-Jobb'd, and as I may say, Huckster'd into an Advanced Price, shut out of the first Subscription, and oblig'd to come to the Engrossers for their Tickets, and buy them at second Hand." Defoe (1711:223) concluded that lottery brokers and stock-jobbers were "Cheats and Thieves of the State."

During the eighteenth and nineteenth centuries, there was a proliferation of discourse on

the evils of speculation similar to Defoe's condemnation of stock-jobbing. For example, the 1791 anonymous poem cited at the beginning of this chapter, which was published in New York, accuses speculators of unjustly acquiring more than their deserved share of "Fortune's goods" (*Glass* 1791:3). The poem goes on to say:

> You sons of earth, did God alone for you
> Bid countries rise and spac'ous rivers flow? (...)
> In Virtue's cause have thousands labour'd hard,
> That you should run away with the reward? (...)
> Have you no bowels for th' unfortunate?
> Does not soft pity reach your stoick state?
> Can you see thousands ruin'd by your means,
> And yet in perfect ease enjoy your gains? (*Glass* 1791:7, 10).

This section discusses how the moral problematisation of gambling manifested itself in debates surrounding stock and futures trading. If we take as starting point Foucault's argument that power operates in the regulation of knowing and speaking, the proliferation of debate over financial trading in the late nineteenth-century US is not just a rhetorical addition to changing economic structures, but the very means through which the financial sphere was defined, shaped and legitimised. In other words, the institutional, legal and moral framework of the twentieth-century financial sphere can be traced back to these debates. Following Foucault, the remainder of this chapter will discuss the viewpoints, positions and regulation of discourses concerning the nascent financial sphere in Britain and particularly in the US. In the US, this debate was complicated by the existence of bucketshops, small-scale betting shops which allowed wagering on stock prices. The 'bucketshop debate' provides an important study case precisely because legislation questioning the legitimacy of futures trading forced those defending these practices to explicitly and consistently formulate the differences between gambling and finance.

The bulk of the debate concerning the legitimacy of speculation in the US took place after the civil war (1861-1865), which had given a boost to the emerging monetary networks. The uncertainties and volatility of war had created unprecedented opportunities for investment and speculation, and the Republican Army was one of the major purchasers of grain futures contracts as a way of securing food supplies to its soldiers (Dunbar 2000:27). Before the war, in the 1840s,

Chicago had emerged as an important trading city, providing the more populated east coast with the products of Midwestern farms. In 1848 the Chicago Board of Trade (CBoT) was founded in order to facilitate and centralise long-distance grain trading. Two more organised exchanges for futures trading were founded in the boisterous atmosphere of post-civil war United States: the New York Cotton Exchange in 1870, and the Chicago Produce Exchange in 1874 (Hieronymous 1971:71-80).

Merchants on the CBoT created time contracts, or 'to-arrive' contracts, to allow future delivery of batches of produce at a fixed price. Time contracts were not new and had been used, for example, for gambling and speculative purposes in Amsterdam in the seventeenth century (De Marchi and Harrison 1994). However, post-civil war financial trading in the US was unique in that the CBoT adopted formal rules governing time contracts, which led to an unprecedented increase in their use.[3] The new futures trading rules were made possible through a process of standardisation and formalisation of trading on the produce exchanges. As Witold Kula (1986) has shown, units of measurements for grain and other agricultural commodities displayed extensive spatial and temporal variation until well into the nineteenth century. For example, many measures were defined by body-parts such as foot, pace, elbow (ell) and therefore displayed large variations. Moreover, ill-defined measures could be tampered with: a wagonload of grain could be flat or heaped, of greater or lesser quality, while grain poured from a greater height packs more densely. Because of this, trading in to-arrive contracts would habitually involve personal inspection of the product upon delivery, or would at least require a high degree of personal trust between buyer and seller in order to guarantee the measure and quality of grain.

During the second half of the nineteenth century however, produce exchanges, led by the CBoT, introduced uniform measures and quality categories of grain, thus making personal inspection of deliveries of grain superfluous. By the late 1800s, traders on the Chicago Exchange needed not even to know what grain looked like in order to buy, sell and make a profit on it. "A successful trader of wheat," writes Theodore Porter (1995a:48), "no longer had to spend his time

at farms, ports, and rail terminals judging the quality of each farmer's produce... [T]he knowledge needed to trade wheat... now consisted of price data and production data, which were to be found in printed documents produced minute by minute."

The creation of "uniform categories of produce" (Porter 1995a:48) thus facilitated exchange trading and made standardised futures contracts possible. Most importantly, standardisation made possible the introduction of margin trading – the requirement of a 10% deposit when entering into futures contracts. Margin trading allowed market participants to make profits on price differences without owning or intending to own the actual produce.[4] Margin trading greatly facilitated participation in the futures markets by allowing positions far in excess of the cash paid for them. It quickly became custom to settle price differences between contracts when the delivery day arrived, instead of making the actual delivery. From 1872 onwards, the amounts of produce traded on the exchanges far exceeded annual crop production (Cowing 1965:5). The amount of futures contracts which led to delivery of the produce or commodity stipulated was estimated to be anywhere between 10% to a fraction of one percent of all futures trading during the years of the bucketshop debate.

Increasingly, professional speculators rather than farmers and merchants operated on the futures markets. As the 1791 poem quoted at the beginning of this chapter illustrates, these speculators were accused of the same vices as gamblers. It was argued that they were rewarded without effort or hard work, and that they profited from the labour of others, particularly farmers. As early as 1846, an article in the *United States Magazine and Democratic Review* (1846:83) noted that trading in stocks and credit certificates "has opened a road to the possession of great means... far shorter and more agreeable to the successful than the old beaten and irksome track of perseverance and industry. It is a means greatly to be deprecated. It is subject to all the chances of a game of hazard, when conducted in good faith, and susceptible of endless varieties of fraud under the guidance of persons destitute of principle." The article made no distinction between gambling and speculation and argued that the New York Stock Exchange since its constitution in

1820 had become the "scene of the most stupendous gambling operations" (1846:86). Instead of being created through gambling and chance, the *Democratic Review* (1846:83) argued, "all the wealth of a nation must necessarily consist of the proceeds of the industry of its inhabitants." The *Democratic Review's* (1846:90) conclusion that "the worst of this stock-gambling is the degree of toleration it receives from the public opinion," proved slightly premature. A veritable explosion of discourse on the topic of gambling and speculation took place after the civil war, and the discussion lasted well into the twentieth century.

The debate over the legitimacy of speculation and futures trading was fuelled by the emergence of so-called bucketshops in the 1870s. Bucketshops were small betting shops where the public at large could bet on the movements of stock prices without actually purchasing stock. Bucketshops used all the paraphernalia associated with established exchanges, such as stock quotes and ticker tape in order to appear legitimate. These betting shops called themselves brokerage houses and established themselves in financial districts, not just in New York and Chicago, but in all major cities in central and western United States. They were reputed to have derived their name from saloons in London where the urban poor drank beer which had been spilled and collected in buckets from larger pubs (Fabian 1999:189). Bucketshops accepted small bets on the movements of stock prices (much smaller than the minimum investments required by the exchanges), but most of them did not actually execute their client's orders on the exchanges. They simply took the opposite position to their customer's bets, sometimes hedging their positions on the exchanges. In some cases, bucketshop proprietors would tamper with the stock quotes if they were about to suffer losses.

By their appearances and practices, bucketshops publicly associated financial trading with gambling (Hieronymous 1971:89-93). According to one critic of the CBoT, for instance, the exchange was nothing but a giant bucketshop: "a certain Board of Trade... is little more than a mammoth bucketshop...in which trickery of the most unscrupulous kind is exalted into a science. Futures are not so fair a game as cards" (Howe 1916:53). The remainder of this section will

examine the critiques of exchange trading, which were fuelled by these public associations between gambling and finance.

As Ann Fabian (1999) demonstrates in her history of gambling in the US, farmers and agricultural organisations formed one powerful source of critique of speculation and futures trading in produce.[5] They argued that futures trading had caused enormous price volatility in produce since the end of the civil war, and that speculating for a price-decline, or short-selling,[6] induced financial operators to deliberately drive the prices down. Farmers attacked futures trading as gambling in food and produce, and accused professional speculators of trading in 'fictitious commodities' or 'wind wheat.' "While a few men really buy and sell wheat [on the exchanges]," a New England preacher wrote in 1888, "the majority of speculators buy and sell promises" (Hubbard 1888:6). Reverend George Hubbard (1888:7-8) blamed speculation for the inequality of income in the US and went on to say:

> The paper contracts of the various Exchanges already mentioned, involving billions of dollars, imply an actual loss on one side and gain on the other of hundreds of millions. This enormous sum of money does not represent any benefit conferred upon the community, but is absorbed by the fortunate speculators without any return whatever, leaving the country at large so much poorer... Thousands of poor people may be starving for want of bread while millions of bushels of wheat lie stored away in the elevators held to compel a rise in prices.

Similarly, a satirical poem of 1840 lamented the influence of speculators on prices and produce markets in the following verses:

> But [in 1838] Speculators *swarm'd again*
> And bought up all our *meat* and *grain*
> While av'rice and its kindred *vices*
> Near *starv'd* us with their famine prices
> For *Bread*, the hapless widow sighed
> And *orphans* of starvation died! (Citizen of Saragota Springs 1840:7)

Farmers condemned speculation for being immoral and sinful. In 1892, in a letter to the Committee on Agriculture in support of a bill designed to tax futures trading in produce,[7] a Minnesota wheat farmer compared speculators to the devil. "The gambling in food products," this farmer wrote, "utterly destroys anything that could be called a market. What business has a man (or devil) selling or pretending to sell, a food product which he does not possess?... These

men who 'operate' on the boards of trade (more appropriately called gambling hells) have no right to the consideration of honest men than the devil has to a seat in heaven" (quoted in Fabian 1999:153). The argument that speculating was the work of the devil was voiced also by Charles William Smith, a former Liverpool broker who had become a fierce opponent of financial trading. In support of the farmers Smith wrote: "all raw materials, say, the land and all its actual products, were not made by man, but created by God, for the use and sustenance of the human race. And this dealing in 'fictitious' commodities, I maintain, is directly antagonistic to the spirit of Christianity, and consequently must be forbidden in all Christian countries" (Smith 1906:6).[8]

Indeed, as Hilton (1988) demonstrates, the new monetary practices and Christianity stood in a profoundly uneasy relation with each other. Religious condemnation of speculation, or 'over-trading,' was common in nineteenth-century Britain. "Over-trading is *fast* trading," one British opponent of speculation wrote in 1866, "[it] is, in fact, the criminal folly against which the Word of God so clearly warns us – the *making haste to be rich*, which is never innocent, but always culpable and baneful" (quoted in Hilton 1988:123, original emphases). This argument was made also by the Scottish reverend and theology professor Thomas Chalmers, who rallied against the sins of excess associated with speculative practices. "We feel no dread anticipation of national loss, either from profuse expenditure or from excessive speculation," Chalmers (1832:123-124) wrote in his treatise on political economy, "but both habits are much to be deprecated, as being alike unfavourable to private virtue and happiness. And both these excesses may in fact be realised by the same individual – in whom the appetite for gain and the appetite for indulgence, may meet together in hurtful and vicious combination" (c.f Hilton 1988:115-120). Instead, Chalmers (1832:124) praised the "cardinal virtues" of "the grandfathers of our present race, with their homely fare and their primitive habits, [who] were still uninfected by the vice and vanity of modern times."

Like gamblers, then, speculators were accused of making money from nothing, and of being "idlers who made profit even while they slept; [they] had money that reproduced itself

without labour" (Fabian 1999:159). The popular financial journalist Garet Garrett (1911:2-3) described New Street in the New York financial district as "the Hall of Delusions," and lamented that "in New Street all men are equally under the delusion that the ticker is a source of wealth – that wealth is made and unmade by the going up and down of prices." The comparison between the financial sphere and casino gambling was frequently made, for instance by the lawyer Franklin C. Keyes (1904:5) who said, in a lecture on the *Tricks and Tragedies of Wall Street*:

> Wall Street speculation is the most stupendous game known to the world of chance; as compared with it, the game at Monte Carlo pales into utter significance; in no other game are the stakes so high, is success so transitory and failure so overwhelming. It is a game in which the wealth of Croesus changes hands in a single hour, a game in which a few manipulators behind the scenes pile up millions on top of more millions year after year; but in which the vast majority of the outside public, who tamper with it, go to financial and often physical and moral ruin.

Another critic of financial trading, James Hamilton Howe, published a popular tract against speculation and futures trading in 1882, "written especially for the education and protection of our young men and women, about to enter the business or professional world." Howe, a lecturer at Boston University, took aim at the CBoT, which he called "the Dragon and Juggernaut of Speculation." "Dragon takes advantage of Drought, Hail, Wind, Rain, Frost, Floods and Fire," wrote Howe (1916:38), "The Devilish Tricks that He Daily Frames Up, in order to Deceive the Poor Fish, are Many and Subtle... Dragon is the most powerful and dangerous robber of the present time; disturbing, as he does, the normal prices of the food products of the world, even to far-away Zanzibar." Howe flamboyantly argued that the CBoT was a giant casino which received the support of the government and the most powerful business interests in the US.

The asserted parallels between speculating and gambling resulted in a bleak portrait of financial traders. Speculating was seen as leading to financial ruin at best, and madness and suicide at worst. We have already seen that the Englishman Moore (1790:362) devoted a whole section of his investigation into suicide to gambling, which he believed to lead to "despair, rage and madness," and, eventually, suicide. Moore (1790:363-365) strongly opposed stock-jobbing and lotteries and concluded: "did ever extravagance and gambling in all its varied forms reign more

triumphant in the bosom of trade? Did ever consequent fraud and forgery so fearfully pervade the whole system of commerce? – The career begins in idleness... and terminates in the chambers of infamy and death." Similarly, the American author of a tract on the *Ethics of Gambling* argued that gambling and suicide were closely related, and wrote in 1896: "if we could but obtain accurate statistics, we should find that gambling was of all vicious habits, not even excluding hard drinking, the one which most predisposed its victims to suicide" (Mackenzie 1896:44). Suicide, argued Mackenzie (1896:30), was the logical outcome of the gambling process, which induced the gambler to "step outside the conditions of rational, human action, [and] to resign the use of your own manhood." Howe also argued that insanity took hold of those who gambled on the CBoT. "The usual person whom Dragon induces to enter these gambling halls soon becomes hypnotised and sadly influenced to his personal ruin and dismantlement of his household goods," Howe (1916:38) asserted, "His few short hours of gain are filled with excitement and fidgety dreams, rather than happiness. His feelings are more like the ecstatic musings of [a] maniac... a sanatorium would be the proper place for him."

The Legal Ambiguity over Speculation

In addition to growing popular resistance against their practices, stock and produce exchanges faced considerable legal restrictions during the nineteenth century. Most US states passed laws against speculation, futures trading and commercial wagering, which made little or no distinction between the business of bucketshops and that of the exchanges. Opposition against futures trading was strongest in Midwestern states, where agricultural organisations hostile to grain and produce speculation had the most political clout. As late as 1927, the *Harvard Law Review* lamented the existence of anti-futures laws which affected the stock and produce exchanges. While anti-futures laws were "clearly desirable when applied to transactions not conducted through the medium of stock and produce exchanges, as, for example, bucketshop operations, considerable

difficulties arise from [their] application to futures contracts on exchanges" (*Harvard Law Review* 1927:638).

This section will focus on the legal discussion over speculation in the US, which was more public and more controversial than the one in Britain, and offers unique insight into the arguments and objections that had to be muted in order for speculation to become a considered a legitimate and socially beneficial practice in the mid-twentieth century. As we have seen at the end of chapter 2, Britain passed an anti-speculation law in the aftermath of the South Sea Bubble in 1734. In addition, there was some discussion in Britain over whether stock exchange transactions and 'time-contracts' were affected by the Gaming Act of 1845, which voided all "contracts or agreements... by way of gaming or wagering" (Morgan and Thomas 1962:148). The legal controversy over speculation in Britain, however, was much more muted than the one in the US. In their history of the London Stock Exchange, Morgan and Thomas (1962:147-148) document that informal networks of trust prevalent in the City meant that financial participants did not easily appeal to the courts. May (1939:489) moreover documents that in Britain, "the courts have always refused to interfere with the exchanges' own rules or their relations with their own members. A client has no right of legal defence against an exchange rule unless it is both illegal and unknown to him." Barnard's Act was repealed in 1860, and all legal restrictions of speculation were thus removed from British law (Fayant 1913:46).

However, it should be noted that speculation was contested in Britain in similar terms as in the US. Above, I have quoted the Scottish reverend Chalmers (1832:124, 168), who regarded speculation to be excessive and indulgent, and who praised the "plodding and painstaking" virtues of hard work over the "gambling artifices" of credit creation. In 1877, a Royal Commission was appointed to enquire into the legitimacy of the activities of the London Stock Exchange, particularly speculation. One of the problems, a member of the House of Commons asserted, was that the Stock Exchange "encouraged speculation by admitting a low class of members with small security" (quoted in Kynaston 1994:277). One ruined speculator testified before the Commission

that "the Committee of the Stock Exchange is in one word corrupt... How can it be otherwise? The Committee is an irresponsible body. They frame their own laws to suit their own objects. Such of their laws as are framed with a view to protect the public, and these are few, they disregard when challenged to do so... as I have proved to my cost" (quoted in Kynaston 1994:283). The secretary of the London Exchange, on the other hand, testified that in order to prohibit fraud, "the best restriction is to take all the means in one's power to see that the applicant is a person of good character and credit" (quoted in Kynaston 1994:278). In 1878, the Royal Commission delivered a report which recommended the incorporation of the Exchange and the public visibility of the trading floor, but which denied the need for any fundamental transformation of the Stock Exchange. The Commission's Report was praised by one observer in the United States as an example which "absolutely upheld the purpose of the Stock Exchange and the legitimacy of speculation in securities" and which "pointed out the dangers of attempting to force external control on the Exchange" (Fayant 1913:46).

In contrast, in the US the courts and other legislative bodies were more susceptible to the cases of ruined speculators, and more willing to restrain speculative practices. New York State was one of the first to pass an anti-speculation statute in 1812, by prohibiting sales for future delivery when the seller did not own the stock or produce to be delivered (short-selling). The "Act to Regulate Sales at Public Auction and to Prevent Stock Jobbing," declared void all future sales of stocks or shares, "unless the party contracting to sell... shall at the time of making such contract be in actual possession of the certificate" (Fayant 1913:54-55). The New York statute was controversial in the State Legislature, demonstrated by the fact that the law was contested but re-enacted in 1830. The Statute was eventually repealed in 1858 by an act which held that no contract shall be void or voidable "because the vendor at the time of making such contract is not the owner or possessor of the certificate... or other evidence of such debt, share, or interest" (Dewey 1886:18-19).

In contrast to the New York State Legislature, most US states formulated laws against

stock-gambling, bucketshops and futures trading *after* the civil war. For example, the criminal code of the 1880 Revised Statutes of the State of Illinois includes a section on 'Gambling in Grain,' which stipulates: "Whoever contracts to have or give himself or another the option to sell or buy, at a future time, any grain, or other commodity, stock... or gold... shall be fined not less than $10 nor more than $1,000, or confined in the county jail not exceeding one year, or both; and all contracts made in violation of this section shall be considered gambling contracts and shall be void" (Cothran 1880:471). Similarly, the 'Georgia Statute against Short Sales' held that "a contract for the sale of goods to be delivered at a future day where both parties are aware that the seller expects to purchase himself to fulfil his contract, and no skill and labour or expense enters into the consideration... is a pure speculation upon chances, is contrary to the policy of the law and can be enforced by neither party" (Dewey 1886:21).

Texas enacted an anti-futures law as late as 1907. Section 14 of the Texas law emphasised the urgency of its enactment and stated: "The fact that there is now no adequate law to prevent dealing in futures and the further fact that the prices of agricultural and farm products are greatly depressed by such gambling transactions and that such transactions are against good morals and contrary to public policy... creates an imperative public necessity... that this bill takes effect" (*General Laws of the State of Texas* 1907:174). However, the controversial nature of the Texas law is demonstrated by the fact that one of the most important supporters of the law, president of the Texas Farmers' Union, E.A. Calvin, made a public announcement withdrawing his support for the anti-futures law in 1909. Calvin argued that the law, while intending to eradicate bucketshops, had damaged exchange trading, and concluded: "Speculation, as commonly known, is a venture based on calculation containing elements of reason, while gambling is without calculation and simply blind chance. One is an evil, the other a necessity. The law condemns gambling, but should sustain speculation" (quoted in *The Functions of the Legitimate Exchanges* 1910:187).

It was frequently left to the courts to decide whether exchange transactions were affected by the various statutes against futures trading and bucketshops. Numerous court cases were

fought on state and federal levels concerning the legality of futures contracts.[9] Usually, these cases were commenced by unfortunate speculators who hoped to avoid paying their losses by arguing that the contracts entered into were gambling contracts and should be declared void. It was not unusual for state and circuit judges to find in favour of these ruined traders. For example, in the Illinois case *Cothran versus Ellis*, which was decided in the late 1800s, Judge Mulky found futures trading to be unambiguously within the jurisdiction of the anti-gambling laws. "Dealing in futures or options, as they are commonly called, to be settled according to the fluctuations of the market, is void by the common law," this judge held,

> It is not only contrary to public policy, but it is a crime – a crime against the state, a crime against the general welfare and happiness of the people, a crime against religion *and morality, and a crime* against all legitimate trade and business. This species of gambling has become emphatically and pre-eminently the national sin... In its pernicious and ruinous consequences, it is simply appalling. Clothed with respectability and entrenched behind wealth and power, it submits to no restraint, and defies alike the laws of God and man (quoted in Howe 1916:123).

Other courts delivered similar decisions. For instance, a Court of Appeals in Tennessee *decided in* 1896 to annul a number of financial contracts which settled price differences, rather than delivering the underlying stocks. The Tennessee Court held *"that stock speculation of this kind*, where the party trading neither has nor expects to get and to pay for the actual stock, is merely gambling, and illegal, and contracts founded thereon are void and unenforceable, is beyond dispute" (quoted in MacDougall 1936:72).

During the course of these legal controversies, a number of themes emerged which became decisive in the question whether futures contracts could be declared void. The large number of court cases fought on the topic produced confused and contradictory evidence and varying definitions of futures trading, wagering and speculation. However, the 'intent of the parties to deliver' became a validity test for futures contracts which was formulated as early as the 1852 federal case *Grizewood versus Blane*. If parties to a contract do not intend to deliver the underlying stocks or commodities, this reasoning held, and if "the real intent be merely to speculate in the rise and fall of prices," then the contract would be void (Taylor 1933:66-67).

Dewey (1886:76) presents an overview of "facts and circumstances which have been

considered by the courts as indicating an intention to wager," which he admits to be "unsatisfactory and contradictory." First, notes Dewey (1886:95-106), intention to wager has sometimes been considered proven when the seller of the futures contract did not actually own or posses the articles sold. The court cases which annulled futures contracts on this basis thus had the same effects as the statutes against short-selling mentioned above. Dewey demonstrates that this line of reasoning was subject to much debate, as in a series of Illinois cases which formulated, questioned and eventually overruled the annulment of contracts on this basis. Other factors indicating the intention to wager included evidence that a purchaser of futures contracts intended to resell the contract before the stipulated time of delivery; evidence that the party dealing in futures contracts would not be able to pay for the actual delivery of the underlying stock or produce, and thus merely intended to settle the price differences; and evidence that the parties to the contract were engaged in a large number of transactions at the same time (Dewey 1886:115-135). For example, the argument that engagement in a large number of speculative transactions indicated intention to wager, was voiced by a Pennsylvania court which said: "If besides this contract if should be shown that many others of a similar kind were entered into by the same man, and at about the same time, certainly it would strengthen the conviction that the plaintiff was not a bona fide contractor in a legitimate business" (quoted in Dewey 1886:133).

As late as 1933, the US Supreme Court considered the professions and financial capacity of parties to futures contracts among the decisive factors for annulment of the contracts. In *Dickson versus Uhlmann Grain Company*, the court held Uhlmann to have conducted a gambling establishment in the Missouri town Carrollton, which enabled local residents to gamble on the fluctuations in grain prices. The court said:

> The accounts of the defendants were carried on margin; and the extent of their purported obligations exceeded their financial capacity... Between 40 and 50 local residents from widely divergent walks of life in no way connected with purchasing or selling grain became customers of the branch. Of the five defendants... who were the plaintiff's largest customers at Carrollton, two were farmers, two were clothing merchants, and one was an ice dealer. These defendants, who were not in the grain business, who had never traded on a grain exchange, and who had no facilities for handling grain, purported to buy and sell in amounts up to 50,000 bushels in a single transaction. In a period of nine months the total number of bushels involved in the transactions

of four of the defendants, according to one of the plaintiff's witnesses, was 2,360,000.[10]

The War Against Bucketshops

Faced with growing popular and legal opposition to their practices, the established exchanges in Chicago and New York realised that explicitly dissociating themselves from gambling had become crucial to the legitimacy of their profession. One of the ways in which they attempted to do so was by waging a legal war against bucketshops. If they managed to portray bucketshops as the *real* gambling houses, they would be able to acquire respectability as legitimate places of business. Instead of passing various anti-futures and anti-speculation laws, one author asserted in a collection on *The Functions of Legitimate Exchanges*, published in 1910, "the efforts of law makers... should be directed toward the elimination of the bucketshop evil, and not toward prohibiting the meritorious system of marketing our cereal crops by the buying and selling of grain for future delivery... The bucketshop is the racetrack of the speculative game... It is this kind of gambling that has wrought widespread ruin, sorrow and disgrace" (Brown 1910:131-132). In spite of Brown's assertion to be acting in the interest of the speculating public, the exchanges were not in the last place acting in their own financial interest when waging the war upon bucketshops, which had appropriated much of the business in stock and produce speculation.

The problem with the discursive strategy which sought to legitimate exchange activity by arguing that bucketshops were the real gambling houses, was that it was hitherto impossible to make a consistent and fundamental distinction between the practices of bucketshops and the financial instruments traded on the exchanges. This is exemplified by the ambiguous formulation of the various anti-futures statutes and the legal struggle over the definition of the intention to wager, discussed in the previous section. As Fabian (1999:198) puts it: "For twenty years the Board of Trade tried to close the bucketshops, but the directors and their lawyers kept stumbling on their own troublesome similarity to bucketshops. How could the Board rid itself of its

diabolical double without crippling itself and limiting the very practices that made modern markets possible?" This section and the next discuss the legal and polemical efforts undertaken by exchanges and their defenders to articulate a clear and consistent distinction between their practices and those of bucketshops.

The practical and legal way in which the exchanges attempted to close down the bucketshops was by withholding price quotations for stocks and produce, meaning that the bucketshops had nothing to bet on. After the first bucketshops opened in Chicago in the 1870s, the CBoT began prohibiting the dissemination of price quotations in 1882. Between 1882 and 1892, the struggle over price quotations intensified, and CBoT withheld the quotations from the bucketshops and from the Western Union Telegraph Company which distributed the quotes to other states. Many CBoT members, however, continued to communicate the quotes to interested parties for a fee, and bucketshops reputedly hired agents to look into the windows of the exchange. In 1892, the CBoT resumed sending continuous quotations over the telegraph wires, and by 1895 there were an estimated eighty bucketshops in Chicago alone. In the late 1890s, legal action against the bucketshops was resumed and the CBoT managed to have a number of them condemned for being illegal gambling operations. This legal action culminated in a prolonged battle between the CBoT and a large Kansas City bucketshop operation called Christie-Street Commission Company, popularly known as the 'bucketshop king' (Ferris 1988:117-130; Boyle 1920:89-97).

Between 1900 and 1905, eight court cases between the CBoT and Christie were decided, five of which found in favour of the bucketshop (*Harvard Law Review* 1932:914-915). In 1900, Judge Tuley of Cook County, Illinois, affirmed the right of the CBoT to withhold its price quotations from the Christie Company, and ruled:

> So prevalent has this [bucketshop] evil become that the betting upon the price of grain without the intention of delivery may be said to have become the national mode of gambling... The evidence shows that Christie-Street Commission Company never purchased or sold a bushel of grain, although it made trades amounting to 157 million bushels in a year. The evidence shows that bucketshopping or gambling in prices on the Chicago Board of Trade of grain and other products was the main business of complainants... the quotations being used as dice are used, to

determine the results of the bet (quoted in Ferris 1988:123).

However, in 1901 Christie reopened under the name of Christie Grain and Stock Company, and when the CBoT resumed legal action against the bucketshop, Christie won a significant victory. In 1903, the Circuit Court of St. Louis accepted Christie's defence that there was no essential difference between its practices and those of the CBoT. The St. Louis court held:

> It is thus proven beyond all reasonable question that the Chicago Board of Trade... members... engage in making and carrying through deals in grains and provisions, in which it is not intended to make a future delivery of the article dealt in, but which are to be settled by payment of money only according to the fluctuations of the market and which are in all essentials gambling transactions... In seeking the aid of the Court... the Board of Trade does not come with clean hands, nor for a lawful purpose (quoted in Ferris 1988:126).

The CBoT appealed against this decision, and in 1905 the case was referred to the US Supreme Court, the final legal authority available. In its defence, Christie Grain argued not just that the activities of the CBoT were indistinguishable from its own, but moreover that price quotations were public property and that the Board had no right to limit their distribution. Attorney Charles D. Fullen, representing the bucketshop, pointed out to the court that 95% of the transactions of the CBoT did not result in delivery but merely settled price differences. Fullen concluded:

> so great was the halo around the Chicago Board of Trade that it seems no one was courageous enough to say that the Board of Trade was in itself a huge gambling concern... [T]estimony could be pointed out in the record showing that delivery does not result from the transactions in the pits... This illustrates the fact which we want to present to the court, that there is no limit which can be placed upon the trading in the pits of the Board of Trade, that it is all wind trading and the volume of the trading is not dependent upon any condition of... the quantity of produce in the country (quoted in Howe 1916:117-118).

However, the Supreme Court delivered an opinion in favour of the CBoT, which sought to legitimate futures trading regardless of actual delivery of the underlying stocks and produce. Justice Holmes, who delivered the opinion of the court, said:

> People will endeavour to forecast the future, and to make agreements according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable. Its value is well known as a means of avoiding or mitigating catastrophes, equalising prices, and providing for periods of want. It is true that the success of the strong induces imitation by the weak, and that incompetent persons bring themselves to ruin by undertaking to speculate in their turn. But legislatures and courts generally have recognised that the natural evolutions of a complex society are to be touched only with a very cautious hand.[11]

The court moreover stipulated: "In the view which we take, the proportion of the dealings in the pit which are settled in this way [through price differences] throws no light on the question of the proportion of serious dealings for legitimate business purposes to those which fairly can be classed as wagers, or pretended contracts." Holmes provided the exchanges with the legal ammunition required to close down the bucketshops by stipulating that price quotations are a "trade secret" and thus private property of the Board. It is important to note however that despite its ruling in favour of the CBoT, the Supreme Court did not, and could not, make a clear and consistent distinction between CBoT trading and bucketshop practices.

Although the 1905 decision was a landmark victory for the CBoT and affirmed the legitimacy of futures trading at the highest possible legal level, it did not immediately eradicate the existence of bucketshops. Bucketshops had become more sophisticated and continued to imitate exchange practices. For instance, by the late nineteenth century most exchanges stated explicitly in their rules that all transactions seriously contemplated delivery, as a way to circumvent accusations of gambling and non-delivery. By the 1930s this had become a decisive legal argument. As one lawyer put it in the *Yale Law Journal*: "Clearly speculation in commodity futures does not usually involve the purchase and sale of physical property. Just as clearly it does not consist in mere betting on fluctuations in the price of the subject-matter. The former is manifest from the insignificant percentage of contracts consummated by delivery; the latter perhaps needs explanation. Speculation is not betting because delivery of actual goods *can be required* on future contracts" (Taylor 1933:89, emphasis added). The bucketshops which continued to operate after the Christie decision similarly claimed to contemplate delivery, and most now executed their orders on the exchanges. Indeed, bucketshops had evolved into small brokerage firms (*Harvard Law Review* 1932:915).

A few more cases involving charges of bucketshopping reached the Supreme Court after the 1905 Christie decision. In the 1907 case of a small Memphis broker, Clarence Hunt, versus the New York Coffee Exchange, Hunt challenged the right of the exchange to withhold the price

quotations which were vital to his business. Hunt's defence argued that his was a legitimate brokerage business, in which all contracts contemplated delivery: "He [Hunt] has transacted no business except as a broker, as stated, and is duly licensed under the laws of Tennessee. Every transaction made by him as evidenced by a report made to his customers... has upon it the following: 'All orders for the purchase or sale of any article are received and executed with the distinct understanding that actual delivery is contemplated.'"[12] The Supreme Court however dismissed Hunt's argument, and upheld the Christie decision, ruling that the Coffee Exchange had the right to sell or withhold the price quotations to whomever it pleased.

A final important Supreme Court case which involved charges of bucketshopping, decided as late as 1933, was that of *Dickson versus Uhlmann Grain Company*, which ruled a number of futures contracts entered into by citizens of the small Missouri town Carrollton to be gambling contracts and thus void. Uhlmann Grain was a "member in good standing" of a number of stock and produce exchanges, including the CBoT, and executed the orders from its Carrollton office on those exchanges. When a number of Carrollton citizens, including Mr. Dickson, suffered large losses as a result of their transactions with Uhlmann and refused to pay, Uhlmann started legal proceedings against its clients. The case was appealed all the way to the Supreme Court, which found in favour of Dickson and the other Carrollton citizens who had been financially ruined by the grain speculation, and accepted the argument that Uhlmann conducted a bucketshop. Although there was little difference in the appearance of bucketshops and that of small brokerage firms, one of the factors which influenced the Supreme Court's ruling was the following stereotypical description of a bucketshop office:

> This office was in the basement of the Florence Hotel. It consisted of a roll-top desk, some chairs where the prospective victims might rest, a blackboard where they might study figures which they could not understand, a desk for telegraph instruments, a typewriter and some other paraphernalia that added a touch of mystery to the situation... Here sat throughout the day some of the citizens of Carrollton and vicinity who expected to grow rich rapidly by gambling in the purchase and sale of imaginary commodities (quoted in MacDougall 1936:81).

This description led the Supreme Court to conclude that "the Carrollton office was equipped in a manner common to bucketshops." The court held that Uhlmann knowingly enticed the

Carrollton citizens to gamble, and declared Uhlmann's contracts to be illegal and void under Missouri law.

A lawyer who disputed the findings of the Supreme Court in the Uhlmann case, wrote in the *Yale Law Journal* that the Court's bucketshop description was merely "argument by creation of atmosphere," and objected to the ruling that the Carrollton office was a bucketshop on the grounds that it executed all its contracts on the legitimate exchanges (Taylor 1933:82). Taylor (1933:84) concluded that Uhlmann's actions "include nothing which suggests anything out of the ordinary course of speculation."

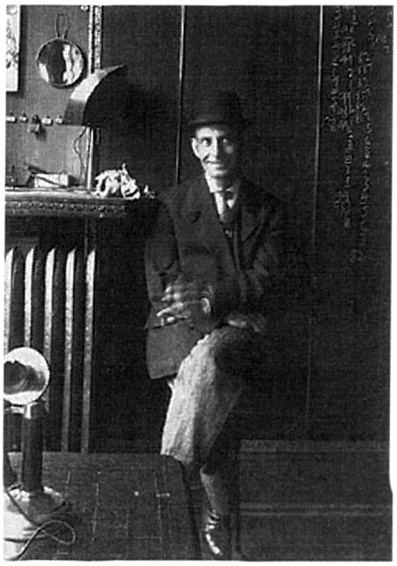

Figure 3: Bucketshop in New Castle, Pennsylvania Circa 1908.

Photograph by:
George Elmer Fisher

Available from:

http://www.iwaynet.net/~lsci/Panhandle/buctshop.htm

However, it was precisely the meaning and content of the 'ordinary course of speculation' which was disputed in the various court cases mentioned, and which remained ambiguous in the 1930s. The argumentation in the Uhlmann case suggests that the sinister stereotype of the bucketshop (see figure 3) had become the discursive basis on which its opposite, ordinary speculation, could be articulated. At the same time however, the case demonstrates that the dividing line between gambling and speculation, as well as that between bucketshop and broker, remained disputed well into the twentieth century.

The Moral Justification of Speculation

All parties involved in the bucketshop debate, including the courts, assumed that the dividing line between gambling and speculation was a moral problem, rather than an objective economic distinction. Outside the courts discourse on the moral distinction between gambling and speculation proliferated. Exchanges tried to cast speculation as a normal business practice, in opposition to the excessive vices of gambling. While it was frequently admitted that gambling and speculation had some aspects in common, it was argued that the prudence, restraint and intelligence of financial participants and the institutional structures of the exchanges guaranteed the fundamental difference between gambling and speculation. While speculation had originated as the idea of making profit by wagering on uncertain events, "distinct from regular trading or investment," it had to be rearticulated as a normal, if somewhat risky, business practice (*OED*, Vol.XVI 1989:172). This section examines a number of arguments put forward by exchange supporters, who sought to articulate the moral superiority and economic productivity of financial traders.

First, it was argued that futures trading and professional speculation had an equilibrating function on the produce markets. Although farmer's organisations had argued precisely the contrary, defenders of the exchanges maintained that futures trading allowed the even distribution of harvests over the year, thus stabilising not just the farmer's business but also that of the miller and spinner (Cowing 1965:9). This argument coupled the existence of financial markets to national strength and prosperity. As Brown (1910:130) put it: "Dealing in grain and pork products is essential to the national prosperity. If it were done away with the farmer would suffer and consumers would not benefit. The market for those commodities would be disorganised and prices over the country would not be uniform." Similarly, in a memorial in protest of the Hatch bill, which had been proposed to tax futures trading, the CBoT (1892:44) wrote: "The idea, scheme and theory of contracting for future performance permeates our very lives. It is the blood and bone... of our National, personal, commercial and financial existence." The CBoT (1892:47)

went on to argue that the "enormous capital" deployed on the exchanges "is an active, virile, substantial support to the values of agricultural products, and not, as many ignorant or poorly informed persons imagine, a source of depression," thus equating the national prosperity with virility and strength. Just as MacKenzie (1896) defined gambling as the resignation of one's manhood, the CBoT (1892:44-45) argued that futures trading provided virile support for national wealth, while "gambling pure and simple is carried on in bucketshops" and caused the "depression of values."

A second, related, argument put forward by the exchanges was that speculating was a natural human enterprise, and that futures trading was merely a more sophisticated form of century-old practices. This argument both held that speculation had always existed, *and* that futures trading represented the highest possible achievement of civilised man. H.S. Martin (1919:1), defending the New York Stock Exchange (NYSE), asserted that "speculation was born when men first exchanged one desirable object for another – eatables for wearables, necessities for ornaments." As early as 1865, a manual of the NYSE wrote: "The wish of improving his condition, of acquiring wealth, is deeply implanted in man. It is a passion which, duly regulated by sound principles, secures social improvement and national prosperity" (Hamon 1970:141). Similarly, Chas D. Hamill (1892:53), president of the CBoT, argued before the US Senate that "the spirit of speculation is inborn in man. The sleepless tendency of all enlightened minds is to speculate upon future conditions and events; and it is to this attribute in man that the highest type of civilisation everywhere owes its advancement and stability." Finally, New York House representative John De Witt Warner argued in an 1894 speech before the House of Representatives that "the business of futures trading is a natural and beneficent one" and an exemplary aspect of the civilised world. To support this argument, Warner (1894:13) set out the history of economic evolution as follows:

> If a jackal wants shelter, he goes into a convenient cave... If a savage feels similar need, with still advancing use of intellect, he puts together, or makes his wife do so, the materials of which his rude hut is constructed; or if he is a great chief and wants a bigger one he causes to be brought together the material... If, however, a civilised man wants a house, about the last thing he does –

> or about the first thing he is sorry for if he does do it – is to purchase the lumber, the stone, and the brick, and then hire the men to put up the house himself... What he does do, however, is to go to a builder whose special interest it is to arrange for the erection of houses in that locality and he contracts with that builder for his house – in other words, he buys a future in houses, deliverable in six months, a year, or two years hence.

Warner's argument that speculation was the normal and natural result of economic evolution attempted to depoliticise the discussion and locate the justification of speculation in (human) nature. Despite the fact that only a small percentage of futures contracts resulted in delivery and could thus be said to have such 'economic' function, arguments concerning the naturalness and evolutionary inevitability of financial trading were important as they tapped into the scientific and biological discourses of the time. The next chapter will discuss in more detail how such arguments concerning the natural origins of markets and prices resonated with attempts of nineteenth-century economists who wished to give the study of economics and finance scientific respectability.

A third argument attempting to legitimate speculation held that gambling and speculation belonged to fundamentally different moral domains. This argument was made, for instance, by New York banker George Rutledge Gibson in a speech to the Association of American Bankers in New Orleans in 1891. While speculation is a business venture, Gibson (1891:15) argued, gambling is mere useless entertainment: "In a moral sense, speculation is not gambling, because, while often resembling it in its uncertainties, the *principle* differs. When one voluntarily gives up his property in a moral way he either exchanges it for another value, which is commercial, or he makes a gift of it, which is benevolent. When he bets on the turn of a card or the result of a race, he relies wholly on chance; he is outside the pale of commerce" (original emphasis). This moral difference, Gibson (1891:16) continued, exists whether delivery of a future contract is intended or not: "The man who buys a hundred shares of stock and sells them the next day may have a gambler's instinct...but nevertheless his act is commercial." It is for this reason, Gibson maintained, that bucketshops are immoral and should be outlawed, while trading on the exchanges is moral, albeit sometimes conducted in a 'gambling spirit.'

The same distinction between 'real' business and gambling can be found in the work of the lawyer T. Henry Dewey, who published two manuals documenting legislation concerning futures trading. In the introduction to one of these manuals Dewey (1905:5) wrote: "in speculation and in gambling on prices the result depends upon an uncertain future event. The difference is that, in one the parties are engaged in legitimate business beneficial to both of them, while, in the other, they are engaged in an idle and useless occupation beneficial to only the party winning, and when carried to an excess, injurious to society." While being important for assigning gambling and speculation to different moral spheres, these arguments remained confused and were unable to effect a clean break between gambling and speculation. As Dewey (1905:6-7) himself admitted: "so far as the things done in a bucketshop go, it is impossible to distinguish them from the things done in the offices of brokers or commission merchants."

A final argument articulating the differences between gambling and speculation was the assertion that speculators proceeded with careful examination and information while gamblers were reckless and ill-informed. In 1903, S.A. Nelson (1964:21), an associate at the Dow Jones news agency in Wall Street, articulated this difference between speculation and gambling, when he wrote, "the terms are often used interchangeably, but speculation pre-supposes intellectual effort; gambling blind chance." A few years later, New York banker John Moody[13] stated the same argument in *The Art of Wall Street Investing*. "The man who speculates in stocks acts on information which he has ascertained and analysed in one way or another," Moody (1906:108) wrote, "A 'gamble' on the other hand is where a man buys and sells on a blind chance without any particularly sane reason, except that he thinks that a turn in the market up or down is due or that the pools and 'big fellows' mean to give a twist to the stock." These are the grounds on which bucketshops should be outlawed, Moody (1906:146) argued: "pure betting is done in bucketshops, is of no use to the community, is destructive to the morals and pockets of young men, and cannot be too severely censured." A final example of the argument that speculative activity required intellectual effort and rational analysis, is provided in the work of financial writer

Thomas Gibson. Gibson (1923:6) argued that speculators should proceed with "intellectual examination... [and] reasoning taking the form of prolonged or systemic analysis." Gibson's (1923:12-13) advise to speculators was to "gain immunity from the influence of surface appearances. This can be accomplished only through *knowledge*. The emotions cannot be allowed to play any part in our plans... It is, in short, necessary to realise that the same principles and policies which make for success in any line of business are equally essential in the business of speculation" (emphasis in original).

In the various arguments put forward by the exchanges and their supporters, then, we can slowly see emerging the articulation of a particular financial rationality, which was coupled with a particular representation of the character and identity of financial man. While critics of futures trading had accused speculators of being greedy and reckless operators, the defence of speculation cast financial men as a cool-headed and rational beings. As early as 1865, the manual of the NYSE argued that speculation, as opposed to gambling, "depend[s] only on political and financial events, which speculators can foresee in proportion to the acuteness of their intelligence... Cool-headed men are the most fortunate speculators, because honest speculation is nothing else than discretion applied to private or public securities" (Hamon 1970:141-142). This argument was also made by the CBoT, which argued in a 1922 Supreme Court case that federal regulation of financial markets was not necessary, as the Board required "character and financial responsibility as qualifications for its membership."[14] Moreover, as H.S. Martin argued in a pamphlet of the NYSE published in 1919, speculation should not be condemned because some people were unsuccessful. "The blame," Martin (1919:33) wrote, "should not be placed upon the *kind* of business engaged in, but upon the kind of *man* and the *way* in which he engages in it" (original emphases). Martin thus put the morality of financial participants at the heart of the matter, and considered the ideal *persona* of the financial practitioner as one who displays both self-discipline and masculine predatory strength. "Some persons think that only those should speculate who can afford to lose," Martin (1919:34) concluded,

> nothing could be further from the true spirit of speculation, than to hold such a theory, because true speculation, while contemplating loss – considers all the risks, provides against them, and so surrounds one's judgement with reserves of capital as to insure against loss. It is true, however, that many persons should not speculate – for instance, those whose minds are easily influenced, those without strict and sterling business principles, persons of feeble judgement, those who allow anxieties to prey upon them.

One of the most respected and influential defenders of speculation in the late nineteenth century, who put forward similar arguments concerning the moral character of financial man, was Henry C. Emery. Emery was a former broker who wrote a dissertation on speculation for Columbia University in New York in 1896 (Cowing 1965:47-49). In his dissertation, Emery argued that the negative effects of speculation were not inherent in financial practices, but were caused by amateur participation in the stock markets. "The greatest evil of speculation," wrote Emery (1896:187), is "the moral evil of a reckless participation in the market by a wide outside public. The possibilities of making quick and large gains from fluctuations in prices lead thousands into the speculative market, who have no knowledge as to its condition, and no real opinion as to the course of prices. Such speculation is the merest gambling in spirit." In contrast, 'real' speculators, Emery (1895:67) argued in an article in the *Political Science Quarterly*, do not enter the market until they have given "full consideration of all knowable circumstances bearing on the future price of their commodities, they enter the market to sell if they expect a fall, and to buy if they expect a rise." As well as an important defender of speculation, Emery (1896:181) was an influential spokesman for self-regulation of the stock markets, and argued that "the highest standard of honour and good faith" should find expression in the rules and regulations of the stock market. Thus, Emery's arguments articulated a powerful distinction between 'normal speculation,' guaranteed by stock exchange regulations and expressed in the moral virtue of financial professionals, and amateur gambling by the reckless and ill-informed outside public. Emery (1895:79) formulated the moral superiority of financial man as follows:

> [T]he prices determined by speculation are prices for future goods and are made by transactions based on probable future conditions. These conditions are purely matters of estimate, and the farmers as a class are not able to weigh the numberless influences which may affect the future market for their commodities. Only those men who have great experience, wide knowledge and the most improved means of obtaining information, combined with cool judgement, courage and

> the faculty of quick decision, are competent to forecast the course of future prices and forestall the probable event by their own purchases and sales. And it is the great speculators who combine these qualities in the greatest degree.

The argument that speculators were rational beings who examined all available evidence before participating in the futures markets provided a powerful and durable defence of stock trading, despite the fact that bucketshop traders, or any other gamblers, could equally claim that their trade involved careful study and the collection of information. The exchanges and their supporters were able to make these arguments, because, as Fabian (1999:4-5) puts it, gambling had become a 'negative analogue,' or "the one form of gain that made all other efforts to get rich appear normal, natural [and] socially salubrious." In other words, what I have called the moral problematisation of gambling, which portrayed gambling in a web of vice that included drunkenness, riots and prostitution, made it possible for defenders of speculation to posit themselves in opposition to this lawless practice, and emphasise the respectableness of the exchanges. Significantly, one way in which this respectableness was asserted was by pointing out that exchanges charged a considerable sum for membership, which in the late nineteenth-century CBoT, for instance, was around US$25,000. The moral superiority of exchanges was thus assumed guaranteed through financial capacity, a reasoning also detectable in Emery's objections to amateur participation in speculative markets. It is thus no coincidence that the moral problematisation of gambling emphasised the evils of "gambling at the margins of society" (Fabian 1999:2-3). The web of meaning which posited gambling as a problem with particular meaning for the working classes and women, contrasted financial irresponsibility, female unruliness and laziness with financial capability, virile rationalism and active decision-making.

Accordingly, we can recognise Defoe's mastering financial man in Emery's emphasis on courage and quick decision, Hamon's cool-headed speculators, or the CBoT's argument that speculators provide virile support for produce prices. As I argued in the previous chapter, mastering *Lady Credit* required first and foremost a mastering of the self. This line of reasoning re-emerged in the bucketshop debate which cast speculation as a normal and rational business

practice, which could however, when carried to excess, have negative effects. For instance, a CBoT (1892:44) pamphlet argued that "the extent to which produce gambling is carried on in the legitimate exchanges of the country is immensely exaggerated. It bears about the same relation to the legitimate commerce and speculation of the country that the froth and foam of the Niagara do to the mighty volume of water underneath. It is the bubble and fuss and fury, the froth and foam upon the surface of trade and commerce that offends – not the trade and commerce itself." The CBoT's argument that it was the excess of speculation, not speculation itself, which was to be condemned, implied that the moral superiority of financial man should consist of the self-restraint required to refrain from indulging in these excesses. Emphasising the rational, cool-headed and studious nature of speculators was one way of communicating that financial professionals possessed such self-restraint, in opposition to reckless and ignorant amateur participants.

As Foucault (1984b:45) has pointed out, the moral problematisation of an issue, and the concomitant construction of "quantitative gradations" of the action, enables the regulation and normalisation of the issue. Articulating a mythical dividing line between normal speculation and excessive gambling (the Niagara and its froth) implies that immorality is not located in the nature of the act (speculation), but is "always connected with exaggeration, surplus and excess" (Foucault 1984b:45). In other words, it is through the emphasis on excess that the normal is able to emerge. As I will elaborate further in the interlude, this is precisely the way financial regulation can be understood. Instead of a simply prohibiting certain financial practices, financial regulation formulates and fixes the arbitrary diving line between the normal and the excess, thus enabling and legitimating the growth of financial practices. The period of the bucketshop debate was a period in which financial regulation was considered and contested, as exemplified by the many anti-speculation laws and the various court cases on the subject. However, it was not until the 1930s that large-scale regulation and normalisation of financial practices took place.

Finally, it is interesting to note that even the defenders of speculation in the nineteenth century condemned practices which have become respectable financial instruments in the 1980s

and 1990s, including options, or 'privileges.' Options are contracts which give the buyer the option, but not the obligation, to buy a stock or commodity. In contrast to futures then, options contracts were not always exercised, and thus could not claim to *contemplate* delivery in each instance. Congressman Warner (1894:5) in his speech defending speculation, asserts that he expects no-one in the US to defend options and that "the very ones engaged in them would be most prompt to admit that they are gambling, pure and simple." As I will show in chapter 5, options trading was particularly important in the history of the US hedge fund LTCM, whose founders included two professors who developed sophisticated pricing formulas for options.

Professional Risk Bearers

The final important point of this chapter is that the construction of the normal and the excess in financial practices facilitated the articulation of a productive role for speculators. Like the Hammersmith and Fulham ruling concerning *swaps* trading, the bucketshop debate was about the legitimate grounds for making profit. Professional speculators came under attack because they were able to make a profit by buying and selling fictitious commodities without actually being productive in the eyes of their critics. Farmers claimed to toil on the land and feed the nation, while wealthy speculators gambled with their produce. Although proponents of speculation argued that this was no different from buying and selling done by merchants, and that speculators' work required knowledge and effort, the defence of speculation remained tenuous because speculators were unable to claim a *productive* part in the economic process.

The articulation of the normal versus the excess, or the regular business practice versus the surplus of gambling, facilitated the articulation of such a productive and economic role for speculators. Beginning in the late nineteenth century, speculators became cast as bearers of natural business risk, while gamblers were accused of enjoying the perverted and unnatural creation of chance events. Emery's thesis was one of the first expressions of this argument. "In

speculation, as in gambling, the occurrence of a certain event results in gain for one party, while an occurrence of a different kind results in loss. What distinctions can be made between them?," Emery (1896:98) asked, before going on to say: "Both depend on uncertainties, but, whereas gambling consists in placing money on artificially created risks of some fortuitous event, speculation consists in assuming the inevitable economic risks of changes in value" (Emery 1896:101).

A similar argument was made in the work of Harrison Brace, a conservative economist who argued that the evils of speculation would subside as the markets became more mature (Cowing 1965:49-50). In *The Value of Organised Speculation*, Brace (1913:180) wrote: "[C]oming with the legitimate speculator, we find his counterfeit and imitator, the adventurer, a gambler who enters the speculative markets for the principal purpose of gratifying that love of excitement which he craves. Thus the speculative exchanges are so perverted from their true commercial purpose that they pander to one of the most depraving of the human instincts." Brace's arguments emphasised the distinction between natural business ventures and the unnatural, excessive, love of gambling. "The gambling spirit," Brace (1913:181) argued, "may be gratified in different ways; and the many who have the unnatural craving seem to be ever watching for an uncertainty on which to hang a bet." Still, the exact moment when natural speculation turned into unnatural gambling eluded Brace (1913:181), and he concluded: "the evil which comes from such a [speculative] transaction is not due necessarily to its exact terms, but rather to the spirit with which the enterprise may be entered into."

Although, of course, it is perfectly possible to gamble on natural events, including deaths, births and catastrophes, as we have seen in the first section in this chapter, Emery's argument was of particular and durable importance because of the emphasis it placed on *risk*. "It is in the element of risk that we have the key to the function of speculation," Emery (1896:101) wrote: "It is often said that all business is to a certain extent speculative; in other words, there is an uncertainty as to the ultimate profits. These risks are inherent in all business, and are no more

artificial than the whole commercial order in which we live. They are risks which thrust themselves upon business men and which business men must meet. Especially are the risks dependent on changes in value, and it is the assumption of such risks that constituted speculation." For Emery (1896:108-109), speculators were a professional risk bearing class, "a distinct body of men prepared to relieve [the trader] of the speculative element of his business... [I]nstead of all traders speculating a little, a special class speculates much." Emery thus carved off risk from other conceptions of chance and uncertainty, by defining it as a natural, inevitable and essential part of business.

The distinction between gambling and finance articulated by Emery and Brace was elaborated by Charles O. Hardy, who wrote what is now considered to be one of the first textbooks on the theory of risk. Hardy, a financial economist and vice-president of the Federal Reserve Bank of Kansas City, wrote in his *Risk and Risk-Bearing* of 1923 that "gambling is speculating on *artificial* risks" (1923:128, emphasis added). "The only thing which differentiates gambling from 'legitimate' speculation," Hardy (1923:128) argued, "is that in speculation the risks are inherent risks of industry, and must be borne by someone if production is to go on... In gambling, on the other hand, nothing of this sort is true. The risk is an artificial risk, created by the gambling transaction itself. Risk is increased for the sake of risk and for the sake of profiting by one's luck and skill at the expense of another."

The importance of Hardy's argument was not only located in the fact that he cast speculators as professional risk-bearers, but also that he emphasised the production of knowledge concerning natural and business risks as the legitimate occupation of that profession. Hardy (1923:4) defined speculators as "responsible men [who] anticipate the wants of the market and take the risks on their own shoulders," and argued that the work of the exchanges consisted in transferring risks to specialists. Thus, even if contracts are being bought and sold for purely speculative purposes, Hardy argued, and delivery of produce is neither intended nor desired, speculators fulfil the economic and moral role of sustaining a market for risks. Holders of

speculative contracts, Hardy (1923:239) argued, play "an essential part in the hedging transaction by carrying for a part of the time the risk which ha[s] to be carried by someone all the time." The reason speculators are suited to carry business risks, argued Hardy (1923:73), is that their specialist function requires them to acquire superior knowledge: "Someone must assume the risks; the fact that the one who assumes them is a specialist may mean that he has superior facilities for judging the situation." Indeed, success in speculation "depends on the ability to forecast price changes, which in turn depends upon the ability to weigh the importance of complicated and conflicting indications of the movement of demand and supply," concluded Hardy (1923:127), thus implying that those not immersing themselves in study would soon be financially ruined.

Hardy thus positioned the concept of risk at the heart of what defines the financial domain, and proceeded to offer methods for measurement, classification and identification of risk. He classified the possible "forms and extent of business risk" according to their origins, discerning, for instance, natural catastrophes, personal injury, and risks inherent in the markets (Hardy 1923:1-8). Hardy's efforts to arrive at a formal definition and classification of all possible natural risks entailed a normalisation and regulation of the financial sphere which was, ultimately, made possible by the moral problematisation of gambling. Writing in the 1920s, Hardy was not yet able to express his argument without making explicit the 'moral and social evils of gambling.' Hardy (1923:130) asserted that "the gambler is in an anti-social position. The whole drift of social evolution throughout the recorded history of the race has been toward the development of moral standards... which will promote cooperation. The gambler, however, gains only as others lose." In addition, Hardy (1923:130-133) argued, gamblers wasted their energy, were irrational and were engaged in idle and useless pursuits. However, the main thrust of Hardy's textbook was towards the formalisation and objectification of risk management, manoeuvring speculation away from its moral problematisation and towards what came to be understood as the objective economic sphere.

Conclusion

This chapter has argued that speculation acquired a moral and economic function by the early twentieth century, thus separating it from gambling. It has not been the purpose of this chapter to argue that no distinction *exists* between gambling and speculation, but to argue that this distinction is political rather than natural. The possibility of the distinction between gambling and finance hinges on perceptions of morality, character and excess, rather than being inherent in nature or an objective economic development. Through the various arguments put forward in the bucketshop debate, financial practitioners became cast as responsible, intelligent, rational and masculine, in contrast with gamblers who were portrayed as irresponsible, idle, excitable, irrational and feminine. By the early twentieth century, risk emerged as a defining feature of financial practices which made possible the articulation of a vital economic role for speculators.

The final section of this chapter has discussed the regulative powers of the classification and formalisation of risk that came to underpin the speculators' economic functions. Hardy's textbook on risk did not so much provide an objective enumeration of all possible business risks as construct a legitimate professional domain for the speculator to occupy himself with, which could thus be closed off from the moral, social, religious and political ambiguities out of which it had been born. In the next chapter, I will elaborate on the powers of classification and rationalisation which rendered possible the construction of a professional domain for speculators. The intellectual efforts required of speculators focussed on the history and future of price movements of stocks, bonds, produce and other financial instruments. Before the study of price movements could become a serious intellectual endeavour, however, a knowable and quantifiable future had to emerge from the Medieval divinely determined universe. The next chapter will discuss the history of statistics and the emergence of prediction and calculation as virtues during the eighteenth and nineteenth centuries. Thus, chapter 4 provides a strand of the story of the emergence of finance and gambling as different moral and legal spheres which has been missing from this chapter.

A final point to be made here is that financial globalisation and liberalisation have revived the ambiguities between gambling and speculation, which demonstrates the political nature and the continuing relevance of the distinction. As I mentioned in the introduction, Russian and Japanese legislative bodies have recently struggled to articulate this distinction as the financial spheres in their countries are being liberalised. At the same time, modern incarnations of bucketshops have caused new worries about popular betting on stock and futures prices. Amongst recent forms of bucketshops is 'spread betting,' a form of internet gambling that allows bets on financial markets without actually purchasing stock or futures. Companies such as the British-based IG Index accept bets on the movement of major stock indices, including the Dow Jones and the FTSE 100, for amounts much lower than the minimum investment levels on exchanges. IG Index does not execute its clients' orders on the financial markets, but does buy financial instruments to hedge its client's bets.[15] Companies such as IG Index have caused regulators in the US and UK to worry "that private investors will loose their life savings and destabilise the markets" as a result of these gambling practices (Mackintosh and Sanghera 1999). In the US, legal procedures have been started to outlaw all forms of internet gambling, including spread betting (Pritchard 1999:3).

The renewed ambiguity concerning the boundaries between gambling and finance suggests that the moral defence constructed for speculation by Hardy and others needs to be reassessed. However, as we will see in the fifth chapter, computerised risk-calculation has increasingly depoliticised the distinction between gambling and finance in recent decades. The emergence of risk-aversion as a moral virtue in the late nineteenth century has spurred the growth of a sophisticated business of risk management. Computer models of risk-calculation have become so complex that they can only be comprehended by a few 'rocket scientists' (*Financial Times* April 29, 1999). Chapter 5 will refocus the story on modern risk management, and will discuss the political and societal effects of computerised risk management through a discussion of the case of LTCM.

Notes to Chapter 3

[1] *The Glass, or, Speculation: A Poem Containing an Account of the Ancient, and Genius of the Modern, Speculators*, 1791, New York, printed for the author, p.3.

[2] quoted in *The Functions of the Legitimate Exchanges*, 1910, Chicago: Hartzell-Lord, p.180

[3] Today, the difference between futures and forward contracts is that futures are standardised and sold on exchanges, while forwards are customised and sold outside exchanges. The introduction of trading rules and standardised contracts on the CBoT can thus be seen to have inaugurated futures trading, as currently defined. Earlier 'to-arrive' contracts, as used in London and Amsterdam, were created individually and were thus more similar to current forward contracts.

[4] Margin trading greatly facilitated participation in the futures markets by allowing positions far in excess of the cash paid for them. It quickly became custom to settle price differences between contracts when the delivery day arrived, instead of making the actual delivery. Today, the initial margin for trading securities is 50%, but much less in derivatives markets. Margin trading remains controversial, and has been a topic of debate in the wake of the 1987 stock market crash (Warshawsky 1994:647-648).

[5] The opposition of farmers in general, and the US Populist movement in particular, to business interests is well documented and more detailed accounts of these political debates can be found in Cowing 1965; Fabian 1999; and Hofstadter 1955.

[6] 'Short-selling' is the practice of "selling a borrowed security" (Karpoff 1994:445). Short-sellers sell a security or commodity that that they do not own for delivery at a later date, thus profiting from price declines. Short-selling has been a controversial practice throughout financial history, and has been criticised in the aftermath of the 1929 and 1987 stock market crashes.

[7] In 1892, congressman Hatch of Missouri proposed a national bill to levy a tax rate of 10%, which he considered to be prohibitive, on all non-deliverable futures contracts (Cowing 1965:5-24). Hatch's proposal led to congressional hearings on what was termed 'Fictitious Dealings in Agricultural Products.' The Hatch bill did not become law, as the political will to oppose the established exchanges was smaller than Hatch had hoped (Cowing 1965:21).

[8] This argument carried a strong element of anti-Semitism, as many Western arguments against usury had done earlier. Despite the fact that the critique of usury has Judaic roots (Visser and MacIntosh 1998:178), Jews were often associated with the exploitative practice of money lending in the Western imagination. The here quoted author Charles William Smith (1906:xii) goes as far as to write in his preface that "It matters not what religion, creed or nationality these men [who trade futures] may be," however "the Hebrew race all over the world have... show[ed] their masterly conception [of these systems], over other races." More generally, the opposition to capital and big business in the US in the nineteenth century, which was led by the Populists, had a large content of anti-Semitism which according to Richard Hofstadter (1955:77-81) went hand in hand with Anglophobia.

[9] These cases are documented in, for instance, Dewey 1886, 1905; Goldman 1923; *Harvard Law Review* 1927, 1932; MacDougall 1936.

[10] U.S. Supreme Court, DICKSON v. UHLMANN GRAIN CO., 288 U.S. 188 (1933). Full text of the decision is available at: http://laws.findlaw.com/us/288/188.html

[11] U.S. Supreme Court, BOARD OF TRADE OF CITY OF CHICAGO v. CHRISTIE GRAIN & STOCK CO., 198 U.S. 236, (1905). Full text of the decision is available at: http://laws.findlaw.com/us/198/236.html

[12] U.S. Supreme Court, HUNT v. NEW YORK COTTON EXCHANGE, 205 U.S. 322 (1907).

Full text of the decision is available at: http://laws.findlaw.com/us/205/322.html

[13] Moody is known as the founder of Moody's Investors Service which is still a powerful credit rating agency (Sinclair 1994).

[14] U.S. Supreme Court, BOARD OF TRADE OF CITY OF CHICAGO v. OLSEN, 262 U.S. 1 (1923). Full text of the decision is available at: http://laws.findlaw.com/us/262/1.html

[15] Information taken from IG Index' website: http://igindex.co.uk/. IG Index also accepts bets on major sporting events (http://www.igsport.com/).

CHAPTER 4

Transcendental Finance:

Prices and the 'Free Market' in the Nineteenth Century

"They came to take the census."
"Yes, and what?"
"And my mother told me to hide."
"What for?"
"What for. That's the point. I didn't know what for. She thought, I don't know what she thought. I went and hid, you know. Two people at the door with clipboards. She said, Get inside, stay down."
"Stay down."
"She said, Stay down. I don't know what I thought and I don't know what she thought."
"It was only the census."
"Don't say only the census."

Don Delillo[1]

The Politics of Counting

In Dellilo's novel *Underworld*, this dialogue takes place between a white Italian-American from the Bronx and a black American from St. Louis, Missouri. Although both men are in their forties and have well-paid corporate jobs, the differences in their backgrounds become forcefully apparent when it seems impossible for the Italian-American to understand how the taking of the census can be experienced as a threatening and intruding force by the black family. In fact, the history of census-taking in the US demonstrates the political power of population counting and justifies the black mother's apprehension towards the census-takers. In the first US census in 1790, black slaves were recorded as three-fifths of a person for purposes of representation in Congress (Cohen 1982:159). Furthermore, as Patricia Cline Cohen (1982:177) documents, the 1840 US census found that "the black population of the North appeared to be beset with epidemic rates of

insanity, which suggested to some that 'science,' as revealed by tables of figures, had proved freedom to be detrimental to blacks."

Although the taking of the census is often assumed to consist of objective and unintrusive counting, processes of measuring, counting and classifying form important operative domains for modern political power. That the politics of census-taking are not just an historical aberration, is demonstrated by the political controversy surrounding the 2000 US census. Because the 1990 census missed an estimated 4 million people, disproportionately from minority groups living in low-income areas, the Clinton administration proposed a new method for census sampling to be used in the 2000 census. This new method was rejected, however, in a January 1999 Supreme Court decision, which held that the census should strive for an 'actual enumeration,' as stipulated in the US constitution. The political stakes of the case were located in the fact that census figures provide the basis on which the seats of the House of Representatives are distributed among the states, as well as the basis on which various federal grants are awarded to state-governments. While Democrats had hoped to be able to claim more grants for underprivileged and mostly Democratic population groups, Republicans expressed fear that the new counting method would comprise the "integrity of the census," by replacing the actual and individual head count with statistical sampling.[2]

This chapter discusses the powers of counting, classifying and calculating that are not only inherent in census-taking, but also in statistics in general, and financial statistics in particular. While statistics have become accepted as objective and unmediated counting, they are permeated with political origins and consequences. Statistics literally means the 'science of the state,' and its emergence is inextricably connected to the birth of the modern state and the operation of modern political power. This chapter will examine nineteenth-century political debates through which numbers and statistics became cast as sources of unmediated and unambiguous public information.

The moral virtues which became associated with statistics provided one way in which the

moral superiority of financial man became articulated. As I will argue, the introduction of statistical measurement and management into finance was neither natural nor unambiguous, but provided an important step in the emergence of a professional domain for speculators.

Of particular importance with regard to the role procedures of measuring, counting and calculating played in the construction of a professional financial domain was the birth of financial averages in the late nineteenth century. In the 1880s, Charles Dow, founder of the *Wall Street Journal*, was the first to offer price averages of stock groups – initially, industrial, utilities and railway stocks – thus rendering possible an historical charting and studying of prices. Today, the Dow-Jones Industrial Average, along with a few other financial indicators such as Standard & Poor's 500 Index in the US and the FTSE 100 Index in Britain, have become authoritative measures, perhaps *the most* authoritative measures, of national economic well-being.[3] The Dow-Jones Average is now computed every minute during the trading day in New York, and its daily movements have become part of standard news broadcasts. Moreover, market indicators have themselves become the underlying bases for new financial instruments such as index futures and index options (which gain and loose value with the movement of the underlying index). These derivatives are widely used for hedging and speculative purposes (see for instance Teweles, Bradley & Teweles 1992:359-379; Mishkin 1992:298-305). However, today's authoritative and unproblematic existence of the Dow-Jones Average as public indicator of national well-being obscures its controversial history and contingent compilation.

This chapter begins by discussing the political history of statistics. Then, the chapter will explain how numbers and statistics became cast as sources of objective and unmediated scientific knowledge. In order to explain how and why the science of statistics became ammunition in the debate over the legitimacy of speculation, the chapter will go on to discuss the history of economics and the nineteenth-century attempts to make economics scientifically respectable. The chapter will then focus on the nineteenth-century debate concerning the origin of prices and the invention of stock market averages, epitomised by the Dow-Jones Industrial Index. As I will

argue, these debates ultimately rendered possible the imagination of finance as a science.

Governing with State-istics

As I have discussed in the previous chapter, insurance and particularly life insurance were considered illegitimate and immoral until the early nineteenth century. More generally, measuring human life and nature was long considered blasphemous. As Kula (1986:13-14) documents, Christian European cultures believed that measuring a child would stunt its growth, that medicine which was measured out would not cure the sick, and that calculating harvests was a sin, because "what the lord has provided, even without counting, will find its way into our barns." The Bible teaches that counting God's people was an idea of the devil, and eighteenth-century Christians opposed the taking of the census, both in Europe and the US. As Zelizer (1983:45) documents in her history of life insurance in the US, censuses were rejected as "illicit attempts to discover the secrets of God."

One important reason why insurance was considered blasphemous was that in the religious worldview everything was determined by God. Indeterminacy and chance were not possible: if man did not know what the future held, this was because of men's inadequate knowledge, not because the future was uncertain (Hacking 1990:1). As long as storms and deaths were seen as acts of God, it was blasphemous to attempt to provide against them. Life insurance in particular was considered blasphemous as it placed a money value on the life of a free man. In the eighteenth-century US South, for instance, it was possible to buy insurance on the lives of slaves, because placing a monetary value on slaves was common practice (Porter 1994:214). Free men, by contrast, were not allowed to buy policies on their own lives, because, as Zelizer (1983:45) puts it, "this turned man's sacred life into an article of merchandise."

In order for counting and measuring in general, and practices of insurance and hedging in particular, to become widely accepted and considered morally responsible, a profoundly "altered

conception of time and numbers" was needed (Daston 1988:115). The demise of the Medieval world order instigated this alteration, transforming a divinely ordered cosmos into one partly malleable by man. In chapter 2, we have seen that Machiavelli's concept of Fortuna allowed greater latitude for human resistance against her will in comparison to, for instance, Boccaccio's profoundly Medieval goddess. Thus, as Boccaccio's translator points out, the *Decameron* portrays Fortune as an "impersonal and capricious force, against whose operations the individual is incapable of any response other than an attitude of stoical indifference" (McWilliam 1995:cxxxv). In contrast, Machiavelli suggests that Fortune "is capable of being controlled by the application of wisdom and forethought" (McWilliam 1995:cxxxiv).

According to Campbell and Dillon (1993), these conceptual transformations of time, chance and human responsibility were inextricably connected to colonial conquest. Early modern Atlantic explorations and expansions unsettled the intellectual security of European Christianity, fuelling widespread doubt about God's authority. At the same time however, imperial expansion caused a forceful reassertion of divine will, and "insistence on God's omnipotence left Christian man to confront a universe now dominated not only by a distantiated and inscrutable divine will, but in consequence also by a radical contingency that served to evoke man's awesome powers of self-assertion" (Campbell and Dillon 1993:6). The mutual relationship between Christianity and modernity found expression in, amongst other developments, the birth of statistics, which tabulated contingency while offering its own brand of determinism. The connection between statistics, colonialism and contingency provides a powerful illustration of Campbell and Dillon's (1993:7) argument that "a proprietorial claim to secure knowledge, so dispelling doubt, was, therefore, the philosophical counterpart of a process of securing ruthlessly material proprietorial rights over the world, as feudal hierarchies and Christian cosmology gave way to the appropriative appetites of new material as well as intellectual developments." In other words, the appearance of secure knowledge and an ordered cosmos made possible through the science of statistics was both a rearticulation of divine authority and a powerful new way of ruling and regulating colonial

settlements.

Statistics, or 'the science of the state,' thus, is inextricably connected to the formation of the modern imperial Western state. The word is derived from the German *Staatenkunde*, meaning the systematic study of states. One of its first usages in English has been traced to the late eighteenth-century publication of John Sinclair's *Statistical Account of Scotland*. Sinclair wrote in 1798: "I found that in Germany they were engaged in a species of political inquiry to which they had given the name of *Statistics*. By statistical is meant in Germany an inquiry for the purpose of ascertaining the political strength of a country, or questions concerning matters of state; whereas the idea I annexed to the term is an inquiry into the state of a country, for the purpose of ascertaining *the quantum of happiness enjoyed by its inhabitants and the means of its future improvement*" (quoted in Hacking 1990:16, original emphases). Sinclair measured the quantum of happiness of the inhabitants of Scotland by sending questionnaires to each minister of the Church of Scotland, requesting detailed information concerning his parish. Some ministers had to be threatened and bullied into participating in this highly unusual project, but in 1799 the twenty-one volumes of the first statistical account in Britain were completed (Hacking 1990:27).

Statistics, Foucault (1988b:76-77) argues, provides "a certain type of knowledge" concerning the state's strength in comparison with the capacity of other states. This type of knowledge is connected to the imagination of the 'population,' as an entity about which regular observations can be made. According to Foucault, the concept of population displaced the family as the older model of knowing and governing in Western societies during the eighteenth century. "One of the great innovations in the techniques of power in the eighteenth century was the emergence of 'population' as an economic and political problem," writes Foucault (1998:25), "population as wealth, population as manpower or labour capacity, population balanced between its own growth and the resources it commanded. Governments perceived that they were not dealing simply with subjects, or even with a 'people,' but with a 'population.'" The population became considered both as a source of strength and the object of rule for modern political power.

The reality accorded to the measured and tabulated phenomena of the population, according to Foucault (1991b:99), "gradually reveals that population has its own regularities, its own rate of deaths and diseases, its cycles of scarcity etc.; statistics shows also that the domain of population involves a range of intrinsic, aggregate effects, phenomena that are irreducible to those of the family, such as epidemics, endemic levels of mortality, ascending spirals of labour and wealth; lastly it shows that through its shifts, customs, activities etc. population has specific economic effects."

The emergence of the population as a datum thus made possible a particular kind of government, which Foucault has called 'governmentality.' The compilation of demographics constructs a population not just as a representation of inhabitants, but also as a "field of intervention and as an objective of governmental techniques" (Foucault 1991b:102). It is in this manner that 'the economy' emerges as a field of knowledge, as the connection between territory, population and wealth which can be statistically measured and centrally governed. Thus, Foucault (1991b:102) defines governmentality as a "very specific albeit complex form of power, which has as its target population, as its principal form of knowledge political economy, and as its essential technical means the apparatuses of security." At the heart of the political problem of the population was sex, Foucault (1998:25) argues elsewhere, and the domain of reproduction became a principal focus of governmentality: "it was necessary to analyse the birth-rate, the age of marriage, the legitimate and illegitimate births, the precocity and frequency of sexual relations, the ways of making the fertile or sterile, the effects of unmarried life, etc."

In Foucault's analysis, then, governing with statistics is both an individualising and a totalising power (1982:213). While the science of statistics aims to make regular observations about the population as a whole, including birth and death rates, crime, suicide and poverty, it also claims to speak about each individual member of the population. In *Discipline and Punish*, Foucault discusses the dual effect of what he calls the 'disciplinary writing' which classifies, registers and calculates averages. First, argues Foucault (1979:190), disciplinary writing constitutes "the

individual as a describable, analysable, object, not in order to reduce him to 'specific' features... but in order to maintain him in his individual features, in his particular evolution, in his own aptitudes or abilities, under the gaze of a permanent corpus of knowledge." Secondly, however, argues Foucault (1979:190), the measurement of the individual gives way to "the constitution of a comparative system that made possible the measurement of overall phenomena, the description of groups, the characterisation of collective facts, the calculation of the gaps between individuals, their distribution in a given 'population.'"

This combination of individualising and totalising power is the defining feature of the modern census, according to sociologist Paul Starr (1987). Starr points out that the census has roots in ancient Rome, and was used sporadically in the Middle Ages, usually in order to register free men and property for purposes of military subscription and taxation. Most notably, William the Conqueror ordered the compilation of property and lands in England in 1086, for taxation purposes. The *Domesday Book* is one of the most famous early modern efforts of counting but did not provide much information on the English population, because only the heads of households were recorded and people living in castles and abbeys were excluded.[4] What is distinct about the modern census, according to Starr (1987:11), is its aim of being "an enumeration of an entire population of a nation," by counting individuals rather than families and counting at a fixed point in time. In other words, the modern census has as its dual aim the counting of *every* individual and *all* individuals of a population. So defined, the modern census "did not come into existence simultaneously or unambiguously" (Starr 1987:12). The household continued to be the typical unit of enumeration until the early nineteenth century, and "minimal information, if any, was recorded about individuals other than the head [of the household]" (Starr 1987:11-12). It was not until the mid-nineteenth century that the US census guaranteed confidentiality and began to record each individual by name.

That the enumeration and compilation of demographics is not just a matter of representing people, but also a practice of governing and administrating, is demonstrated in the

fact that the census was specifically a practice of the imperial administration. The first attempts at comprehensive counts of residents of a particular area were undertaken in British colonies, such as Canada, Ireland and India. It is no coincidence that in 1790 the US was the first country to constitutionally demand a regular census; they were continuing and even extending colonial practice (Hacking 1990:17). Ireland was embraced in the colonial grip through the efforts of the English philosopher and mathematician William Petty, who carried out comprehensive surveys and mappings of the country as early as the seventeenth century. Although Petty's efforts historically preceded both the modern census and the concept of statistics, he was aware of the governing potential of his assembled numbers and facts about Ireland. Indeed, Poovey has argued that Petty's efforts helped produce the link between data-collection and modern government. Poovey (1998:124) writes: "Petty's attempt to yoke numerical representation to impartiality gradually altered the form in which modern facts were produced and consumed, especially by governments."

In *Imagined Communities*, Benedict Anderson offers a similar argument. Anderson (1991:164) analyses the census as a prime means through which the colonial state "imagined its dominion [and] the nature of the human beings it ruled."[5] The imperial imagination classified and categorised its subordinate peoples, constructing extensive but arbitrary identity categories. The colonial census-takers desired completeness and certainty. "The fiction of the census," writes Anderson (1991:166), "is that everyone is in it, and that everyone had one – and only one – extremely clear place." What was profoundly novel about the late nineteenth-century census, Anderson argues, is not so much the construction of racial-ethnic classification, but the desire to place each and every individual into this statistical grid.

The Laws of Society

The statistically 'revealed' regularities of the population which enabled the particular power called governmentality, implied their own brand of determinism. Although often interpreted as the birth of a modern and secular rationalism, statistics nonetheless enabled a powerful reassertion of the ordered cosmos.[6] For example, when the German J.P. Süssmilch published one of the first empirical statistical accounts in 1741, he called it the *Divine Order* (*Die gottliche Ordnung*) and claimed that it revealed "Providence at work" (Hacking 1990:20). When bureaucrats started to compile numbers of fires, deaths and suicides in London and Paris a few decades later, and started to make inferences about their occurrence, they substituted the reality and stability of averages for a divinely ordered world. If man did not know *which house* would burn down, or *whose family* would be struck by death, it did become possible to know the regularities of these events over time. In 1795, French mathematician Laplace foreshadowed nineteenth-century belief in societal laws when he wrote: "All events, even those which on account of their insignificance do not seem to follow the great laws of nature, are a result of it just as necessarily as the revolutions of the sun" (quoted in Hacking 1990:11).

Statisticians desired to reveal the laws of society, as astronomers before them had revealed the laws of the skies. In their efforts to record all variables of human existence, statisticians and bureaucrats placed special emphasis on deviance, including crime, suicide and madness, which constituted the first fields of governmental intervention. One influential figure in this respect was the Belgian mathematician and astronomer Adolphe Quetelet, who, according to Hacking (1990:105), was the "greatest regularity salesman of the nineteenth century." Quetelet was convinced especially of the regularity of crimes and in 1829 he wrote: "We know in advance how many individuals will dirty their hands with the blood of others, how many will be forgers, how many poisoners, nearly as well as one can enumerate in advance the births and deaths that must take place" (quoted in Hacking 1990:105). Quetelet assembled and compiled limitless demographics, including, according to Stigler's (1986:169) *History of Statistics*, "birth and death

rates by month and city, by temperature, and by time of day... mortality by age, by profession, by locality, by season, in prisons and in hospitals... height, weight, growth rate, and strength... statistics on drunkenness, insanity, suicide and crime." Indeed, the efforts of nineteenth-century statisticians are replete with examples of "discontinued, disqualified, illegitimate" knowledges, which demonstrate that the history of statistics was not an unambiguous procession towards modern and rational measuring (Foucault 1980:83). Hacking (1991:186), for instance, documents that statistical compilation in the nineteenth century included "the number of feet of oak a man can saw in an hour, the volume of air needed to keep a person alive for an hour... the relative weights of the bones of various species [and] the relative frequency of occurrence of letters in various languages."

Quetelet's tabulation and analysis of assorted numbers led him to compose a statistical profile for average man (*L'Homme Moyen*), including average man's propensity to get drunk or commit a crime.[7] Quetelet's average man found expression in the construction of the famous bell-curved graph for biological and social phenomena. The 'bell-curve,' or law of error, had been developed in astronomy a few decades earlier. Quetelet's innovation in the mid-nineteenth century was to apply this graph to social phenomena, or more precisely, to force his assembled empirical data into the neat fit of the bell-shape. In this manner, Quetelet reified the measures of his average man as inescapable and natural human properties (Hacking 1990:105-114; see also Stigler 1986:203-220).

The bell-curve of social and moral properties became known in English as the *Normal Distribution*. Although 'normal' as a term had existed before Quetelet's statistical innovations, it did not acquire its present sense of "usual, regular, common, typical" until around the 1840s. This is precisely because the pathological – or abnormal – became articulated as a 'deviation from the norm' in the mythical continuum that was represented by the bell-curve. A profound tension was inherent in this new conception of the normal: although it had been articulated as a mean or average in Quetelet's calculations, the normal increasingly came to denote not how things *were*, but

how things *ought to be* (Hacking 1990:160-169). In Hacking's (1990:168) words, this tension is one between "the normal as existing average" and "the normal as a figure of perfection to which we may progress." In chapter 5, we will see that the normal distribution remains an important mathematical tool in the construction of modern financial instruments, and that the tensions inherent in this construct have a profound influence on the operation of modern finance.

The new brand of determinism fostered by the compilation of numerical regularities of disease and disaster created the possibility of individual responsibility which was ultimately to make insurance respectable. The altered conception of time and numbers associated with statistics is not so much, as Hacking notes, a change from a determined universe to an indeterminate and malleable one, but a change associated with the 'taming of chance.' "Where in 1800 chance had been nothing real," writes Hacking (1991:185), "at the end of the century it was something 'real' precisely because one had found the form of laws that were to govern chance." If the regularities governing unfortunate events were still attributable to God, they were now also humanly knowable. As Daston (1988:183) puts it, nineteenth-century statisticians believed that "whole classes of phenomena previously taken to be the very model of the unpredictable, from hail storms to suicides, were in fact governed by statistical regularities," and thus became accurately predictable. In this manner, it became possible for mortals to anticipate the future and act accordingly.

By the early nineteenth century, calculation and foresight were articulated as new virtues that underpinned insurance and severed its link with gambling. As I have argued in the previous chapter, gamblers were condemned for desiring short-term gain and forgetting social responsibilities. People buying insurance policies, on the other hand, were increasingly praised for taking responsibility for themselves and their family over a long-term future. As François Ewald (1991:207) has argued, insurance became a moral technology which entailed "no longer resigning oneself to the decrees of providence and the blows of fate but instead transforming one's relationship with nature, the world and God so that even in misfortune, one retains the

responsibility for one's affairs by possessing the means to repair its effects." Similarly, as we have seen in the previous chapter, speculators were defended from accusations of gambling by being cast as responsible and intelligent forecasters of the future.

Although the link between gambling and property insurance was successfully severed by the 1840s, life insurance remained morally and religiously condemned until the end of the nineteenth century (Zelizer 1983:73-79). As late as 1870, life insurance was prohibited by religious leaders in the US who perceived the work of Satan in this speculation on human lives. These preachers believed that life insurance interfered with divine Providence and was a sign of lack of faith. They taught that God would replace a lost husband and take special care of widows and orphans. Consequently, life insurance companies were careful to emphasise the moral rather than economic functions of their policies, and solicited the aid of clergymen to construct their legitimacy. The moral defence of life insurance reiterated the new virtues of familial responsibility and self-discipline. Slowly, a religious worldview was articulated which encouraged active participation of man in managing his future, and which constructed reliance on providence as outdated superstition. One preacher particularly in favour of life insurance argued in 1869: "We have no right to trust God for anything which he has enabled us to obtain by our own skill and industry" (quoted in Zelizer 1983:78).

Standardisation and Mechanical Objectivity

The collection and compilation of the laws of society, despite Quetelet's best efforts, did not immediately or unambiguously acquire the reputation of unmediated and scientific knowledge. Statisticians were accused of explicit social engagement with their subject matter, and their desires to intervene in matters of crime and poverty were seen as scientifically improper. For example, one of the reasons why early number-enthusiast Petty was not able to convince the English government of the advantages of centralised number-collecting, was that he was implicated in

accusations of advancing his material interests in Ireland through these practices. In 1659, Petty was ordered to appear before Parliament and charged with profiting unfairly from his work. Although these political controversies led Petty to a more precise formulation of numbers as 'disinterested' facts – i.e. free from material interests – his reputation never fully recovered (Poovey 1998:122-138).

The Statistical Section of the British Association for the Advancement of the Sciences (BAAS) was accused of being unscientific and biased soon after its foundation in 1833. The Statistical Section (Section F) had been founded through the efforts of Quetelet, demographer Thomas Malthus and Cambridge mathematician Charles Babbage, amongst others. The controversial nature of statistical collection in comparison to the traditional focus of the BAAS on the natural sciences was already implicated in its foundation, and Section F was admitted to the BAAS with the proviso that "inquiries of this section were restricted to facts relating to communities of men which are capable of being expressed by numbers, and which promise, when sufficiently multiplied, to indicate general laws" (quoted in Hilts 1978:34). In other words, emphasis on numerical representation, arrangement in "tabular forms" and "accordance with the principles of numerical method"[8] were seen to guarantee scientific respectability. Still, these founding provisions could not dispel future controversy and in 1841, less than ten years after its foundation, new BAAS president William Whewell criticised the unscientific behaviour of Section F which allowed discussion of the "most inflammatory and agitating questions of the day" (Henderson 1994:495). Whewell urged members of the Section to restrain themselves and to display "the same calm speculative spirit as the other sciences which we here cultivate" (Henderson 1994:495).

As mentioned at the beginning of this chapter, measurement, calculation and numerical representation had not always been regarded as a means to respectability and a guarantee of disinterestedness. Poovey (1998:54) points out that as late as the end of the sixteenth century numbers were anything but generally respectable – instead they were associated with sorcery and

black magic. In the Biblical tradition, measures and measurement were associated with cheating and the loss of innocence. It has sometimes been asserted that Cain, the wicked son of Adam and Eve, invented weights and measures (Kula 1986:1). How, then, did numbers and measurement become not only respectable but the very guarantee of science and disinterestedness, as Section F's founding provisions suggest? How then, in Poovey's (1998:4) words, did numbers come to epitomise the modern fact?

In order for statistics to become considered scientific, numbers had to be seen as precise representations of objects in the material world: the results of an objective, unmediated and mechanical process of counting. Petty, whose meticulous mappings of Ireland fastened the imperial grip over that country, was fully aware of the controversial nature of his avid collection of numbers. In his defence, he asserted the distinction between measurement and analysis. "The method I take is not very usual," he wrote in his *Political Arithmetic* of 1690, "For instead of using only comparative and superlative words, and intellectual arguments, I have taken the course... to express myself in terms of number, weight, or measure; to use arguments of sense; and to consider only those causes as have visible foundations in nature, leaving those that depend on the mutable minds, opinions, appetites and passions of particular men to the consideration of others" (quoted in Poovey 1998:132). Still, Petty's counting was neither popular nor accurate and people remained hostile and sceptical to official counting throughout the eighteenth century.

Theodore Porter (1994; 1995a:11-32) argues that a historical process of unification and standardisation was required before numbers could be made valid as true representations of external objects. It was through the formalisation of numerical discourse that measurement became allied with precision. Most notably, the post-revolutionary regime in France instituted a campaign for standardised measurement. The meter, for instance, was defined as one 40,000,000th part of the earth's meridian, moulded in gold and locked in a vault in Paris in 1799 (Kula 1986:120). The significance of this definition is that it appeals to a natural unit of measurement, even if it is a wholly mythical one. Thus, while the length the contour of the earth was debated

and redefined after 1799, the length of the meter has remained immutable.[9] By the end of the nineteenth century, processes of standardisation included the setting of electrical standards and the development of a broad range of precision instruments in the physical sciences, such as the pocket watch and the thermometer (Wise 1995:4). At the same time, a process of mathematical standardisation took place, which included the development of numerical methods, including rules for rounding off numbers and rules for the rejection of discordant observations (Swijtink 1989:262).

Standardised mathematical tables for use in insurance, industry and banking were also calculated and published during this period. Whereas previously numbers, for instance in insurance and astronomy, were computed as and when required, in the mid-nineteenth century a veritable explosion of mass-produced numbers took place (Warwick 1995:317-321). Charles Babbage (1989:6), one of the founders of Section F, aspired to designing calculating machines and wrote in 1822: "The intolerable labour and fatiguing monotony of a continued repetition of similar arithmetical calculation... suggested the idea, of a machine, which by the aid of gravity or any other moving power, should become a substitute for one of the lowest operations of the human intellect." Although Babbage's project for what he called the 'Difference Engine' was abandoned in the 1830s, late nineteenth-century calculating machines were advertised as "brains of steel," and promised to replace the fallible and tiresome human mind with speed and accuracy in processing calculations (Warwick 1995:327-336). In the financial sphere, the registration of prices and stock market transactions was increasingly done mechanically. In 1867, the invention of the 'ticker tape' on the NYSE promised instant and accurate communication of stock market transactions. This mechanised system of continuous stock quotes promised to provide "a check-up on the skill and speed with which brokers executed orders on the floor of the Exchange" (Teweles, Bradley and Teweles 1992:140).

Another form of nineteenth-century standardisation which was particularly important to the development of the financial sphere, was the unification of time measurement and the

construction of international time zones. As I pointed out above, changing conceptions of time are inextricably connected to changing conceptions of numbers and statistical regularities. While in the Medieval order it was blasphemous to attempt to predict and insure the future, because time belonged to God and not to humans, it slowly became considered irresponsible *not* to provide for the future and attempt to insure oneself against Fortune's blows. Late nineteenth-century standardisation processes included an important transformation in cultural understandings of time, namely the construction of "scientific public time" (O'Malley 1996:60). Until the late nineteenth century, there was no public standard time, and great varieties in local time-keeping existed. In the mid-nineteenth-century US, railroads ran into more and more difficulties due to haphazard and irregular local time-keeping. Despite the publication of voluminous travel schedules, O'Malley (1996:63) argues, confusion over proper time-keeping increased: "What time prevailed when two or more standards conflicted? Did the railroad and steamship set the time, or did the local sun?" Rail travellers frequently had to adhere to a railroad time which was different from local times, and one railroad official went as far as to suggest that two sets of hands should be put on watches for this purpose.

The political struggle for the reform of time-keeping lasted decades, and even advocates of standardised time feared upsetting century-old local traditions. In 1882, a US Senate Report on the matter concluded that "it would appear to be as difficult to alter by edict the ideas and habits of the people in regard to local time as it would be to introduce among them novel systems of weights, measures, volumes and money" (quoted in O'Malley 1996:104). However, in 1883, the US railroads adopted a system of standard time zones, similar to the one still in use today. The time zones of the railroads were backed by scientific authority and were expected to have a disciplining effect on travellers. As William Allen, who played an important role in the adoption of a central railroad time, wrote: "railroad trains are the great educators and monitors of the people in teaching and maintaining exact time" (quoted in O'Malley 1996:115). One year later, an international time standard was set at the Prime Meridian Conference in Washington, which

"determined the exact length of a day, divided the earth into twenty-four time zones one hour apart and fixed a precise beginning of the universal day" (Kern 1983:12).

The adoption of standardised time was not simply the result of economic logic, driven by the local time's impediments to interstate and international businesses and railroads, but the result of a cultural change which no longer saw time as a divine loan, but as a commodity which could be bought, sold and made profitable. The cultural change necessary for the acceptance of standard time did not come about easily, and a number of US cities, including Pittsburgh, Louisville, and Detroit, refused the adoption of railroad time in the 1880s. A number of court cases were fought disputing the authority of railroad time, particularly in relation to the expiry of contracts, between 1883 and 1917. What opponents of standard time objected to was, firstly, the assumption that time was arbitrary and subject to business interests. For instance, the Iowa Supreme Court decided in 1899 that local time-keeping was still valid, and declared: "we are not quite ready to concede that, for the mere convenience of these companies, nature's timepiece may be arbitrarily superseded" (quoted in O'Malley 1996:139). The cities resisting standardised time disputed the authority of the railroads to set local times, and argued that time should be set by the movement of the sun and stars instead. One newspaper opposing standard time joked in 1883: "we presume the sun, moon and stars will make an attempt to ignore the orders of the railway convention, but they will have to give in at last" (quoted in O'Malley 1996:136).

Secondly, opponents of standardised time objected to the regulatory and disciplinary effects the new techniques of time-keeping had on industrial workers. As Foucault (1979:149-156) documents, the use of timetables in education, factories and other disciplinary institutions is an important instrument of modern power. Although time-tables were used as far back as Medieval monasteries, their role in the organisation and disciplining of modern life was increased and refined during the eighteenth and nineteenth centuries. A more detailed division and allocation of time emerged; timetables began to count in "quarter hours, in minutes, in seconds," and stipulated tasks for each recorded time unit. The "three great methods" of timetables, according to Foucault

(1979:149), were to "establish rhythms, impose particular occupations, regulate the cycles of repetition," and these were an important part of the power exercised in schools, poorhouses and workshops.

US populists objected to the disciplinary power associated with regulated and organised time-keeping, which was facilitated and legitimised by the introduction of standard time. These were of course the same populists and farmer's organisations who fiercely opposed the epitome of commodified time, trading in futures contracts. As no previous development, standardised futures contracts divided and commercialised time, and banked on the future. Populists protested against these new conceptions of time, and "insisted on nature as the source of time and natural imperatives as guides to using it" (O'Malley 1996:141).

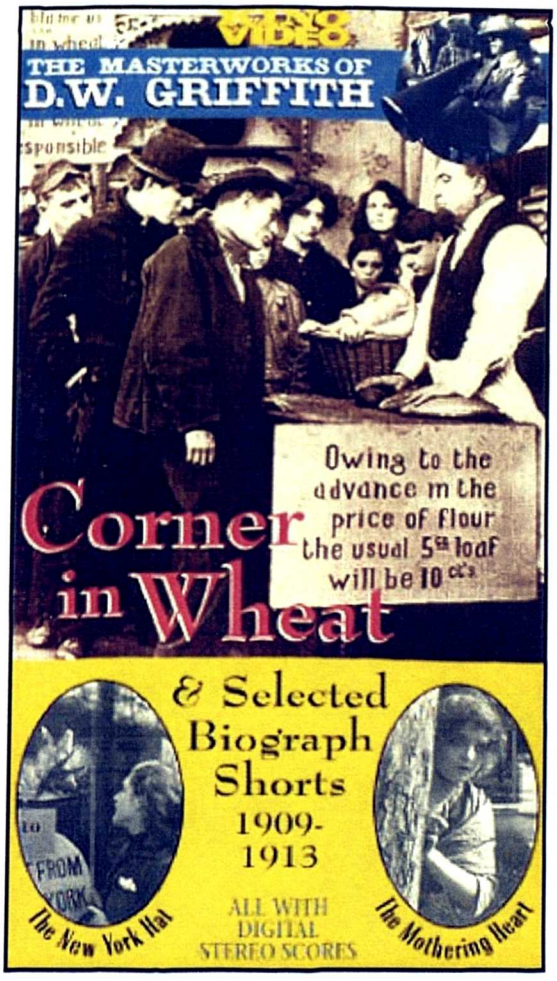

Figure 4:
Corner in Wheat, 1909

by D.W. Griffith.

Available from:

http://images.amazon.com/images/P/6302730740.01.LZZZZZZZ.jpg

These connections between changing ideas about time and the controversies over futures trading are exemplified by a 1909 short silent movie, called *Corner in Wheat* (see figure 4). In the film, a greedy tycoon decides, on a whim, to corner the market in wheat. The movie provides a social critique of futures trading by contrasting the "harsh life of farmers and the poor who depend on the price of bread with the

exotic luxury indulged in by the wheat speculator."[10] This contrast in the movie was made explicit through new techniques for portraying "temporal phenomena that played with the uniformity and irreversibility of time" (Kern 1983:29). The filmmaker David Griffith froze time in a shot of the poor waiting in the breadline, and represented the cycles of natural time by repeating an image of a farmer sowing wheat. Thus, *Corner in Wheat* illustrates how changing cultural conceptions of time were at the heart of the controversy over finance in general and futures trading in particular.

Paradoxically, through these explicit efforts to facilitate counting, measuring and time-keeping, it slowly became possible to assert that "facts speak for themselves" (Cohen 1982:154). For instance, Cohen documents that early American statistical works took pains to assure readers that only authentic facts were presented in their publications, and some authors refrained from commenting upon their assembled data altogether. "Facts were carefully distinguished from opinions and estimates," writes Cohen (1982:154), "and several authors presented wildly eclectic data as if to prove that no preconceived theory dictated their selection." However, as Porter (1995a:32) writes in his study of the social role of numbers and statistics: "What we call the uniformity of nature is in practice a triumph of human organisation – of regulation, education, manufacturing and method."

In conjunction with the invention of statistics, the standardisation of measurement and the promotion of precision in time-keeping, then, a particular brand of objectivity emerged. As historian of science Lorraine Daston (1994; 1998) has argued, objectivity is not an immutable or universal human concept, but must be understood in the historical contexts of its usage. While in the seventeenth century the superior social position of the scientist was a basis for the assessment of his truth-claims, as we have seen in chapter 2, the latter half of the nineteenth century saw the emergence of a "new brand of scientific objectivity," which was premised upon the abstraction of the scientist from his science (Daston and Galison 1992:81). The new brand of objectivity represented numbers and standardised measurement as the epitome of objectivity, and cast human subjectivity as a danger to scientific observation, experimentation and registration. The

human mind became considered unreliable and erratic, increasingly even the mind of the scientist.

In response to the perceived fallibility of the scientific observer, mechanical objectivity was held out as guarantee of perceptual accuracy and observational perfection. The machine was supposed to display all those qualities that were increasingly seen to lack the human observer, including patience, persistency, inexhaustibility, precision and restraint. As Daston and Galison (1992:81) put it: "where human self-discipline flagged, the machine would take over." One of the proponents of standardised and commodified time, for instance, promised to replace "human frailty and propensity for error with automatic, consistent, mechanical observation" in time-keeping (O'Malley 1996:85).

A metaphor of distance is integral to the formulation of mechanical objectivity. The greater the distance between the scientist and his science, the more reliable his observations were considered. Quantification, standardisation and regulation were regarded as such interventions between the scientist and his science. Most importantly, the distance required by the new brand of objectivity was the distance between the scientist *and himself*. The good scientist had to wilfully renounce himself, his personality, his desires, his scientific goals and expectations. The machine was not just seen as intervening in the distance between the scientist and his science, but the scientist was expected to regard himself as "*part of* the measuring apparatus" (Swijtink 1989:267, emphasis added). The scientist was required to display the qualities that were valued in the machine, including, "on the one side, the honesty and self-restraint required to foreswear judgement, interpretation and even testimony of one's senses; on the other, that taut concentration required for precise observation and measurement, endlessly repeated around the clock" (Daston and Galison 1992:83). Scientific asceticism not only prescribed patience, humility and dedication, but moreover involved a struggle against the "inner enemies" of judgement and interpretation (Daston and Galison 1992:118). For example, in 1892 British statistician Karl Pearson put it as follows: "the scientific man has above all things to strive at self-elimination in his judgements, to provide an argument which is as true for each individual mind as for his own"

(quoted in Porter 1995a:75).

It must be emphasised that the new scientific asceticism associated with mechanical objectivity was both gendered and particular to the upper classes. Paradoxically, the self-discipline or wilful self-elimination required of the scientist, while claiming to tame subjectivity, exemplified the highest form of autonomy and personal strength. Only the fully independent, well-educated and self-conscious agent was regarded to have the strength to consciously take distance from himself and to renounce his desires and hopes. Evelyn Fox Keller (1985; 1994) has pointed out that there is a pervasive historical association between articulations of masculinity and objectivity. The struggle against the 'inner enemies' of desire, judgement and interpretation parallels the confrontation of masculine virtue and feminine passions as discussed in chapter 2. Thus, as Keller (1985:78) argues, while the arts have historically been associated with sexual pleasure, and the sciences with sexual restraint, the artist has historically been considered effeminate, while the scientist is seen as masculine. It is precisely the subjection of sexual desires to reason which is seen to make man fully autonomous and in control of his person. The continuities with seventeenth-century gentlemanly science and Defoe's mastering financial man are obvious here, and demonstrate the historical continuity between literary representations and scientific discourses. During the nineteenth century, Keller (1994:316, 321) concludes, the discourse of self-mastering rendered possible "the progressive disembodiment and dislocation of the scientific observer," constructing "the illusion that [scientific] knowledge is not man-made – not crafted, articulated or constructed, but *discovered*" (emphasis added).

Not all contemporaries were happy with the discursive construction of this disembodied self, this calculating and distanced *persona*, as the highest ideal of nineteenth-century science. For instance, Scottish mathematician and social critic Thomas Carlyle lamented the loss of unconditional religious faith during what he called 'the Age of Machinery.' "Not the external and physical alone is now managed by machinery but the internal and spiritual also," Carlyle wrote in 1869, "The same habit regulates not our modes of action alone, but our modes of thought and

feeling. Men are grown mechanical in head and in heart, as well as in hand... Their whole efforts, attachments, opinions, turn on mechanism, and are of a mechanical character" (quoted in Williams 1985:73). Instead of an unconditional belief in Truth, Carlyle argued, men in the Age of Machinery display only a finite love. "[H]e does not *believe* and know it, but only '*thinks* it', and that 'there is every probability'!," lamented Carlyle (quoted in Williams 1985:74, original emphases). Carlyle's reference to statistical assessment of truth claims shows the controversial nature of the new articulations of objectivity. His references to the mechanisation of inner life moreover lament the loss of an age in which truth was based on an absolute knowing embodied by God (Keller 1994:315).

Another critic of the new scientific asceticism, albeit on different grounds, was Friedrich Nietzsche. In his *Genealogy of Morals* of 1887, Nietzsche objected to Victorian science and the new forms of objectivity which claimed to be abstracted from human history and morality. According to Nietzsche (1996:125-127), scientific asceticism did not constitute the renunciation of ideals, beliefs and hopes, but was on the contrary the expression of a very specific kind of faith and morality:

> [S]cience today... constitutes not the opposite of the ascetic ideal but rather *its most recent and most refined form*... [T]he stoicism of the intellect which renounces negation with the same severity as affirmation, the desire to stop short at the factual, the *factum brutum*... in which French science is now seeking a kind of moral superiority over German science, the complete renunciation of interpretation (of violating, adapting, abridging, omitting, padding out, spinning out, re-falsifying, and whatever else belongs to the essence of all interpretation)—all this expresses, broadly speaking, the asceticism of virtue as much as it expresses some kind of denial of sensuality... But what *compels* these men to this absolute will to truth, albeit as its unconscious imperative, is the *belief in the ascetic ideal itself*—make no mistake on this point—it is the belief in a metaphysical value, the value of *truth in itself*... Strictly speaking, there is absolutely no science 'without presuppositions,' the very idea is inconceivable, paralogical: a philosophy, a 'belief', must always exist first in order for science to derive from it a direction, a meaning, a limit, a method, a *right* to existence.

Nietzsche's critique remains one of the most forceful ways of questioning scientific asceticism in general and the constructed persona of financial man in particular.

The next sections will discuss how discourses of mechanical objectivity and their associated asceticism were instrumental in according to economics and finance scientific

respectability. Slowly, the metaphor of distance was introduced in economics and finance, which made it possible to argue that financial practitioners in general, and speculators in particular, merely studied and predicted market prices. After a discussion of the way in which economics became considered scientifically respectable, the chapter goes on to explore the legal and political discussions that surrounded the question whether stock prices could be scientifically predicted.

Economic Science

As Foucault shows, the connection between population, wealth and territory made possible by statistics, constituted the national economy as a domain of study and intervention. The emergence modern economics[11] is thus inextricably connected to the history of statistics and the imagination of the (colonial) population. In order for economics to gain scientific respectability, however, it had to be abstracted from this violent and political history, and be cast as an objective scientific endeavour.

Towards the mid-nineteenth century, there was an explicit effort to mould the study of political economy into the requirements of mechanical objectivity as discussed in the previous section. The economy became conceived of as an enormous mechanism, operating with measurable and predictable regularity, and expressible in various economic laws. The main instrument through which this shift was brought about was by casting economic phenomena in terms of the natural sciences. In her history of econometrics, Mary Morgan (1990:7-8) argues that the regularities revealed in statistics were put forward as an appropriate substitute for the experimental method of the physical sciences. Indeed, as Philip Mirowski (1991) points out, by the middle of the nineteenth century, economists began to copy the language of physics term for term in order to guarantee the scientific character of political economy. This allowed economists to reduce the issues of political economy to "mere arithmetical problems" (Poovey 1991:403).

One important figure in the rearticulation of political economy as economic science was

the British economist William Stanley Jevons, whose work, as we will see below, influenced Charles Dow. Jevons considered it his explicit goal to make economics scientifically respectable, and in response to controversy over the scientificness of the Statistical Section, Jevons (1911[1871]:21) argued: "I do not hesitate to say, too, that Economics might be gradually erected into an exact science, if only commercial statistics were far more complete and accurate than they are at present, so that the formulae could be endowed with exact meaning by the aid of numerical data." Jevons appealed to both the method and subject matter of the physical sciences in order to make economics scientifically respectable. In a paper read before Section F in 1862, Jevons (1995:113) urged that "all commercial fluctuations should be investigated according to the same scientific methods with which we are familiar in other complicated sciences, such especially as meteorology and terrestrial magnetism. Every kind of periodic fluctuation, whether daily, weekly, monthly, quarterly, or yearly, must be detected and exhibited." Jevons lamented the fact that economists in general, and financial practitioners in particular, had hitherto shown little interest in collecting and charting commercial and monetary data, and he started to undertake such projects himself.

Jevons's avid number collecting led him to formulate the so-called sun-spot theory of prices. In a series of papers published in the journal *Nature* between 1878 and his death in 1882, Jevons (1878:36) proposed that commercial fluctuations were directly related to "the varying power and character of the sun's rays." He analysed two centuries of data concerning the prices of corn, wheat and other agricultural products, not just in Britain, but also in India and China, and announced that he had found a "true but mysterious periodicity" (Jevons 1878:34). This periodicity, Jevons argued, was due to the sunspot cycle, which influenced the weather and the harvests, thus causing fluctuations in agricultural prices. Jevons (1879:588) determined the interval of the periodic commercial crises to be, on average, 10.466 years, and stated: "I am perfectly convinced that these decennial crises do depend upon meteorological variations of like period, which again depend, in all probability, upon cosmological variations of which we have evidence in

the frequency of sun-spots, auroras, and magnetic perturbations." In the nineteenth century, astronomy was regarded as the "queen of the sciences" (Cannon 1978:2), and because of the sheer distance between astronomers and their observations, it was seen as the most objective form of knowledge. By claiming that economic fluctuations were ultimately determined by the movements of the sun, rather than, for instance, by wars, colonial conquest and international commerce, Jevons directly appealed to the reputation of astronomy in order to make economics scientifically respectable.

Jevons used a large number of tables, graphs, and curves in order to publicise his collected data and illustrate his theories. According to Jevons, graphical representation was the best way to let the economic facts 'speak for themselves.' "My purpose," wrote Jevons (1865:302) in a paper read before the Statistical Society, is to "ascertain and measure these great changes with some approach to certainty and accuracy, and to establish them as facts of observation. To explain or account for them is a matter which I do not undertake." Statistical tabulation and graphical representation was the simplest form for presenting his information, Jevons (1865:301) went on to argue, because "when we have a long series of years presented in a curve... the eye easily compares any year or period with any other year or period." The same argument was made by another influential figure in the emergence of economic science, Alfred Marshall. "The graphic method of statistics," Marshall (1966a:175) wrote in a paper presented before the International Statistical Congress in 1885, "has the advantage of enabling the eye to take in at once a long series of facts... [E]ase and rapidity are essential when we want to compare many sets of facts together; because, if the mind is delayed long in taking in the general effect of one set, it meanwhile loses full count of others." As Daston and Galison argue, the use of graphs and tables was an important aspect of the emergence of mechanical objectivity. Like numbers, graphical expression was seen to be less vulnerable to distortion and bias than language and rhetoric. As one French physiologist put it in 1878: "There is no doubt that graphical expression will soon replace all others whenever one has at hand a movement or change of state – in a word, any phenomenon.

Born before science, language is often inappropriate to express exact measures or definite relations" (quoted in Daston and Galison 1992:81). The articulation of economics as a science thus depended upon an increasing formalisation, quantification and graphical representation of the arguments.

Jevons was not alone in his efforts to make of economics an exact science. British mathematician and economist Francis Ysidro Edgeworth similarly proposed that statistics and numerical precision could guarantee mechanical objectivity in economics. Edgeworth conceived of the economy as a grand mechanical structure, measurable like the physical world, but still divinely ordered. "Mécanique Sociale may one day take her place along with Mécanique Celeste," Edgeworth (1881:12) wrote, "as the movements of each particle, constrained or loose, in a material cosmos are continually subordinated to one maximum of sum-total of accumulated energy, so the movements of each soul, whether selfishly isolated or linked sympathetically, may continually be realising the maximum energy of pleasure, the Divine love of the universe." Like Jevons, Edgeworth devised methods and formulas for the calculation of the aggregate movements of men, who he assumed to be driven by a desire to maximise pleasure and minimise pain. Feelings of pleasure and pain, these economists argued, can be measured as concrete and precise entities, just as scientists do with heat, weight or electricity. "I hesitate to say that men will ever have the means of measuring directly the feelings of the human heart," Jevons (1911:11) wrote, "but it is the amount of these feelings which is continually prompting us into buying and selling, borrowing and lending... ; and *it is from the quantitative effects of the feelings that we must estimate their comparative amounts*" (original emphasis).

Similarly, in his *Mathematical Psychics: An Essay on the Application of Mathematics to the Moral Sciences* of 1881, Edgeworth conceived of nuggets of pleasure (and pain) as ungraspable as atoms but no less real. "We cannot *count* the golden sands of life," Edgeworth (1881:8-9) wrote, "we cannot *number* the 'innumerable smile' of seas of love; but we seem to be capable of observing that there is here a *greater*, there is a *less*, multitude of pleasure-units, mass of happiness; and that is

enough" (original emphases). In spite of professing to calculate the movements of 'each soul,' however, Edgeworth was careful to point out the differences between male and female souls. At the end of his treatise, Edgeworth (1881:78) amends his concepts in order to discuss the "aristocracy of sex," which, he argued, originates from the "superior capacity of the man for happiness," because "woman is the lesser man, and her passions onto mine; are as moonlight unto sunlight and as water unto wine."

Finally, and perhaps most importantly, nineteenth-century economics acquired scientific respectability through Marshall's formulation of the laws of supply and demand.[12] "The laws of economics," argued Marshall (1961:32) in his *Principles of Economics* of 1890, "are to be compared with the laws of the tides, rather than with the simple and exact law of gravitation." Still, Marshall (1961:31) went on to say, economics can be made a science, through increasing collection and registration of data: "Economics aspires to a place in [the physical] sciences: because though its measurements are seldom exact, and are never final; yet it is ever working to make them more exact, and thus to enlarge the range of matters on which the individual student may speak with the authority of his science." Marshall himself aspired to produce a book of information and graphs, in order to illustrate his 'equilibrium theory of prices' (Schabas 1989:70). The value of a commodity was not, as earlier economists had believed, argued Marshall, dependent upon intrinsic worth or natural properties, but determined through the laws of the market, which join supply and demand. The joining point of the supply and demand curves, argued Marshall, produced the "true equilibrium price." This is the price which "exactly equate[s] demand and supply (i.e. the amount which buyers were willing to purchase at that price would be just equal to that for which sellers were willing to take that price)" (Marshall 1961:333). The equilibrium price was, according to Marshall (1961:332), the product of an advanced society and integrated markets, and "the simplest cases of a true equilibrium value are found in the markets of a more advanced state of civilisation." Like many scientific economists, and statisticians more generally, Marshall was motivated by social concerns and hoped that the discovery of economic laws and

mechanisms would enable man to manipulate the economic sphere in order to eliminate poverty and scarcity.

It is important to point out that scientific economics, while often understood as the birth of a modern and secular rationalism, entailed its own formulations of divine, or at least cosmological, determinism. As Nietzsche argued, scientific rationalism requires a particular kind of faith in truth and the laws of the universe, which entails a continuity with earlier Christian faith. By locating the origins of prices among the movements of the sun and stars, Jevons and Edgeworth displayed faith in a cosmological order while at the same time making these economic factors scientifically knowable. Indeed, in modern economics the laws of the market appear to possess a transcendental authority comparable to that of a provident divinity. As Hilton (1988:125) points out, during the nineteenth century commercial cycles were frequently interpreted as the work of God, providing "timely reminders of the existence of providential government," and reminding businessmen of their "ambivalent moral status."

At the same time however, through casting economics in terms of astronomy and physics, proper scientific distance, which was indispensable to mechanical objectivity, suddenly became possible in economics. What could be further from human interference than the movement of the sun and stars, or, alternately, the movements of the atoms? While Marshall did locate the origins of prices among human actions and desires, still his theories were dependent upon physical and mechanical analogies. In a paper published in the *Economic Journal* in 1898, Marshall defended the analogy between his theory of economic equilibrium and the language of physics, in order to counter the argument that economic phenomena are produced reflexively in human endeavour. "Of course there is some analogy to [economic science] in mechanics," wrote Marshall (1966b:317), "[o]ur planetary system happens, indeed, to be in stable equilibrium; but a little change of circumstance might make it unstable; might, for instance, after a time cause one of the planets to shoot away from the sun in a very long ellipse... Mechanical analogies ought, therefore, not to be abandoned hastily on the ground that economic events react upon the conditions by

which they were produced."

The Origin of Stock Prices

The origins of prices, as debated by the nineteenth-century English economists, also provided an important strand of the previously discussed bucketshop debate. The question whether speculators on the exchanges distorted and manipulated prices, or whether exchange transactions merely represented the laws of supply and demand, was hotly debated. As we have seen in the previous chapter, farmers accused speculators of deliberately driving down produce prices. These arguments were reinforced when many farmers suffered financially in the 1907 recession. As noted before, Texas accepted an anti-futures law in 1907 on the grounds that "the prices of agricultural and farm products are greatly depressed by such gambling transactions" (*General Laws of the State of Texas* 1907:174). Although the US Supreme Court had ruled in the 1905 Christie case that equalising produce prices was one of the economic functions of the exchanges, the debate over the origins of stock prices intensified in the early twentieth century, and to some extent replaced the contested legitimacy of bucketshops as the core controversy surrounding speculation.

In 1912, a grand-scale investigation was launched by the Committee for Banking and Currency in Washington, with the mandate to establish whether the management of US corporations and financial institutions was "rapidly concentrating in the hands of a few groups of financiers" (Pujo Committee 1912:6). It was feared that these financiers, particularly J.P. Morgan, were so powerful on the financial markets that they were able to determine prices as well as "to control the security and commodity markets; to regulate the interest rates for money; to create, avert and compose panics" (Pujo Committee 1912:6). Samuel Untermyer, chairman of this investigative committee which become known as the 'Pujo Committee,' made it clear that in his view, there was little difference between speculation and price manipulation. In a paper presented before the Annual Meeting of the American Economic Association in 1915, Untermyer argued

that since the disappearance of 'pure' bucketshops, which did not execute their transactions on the exchanges, price manipulation of stocks had become the main problem of speculation. The multitude of small brokers which replaced the bucketshops *did* execute their speculative orders on the exchanges and thus influenced price movements. As a result, argued Untermyer (1915:46), "the dealings on the Exchange have become mainly speculative and... prices are regulated, not by intrinsic values, but by the technical phase of the market created by the manipulation of the particular security by the big interests." Untermyer pleaded passionately for federal regulation of the stock markets, and proposed to curtail the rights of brokers to advertise their services. Regulation, according to Untermyer, would enable rather than hamper the natural functions of speculation. Only when price manipulation has ceased, "can we have open, honest speculation based upon conceptions of value," concluded Untermyer (1915:52), "[t]hen and only then will speculative transactions furnish a guide to values."

In response to Untermyer and others before him who had made similar arguments, defenders of speculation argued that the exchanges were nothing but neutral market-places, enabling a multitude of buyers and sellers to meet and determine the right price for securities. For instance, Horace White (1909:529), chairman of the Hughes Commission, an earlier investigative committee into stock market practices, which, contrary to the Pujo Committee, had found no need for federal legislation, argued in 1909 that "an exchange is a common meeting-place of buyers and sellers. Such meeting-places have existed from earliest times. The Agora in ancient Greece was an open-air market before it acquired any political or juridical character." The economic function of these markets, which are natural products of economic evolution, White (1909:530) went on to argue, "is the ascertaining and publishing of prices, so that producers may know what they can obtain for their products, and purchasers what they must pay for them." White (1909:530) was approaching the reasoning of Jevons and Marshall when he argued that "prices are made by the competition of buyers and sellers in open market under the spur of self-interest, and there is no other way they can be legitimately made." Still, when it came to the

definition of manipulation and the influence of speculation on prices, White's argument remained confused. "The physical, or external causes are the controlling ones in the long run," White (1909:530) asserted similarly to Jevons, "but the governing force at any particular time is the state of opinion prevailing on the exchange. This may be in part artificial or 'manipulated,' but it represents the law of supply and demand at the moment."

It is important to understand that the resolution of this debate did not depend on the *discovery* of the true and natural origins of stock prices, but on the construction of a discourse of 'true prices,' as being independent of human influence and control. Such true and natural prices were determined, according to the English economists, by the movements of the economic mechanism which resembled the movements of the sun and stars. Increasingly, the existence of true and natural prices was simply asserted. The following exchange between Untermyer and Frank Sturgis, a governor of the NYSE, during the Pujo hearings, illustrates how exchange transactions were rearticulated as being expressions of economic truth:

> Q. [Untermyer] What is the purpose of short-selling?
> A. [Sturgis] Generally speaking, to make a profit.
> Q. To make a profit by what process?
> A. By repurchasing the short sale at a declining price.
> Q. That is, by selling a security that you have not got and gambling on the proposition that you can get it cheaper and deliver the thing that is sold. Is that not it?
> A. That is the usual process – selling *when you think the price is too high and repurchasing when you think it has reached the proper level* (quoted in Untermyer 1915:53, emphasis added).

Sturgis's answer does not so much disagree with Untermyer, as reformulate the question by asserting the existence of natural and transcendental prices. An 1892 pamphlet of the New York Cotton Exchange similarly argued that speculators had no influence on price levels, but merely acted in accordance with economic laws. "The great law of supply and demand," the Cotton Exchange Committee wrote, "regulates values of everything and is no more to be resisted than the tides of the ocean. A short seller in making his engagements will either derive profit or suffer loss as the ultimate facts prove him to be right or wrong" (New York Cotton Exchange 1892:6-7). In another pamphlet, James Bloss, president of the Cotton Exchange, argued that if speculators had any influence on price movements, it was a negligible one. Speculation, Bloss (1892:14)

argued, "is really no more than a fly upon the wheel that rides along with the vehicle that is moving."

Interestingly, the discourse of the 'right' and 'proper' price, which was assumed to exist above and beyond human action, was used by both defenders and opponents of speculation. For example, after sharp fluctuations in the sugar price in 1923, a case was brought before the Supreme Court by the US government, which argued that the New York Coffee and Sugar Exchange conspired to manipulate prices for sugar and consequently was in breach of the Sherman Anti-Trust Act of 1890. The petition against the NY Sugar and Coffee Exchange argued that futures sales made on the Exchange did not intend delivery and that "the Exchange thus put in the hands of gamblers the means of influencing directly the prices of sugar to be delivered, and thereby of obstructing and restraining its free flow in trade between Cuba and the United States." Like Untermyer, the petition equated speculation with manipulation, and asserted that the exchange dealings did not represent the true and natural prices for sugar. The governors and members of the NY Sugar Exchange, the petition argued, "have established artificial and unwarranted prices, not governed by the law of supply and demand, but based wholly on speculative dealings not involving the delivery of the quantities of sugar represented thereby, but altogether carried on for the purpose and with the effect of unduly enhancing the price of sugar to the enrichment of said defendants and their principals and to the detriment of the public." With the suit, the government sought to dissolve the Sugar Exchange, and restrict dealings in sugar to those persons who actually possessed sugar and those who "in good faith" intended to buy and pay for that sugar.[13]

In response to the petition, the Sugar Exchange argued that, in spite of the fact that the exchange was occasionally vulnerable to gamblers who attempted to manipulate its prices, futures trades generally stabilised and equalised prices. The 1923 fluctuations in the sugar price, argued the Exchange, were due to "a probable shortage in the supply of sugar," as well as to the fact that "the previous estimate of the amount of the next Cuban crop was too high by several hundred

thousand tons." The Supreme Court found in favour of the NY Coffee and Sugar Exchange, and pointed out that the legality of futures trading had been affirmed in the 1905 Christie case.

Another court case which debated the origins of stock prices was the 1923 case over the constitutionality of the Grain Futures Act. The Act was passed in 1922 with the purpose of regulating and recording the trade in grain futures. The Act stipulated that futures trading was invested with a "national public interest," and that transactions on the CBoT were "susceptible to speculation, manipulation and control, and sudden or unreasonable fluctuations in the prices...frequently occur as a result of such speculation, manipulation or control which are detrimental to the producer or the consumer...and render regulation imperative for the protection of such commerce and the national public interest." Less than a year after the passing of the Act, however, the CBoT legally contested it, arguing that the government had no constitutional right to interfere with the private business of the Board, and that transactions on the Board did not distort the natural prices of grain. The CBoT argued before the Supreme Court that a large part of future trading was "done by speculators...who make a study of the market conditions affecting prices, and try to profit by their judgement as to future prices; [and] that few of such speculators have capital enough to make large single purchases in any way affecting the market;...[and] that the law of supply and demand regulates prices and prevents violent fluctuations."[14]

Clearly, then, the very concept of what constitutes the 'free market' was under discussion in this court case. In defence of the Grain Futures Act, the US attorney cited various investigations by the Senate Committee on Agriculture and Forestry, which argued that the grain futures markets were susceptible to manipulation, which distorted or restricted the operation of the free market in produce. One of the witnesses cited by the defence was Herbert Hoover, who spoke in his capacity as Food Administrator when he asserted that speculation did have an effect on price fluctuations and that he regarded a proportion of exchange transactions "as an attempt to dislocate the normal flow of the law of supply and demand and any attempt to *dislocate a free market* must be against public interest" (emphasis added). The Supreme Court found in favour of

the government and upheld the constitutionality of the Grain Futures Act. The court affirmed the beneficial functions of futures trading as formulated in the 1905 Christie case, but agreed with the US attorney that manipulation posed a real danger to the operation of the markets, with the power to "exert a vicious influence and produce abnormal and disturbing temporary fluctuations of prices that are not responsive to actual supply and demand." Moreover, the Supreme Court affirmed that futures sales did in fact have a bearing on produce prices, and that the argument of the CBoT in this matter was contradictory. "It is said there is no relation between prices on the futures market and in the cash sales," Justice Taft said in the decision of the court. However, Taft objected: "This is hardly consistent with the affidavits the plaintiffs present from the leading economists... who say that dealing in futures stabilises cash prices... [I]t is very reasonable to suppose that the one influences the other as the time of actual delivery of the futures approaches, when the prospect of heavy actual transactions at a certain fixed price must have a direct effect upon the cash prices in unfettered sales."

The tension in the CBoT's argument noted by Taft resulted from the fact that in order to fight accusations of price manipulation, financial practitioners increasingly asserted the transcendental existence of stock prices. However, this line of reasoning contradicted earlier claims which held that financial practitioners *produced* stock prices. The productive function of financial practitioners was most notably articulated in the 1905 Christie case, which ruled that the exchanges were the legitimate owners of the price quotations, which were to be regarded as a trade secret. This contradiction is also apparent in the work of Emery, who, as we saw in the previous chapter, argued in the late nineteenth century that the greatest evil of speculation was the reckless participation of amateurs in the markets, and that speculation was best left to experts. However, in a 1915 article written in response to Untermyer, Emery argued that expert speculators did not at all occupy privileged positions in the markets, and that brokers merely fulfilled the neutral function of executing orders on the exchanges. "Is it not obvious that these brokers are, after all, merely our agents; that their powers are very much limited?," asked Emery

(1915:78), before going on to answer: "say what one may about 'insiders' and 'manipulation,' it is the public which makes prices. It is you and I who determine in the end what we think the value of any security to be; and who by our purchases and sales establish the price for that security which is registered on the Stock Exchange." In chapter 5 we will see that this discursive tension in the justification for speculation is still important today.

The Stock Market Barometer

One important late nineteenth-century development which facilitated the imagination of natural and transcendental prices for securities, was the compilation of the Dow-Jones Industrial Average. Charles Dow, founder of the *Wall Street Journal*, aspired to the standardisation, quantification and objectivity of financial news. Although commercial journalism was not new in the late nineteenth century, it had hitherto been a paper extension of small social circles and personal contacts. Financial newsletters often consisted of little more than lists of rates and prices, initially for private use, such as the letters of the Fugger family (McCusker and Gravesteijn 1991:21-41). In England, one of the earliest financial publications in the City of London, John Castaign's *Course of the Exchange & c.*, founded in the 1690s, relied on the "good credit and esteem" of its publisher within the small circle of stock-brokers who met in London Coffee-Houses (McCusker and Gravesteijn 1991:312-314). Impersonal news was not just hard to come by, it was also not valued as such during most of the seventeenth and eighteenth centuries. "What reason was there," Porter (1995a:46) points out, "to put faith in an anonymous document?"

What was new about late nineteenth-century financial publications, most importantly the *Wall Street Journal* in New York and the *Financial Times* in London, was that they emphasised personal detachment and numerical representation of financial news. The first edition of the *Financial Times* in 1888 declared itself "the friend of the honest financier, the bona fide investor [and]... the legitimate speculator" and the enemy of "the gambling operator," and adopted as its

banner: "Without Fear and Without Favour" (quoted in Kynaston 1988:17). Similarly, according to Dow, personal contact and involvement on Wall Street were the origin of fraud and stock manipulation (Rosenberg 1982:5-6). In the first edition of the *Wall Street Journal* in 1889, Dow stated its purpose and principles to be:

> to give fully and fairly the daily news attending the fluctuations in prices of stocks, bonds and some classes of commodities. It will aim steadily at being a paper of news and not a paper of opinions. It will give a good deal of news not found in other publications, and will present in its market article, its tables, and its advertisements a faithful picture of the rapidly shifting panorama of the Street.
> We believe that such a paper will be of use to operators, bankers and capitalists who can find in its columns essential statistics compiled so that their pith and bearing can easily be remembered; also, the events which have moved or are moving prices, together with the drift of opinion in the Street (quoted in Stillman 1986:14-15).

Dow's emphasis on numerical representation, tabular arrangement and the opposition between fact and opinion rearticulated the requirements of mechanical objectivity which have been discussed above.

An important expression of Dow's emphasis on objectivity and statistics was the compilation and publication of stock price averages. The first edition of the Journal in 1889 printed a list of the "average movement of prices," which traced the prices of twelve stocks on the New York Stock Exchange over the past year. Dow attempted to read a pattern in the price movements, and in the accompanying comment he wrote: "The bull market of 1885 began July 2, with the average price of 12 active stocks 61.49. The rise culminated May 18, 1887, with the same 12 stocks selling at 93.27. Prices gradually declined for about a year, reaching the next extreme low point April 2, 1888, the 12 stocks selling at 75.28" (quoted in Stillman 1986:16-17). The fact that Dow did not mention which stocks were included in his average, nor mentioned the unit of account of the prices, contributed to the reification of the average. This table of 12 stocks was the predecessor of the Dow-Jones Industrial Average (DJIA), which was first published in the *Journal* in October 1896 and consisted of a list of twelve industrial stocks which were named by Dow.[15] At the same time as the DJIA, Dow compiled a railway average, consisting of the average price of twenty railroad stocks.[16]

Dow's attempts to discover regular price movements represented by the averages were directly inspired by the work of English economist Jevons who, as we have seen above, compiled and computed price averages for various commodities in order to unearth commercial cycles caused by sun-spots. Dow was familiar with Jevons's work on sun-spot cycles, and agreed that commercial and stock exchange panics showed periodic movements. In an editorial written shortly before his death in 1902, Dow (1920:97) argued that stock exchange panics were periodic because "the business community has a tendency to go from one extreme to another." According to Dow, such commercial cycles consisted of five or six years of confidence, followed by five or six years of hopelessness. "This ten year movement," Dow (1920:97-98) continued, "is given in detail by Professor Jevons in his attempt to show that sun-spots have some bearing upon commercial affairs. Without going into the matter of sun-spots and their bearing upon crops, commerce, or states of minds, it may be assumed that Professor Jevons has stated correctly the periods of depression as they have occurred in England during the last two centuries." Dow went on to argue that the United States had in fact seen commercial fluctuations identical to those Jevons found for England since the early eighteenth century. "Judging by the past and by the developments of the last six years," Dow (1920:101) concluded, "it is not unreasonable to suppose that we may get at least a stock exchange flurry in the next few years." Dow's conclusion has been interpreted as correctly predicting the 1907 financial crisis in the US (Hamilton 1922:27).

Dow's construction of market swings and regularities were premised on the imagination of the financial sphere as a coherent and natural system with its own internal dynamic. In 1899, Dow began a series of editorials in the *Wall Street Journal* which discussed market developments in order to expose this internal dynamic. Downward swings in the market, Dow argued in the first of these commentaries, generally last four years. "The time involved in these turns," Dow (1899:1) wrote, "is determined by natural causes. The cause is that the stock market reflects general conditions and it takes several years for such a change for the better or for the worse to work its way through the community." In another of these editorials in 1901, Dow argued that the

movements of the stock market were comparable to the natural fluctuations of the sea, and that his price averages offered a method of comprehending and predicting such fluctuations:

> A person watching the tide coming in and who wishes to know the exact spot which marks the high tide, sets a stick in the sand at the points reached by the incoming waves until the stick reaches a position where the waves do not come up to it, and finally recede enough to show that the tide has turned.
>
> This method holds good in watching and determining the flood tide of the stock market. The average of twenty stocks is the peg which marks the height of the waves. The price-waves, like those of the sea, do not recede at once from the top. The force which moves them checks the inflow gradually and time elapses before it can be told with certainty whether the tide has been seen or not (quoted in Wendt 1982:67-68).

The image of the stock market as a natural system and the price averages as the barometer of this system became increasingly important, parallel to the increased controversy over price origins. In 1903, Samuel Nelson, an associate at Dow-Jones news agency, argued that the usefulness of the Stock Exchange was its role in the measurement of commodity and produce values. "Stock Exchange prices register values and the state of trade," wrote Nelson (1964:24), "precisely as a thermometer registers heat or cold." When *Wall Street Journal* editor Peter Hamilton wrote a book on Dow's work and theories in 1922, he called it *The Stock Market Barometer.* Hamilton (1922:4) wrote that financial crises and panics were caused by "too much imagination," and that what the financial world needed were "soulless barometers, price indexes and averages to tell us where we are going and what we may expect. The best, because the most impartial, the most remorseless of these barometers, is the recorded average of prices in the stock exchange... [C]ontinuously these have been kept by the Dow-Jones news service for thirty years or more." Reading the price movements was an entirely objective and detached exercise, Hamilton (1922:4) went on to say, just as "a barometer predicts bad weather, without a present cloud in the sky. It is useless to take an axe to it merely because a flood of rain will destroy the crop of cabbages in poor Mrs. Brown's backyard." This argument was also used by Emery in his defence against Untermyer's accusations that prices were distorted and manipulated by speculators. "[P]rices," argued Emery (1915:78), "*whether proved right or wrong in the future*, do represent with absolute accuracy what we all think now" (emphasis in original). In this sense price movements are like a

weather vane, Emery (1915:78) went on to argue, "[t]he vane may change at any time. But the vane does show how the wind is blowing at a specific instant. It seems to me that the fallacy of many people who wish to change methods that provide for the smooth working of a free and open market for securities is the fallacy of one who thinks that he can change the wind by interfering with the weather vane."

The barometer metaphor and the portrayal of the stock market as a natural system with its own objective laws, rendered possible the emergence of a professional domain for speculators. In the previous chapter I have argued that speculators asserted their expertise and intelligence in face of growing opposition to their trades as gambling. Dow's compilation of price averages and charting of financial cycles offered a professional practice to speculators, and Dow instructed the financial trader to

> keep a chart of the price movements of these stocks so as to know their swings for months or years, and thus be able to tell readily where in the general swing his particular stocks appear to be. He should keep with his price movement a record of the volume of transactions and notes of any special facts bearing on that property... He should observe the movement of the general market as indicated by the averages given daily in the *Journal* as this shows the market more clearly than is shown by any one stock (Dow 1900, quoted in Stillman 1986:104).

Such study and administration, Dow believed, did not just inform speculators of past price movements, but enabled him to some extent to foresee the future. "Within limitations, the future can be foreseen," Dow (1920:15) wrote in an essay entitled *Scientific Stock Speculation*, "[t]he present is always tending toward the future and there are always in existing conditions signals of danger or encouragement for those who read with care." As early as 1892, an article had appeared in the *Political Science Quarterly* which similarly asserted that with the right knowledge and information, speculators were able to accurately predict future price movements. "The successful speculator must have accurate knowledge from every available source," Albert Clark Stevens (1892:429) wrote, "[b]eing successful, he has merely foreseen causes which made prices go up or down."

Dow's stock market averages and statistical measurements were made possible through the emergence of mechanical objectivity as a virtue in science. Dow facilitated the emergence of finance as a scientifically respectable domain of study and knowledge, just as Jevons and Marshall

had rendered possible the scientific reputation of economics. Foresight, calculation and prediction became virtues to be exercised by financial participants, which protected them from accusations of gambling, idleness and price manipulation. It is important to consider, thus, that statistical measurement and scientific prediction were introduced into financial practices as a result of political controversy and debate. For instance, the economist of the NYSE, J. Edward Meeker, argued in a speech shortly after the 1929 crash that it was precisely political controversy over stock market practices which was seen to create the need for statistics in finance. Because of the great political interest in the movements of the New York stock market, Meeker (1930:3) argued, "there is today a particular need of statistical yard sticks with which to measure its activities. For only by recourse to definite figures can a basis be provided for a serious and unprejudiced study of the activities and functions of the Stock Exchange. The need of adequate statistics is all the more important because mass psychology is regularly so considerable a cause of most stock market phenomena." By the early twentieth century, Meeker was able to use the discourse that cast numbers and figures as precise representations of an external reality, and that contrasted fact with psychology and emotion.

A final important point to be emphasised here, is that development of rule-governed and numerical financial knowledge during the nineteenth century entailed a political tension between professional judgement and rule-based objectivity. If financial knowledge was to be produced merely by internalising a set of predetermined rules, how could the financial practitioner justify his distinctive identity and unique knowledge to larger society? How could arguments concerning the unique and virile position of financial speculators which, as we have seen in chapter 3, distinguished them from idle gamblers, hold sway? This paradox was not just a problem with respect to speculators. For instance, many accountants and auditors were opposed to the push for professionalisation of their field in the nineteenth century. For example, in 1871 the British *Journal of the Institute of Actuaries* published a paper critical of the benefits of mechanisation advocated by Babbage and others. "[O]n the whole, arithmeticians have not much to expect from the aid of

calculating machines," this author concluded, "and we must fall back upon the wholesome truth that we cannot delegate our intellectual functions, and say to a machine, to a formula, to a rule, or to a dogma, I am too lazy to think, do please think for me" (quoted in Warwick 1995:330).

Theodore Porter (1995a; 1995b) argues that the push for standardisation in these professions was more successful in the United States than it was in Britain during the nineteenth century, because of British gentlemanly culture. "British actuaries conceived themselves as gentlemen whose integrity and judgement had earned the public trust," writes Porter (1995a:102), "[a] strict regime of calculation would have implied the denial of that trust." The existence of an informal culture of 'gentlemanly finance' in the City of London (Thrift 1994; Tickell 1996) helps explain why the emergence of a public stock average did not take place there until well into the twentieth century. As mentioned, the *Financial Times* was founded almost simultaneously with the *Wall Street Journal*, and with a similar emphasis on unbiased news and the publication of ticker tape prices. However, as documented in Kynaston's centenary history of the paper, the *Financial Times* placed less emphasis on statistics and did not start compiling weekly indices of stock prices until the mid-1920s. In 1927, the *Financial Times* began publishing a Weekly Index of Industrial Stock, in order to "measure that elusive entity, Stock Exchange Sentiment" (quoted in Kynaston 1988:97). The first daily publication of the Industrial Ordinary Share Index, which provided the average of thirty listed shares and preceded the currently used FTSE Index, took place in 1935, almost forty years after the invention of the DJIA (Bashford 1991:5).

Transcendental Finance

As I pointed out in the introduction, Thrift (1996) argues that the study of the world economy today is premised upon a discourse of "transcendental rationality." This discourse assumes that reason and rationality are disembodied phenomena, and that numerical and linguistic symbols refer unproblematically to concrete entities in the outside world. The discourse of transcendental

had rendered possible the scientific reputation of economics. Foresight, calculation and prediction became virtues to be exercised by financial participants, which protected them from accusations of gambling, idleness and price manipulation. It is important to consider, thus, that statistical measurement and scientific prediction were introduced into financial practices as a result of political controversy and debate. For instance, the economist of the NYSE, J. Edward Meeker, argued in a speech shortly after the 1929 crash that it was precisely political controversy over stock market practices which was seen to create the need for statistics in finance. Because of the great political interest in the movements of the New York stock market, Meeker (1930:3) argued, "there is today a particular need of statistical yard sticks with which to measure its activities. For only by recourse to definite figures can a basis be provided for a serious and unprejudiced study of the activities and functions of the Stock Exchange. The need of adequate statistics is all the more important because mass psychology is regularly so considerable a cause of most stock market phenomena." By the early twentieth century, Meeker was able to use the discourse that cast numbers and figures as precise representations of an external reality, and that contrasted fact with psychology and emotion.

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However, while discourses of transcendental finance profess to represent unproblematically the truth of financial laws, they offer particular and problematic representations of the financial domain. Financial statistics and averages, like population statistics before them, exert a particular power because they create and define values and categories instead of objectively measuring them. I have discussed how the compilation of population statistics rendered possible the exercise of a power which Foucault has termed governmentality. Forms of compiling, documenting, tabulating and evaluating economic phenomena, Miller and Rose (1990:3) argue, building on Foucault's work, exercise power by "rendering aspects of existence thinkable,... calculable and amenable to deliberated and planful initiatives." Although the DJIA, and other statistics discussed in this chapter, were often the product of democratic drives for public information and political projects for social welfare more generally, they exercise a particular power (Miller 1994:2). Avenues for action in the financial domain are rendered possible, logical and rational through particular representations of financial truth, just as other avenues are foreclosed through such representations.

The fact that averages and statistics are not unproblematic representations of economic reality was implicitly admitted by Meeker, who discussed in his 1930 speech the difficulties encountered by the NYSE statistical department, which was founded in 1924. The main problem confronted by the statistical department, Meeker pointed out, was determining the value of stock market listings, in particular when a security was not frequently traded. Another problem, according to Meeker, was determining to what extent the increase in aggregate monthly value of the exchange listing was due to increased share values and to what extent it was due to new share issues. Still, Meeker (1930:5) was keen to ensure his audience that as a result of the meticulous work of his statistical department "the amounts of listed issues which enter into the monthly compilation are not guesses or estimates, but accurate figures." The problematic nature of statistical representation of financial reality was also commented upon by NYSE president E.H.H. Simmons, who after the 1929 stock market crash argued for better and more accurate measures of

stock market value. "The price levels of the share market are almost always peculiarly difficult to judge because of the inadequacy of existing methods for measuring them," argued Simmons (1930:5) in a speech to an assembly of railroad industrials, "[a]lmost everyone interested in the subject is bound to use stock indexes or stock averages, and to depend upon them. Yet a close examination of such price averages shows how unrepresentative they often are, and in what an offhand manner they are frequently composed. I feel that our statisticians can do us all a great service if they will concentrate their attention on the production and critical interpretation of better stock price indexes."

Meeker and Simmons clearly believed that the problems of representation surrounding stock market value could be remedied by advances in computation and statistical measurement. However, while financial measurement and statistics have become increasingly complex and computerised during the twentieth century, the problems of representation have not been remedied. On the contrary; the construction of ever more complex financial indices has created its own problems. For instance, in December 2000, the financial indexing company MSCI, which computes various stock market indices worldwide, announced a change in the calculation of its indices. In the future, MSCI will only include shares available through the market in its valuation of companies. The recalculation was seen by the *Financial Times* to provide a "more realistic picture of tradeable assets, by reflecting the proportion of a company accessible to investors" (John 2000). However, the recalculation will have a negative effect on companies partly owned by national states, for instance Deutsche Telekom of Germany, where the state owns forty percent of the shares. Thus, the change is expected to devalue former public companies in European welfare states and Japan, while it benefits companies in more liberalized economies such as the US and UK. The change proposed by MSCI underscores the continuing political nature of financial accounting and measurement, an issue which will be further explored in chapters 5 and 6.

Conclusion

This chapter has argued that the moral virtues which were accorded to statistics during the eighteenth and nineteenth centuries were introduced into financial discourses in order to assert the moral superiority of financial man. It was through emphasis on numerical representation, statistical tabulation and calculated foresight that the respectability of financial practices was articulated. The introduction of these methods into finance was neither natural nor unambiguous, but provided an important political step in the emergence of a professional domain for speculators. Financial man was increasingly seen to display a scientific asceticism, enabling him to objectively read the movements of the financial domain.

In contrast to the debates examined in this chapter, and in particular the 1920s court cases which attacked exchange transactions as being contrary to the principles of the free market, by the late twentieth century the stock exchange has become the exemplary model of the free market. As Adler and Adler (1984:2-3) point out, late twentieth-century economic theory considers stock exchanges as exemplary of the "idealised social market system," because they are assumed to be characterised by "pure competition." Three conditions are assumed to make stock exchanges the current embodiment of the free market and the exemplary operation of the laws of supply and demand. First, there is a large number of buyers and sellers on the floor of the stock exchange; second, they deal in a homogeneous commodity (i.e. there is no difference between the units of stock of a same company); and third, there is close contact between buyers and sellers, who share knowledge and create prices. Images of stock traders shouting prices and making deals on the floor of an exchange have become powerful representations of the free market, and are cast as evolutionary successors of the Greek Agora and the early modern marketplace.

However, the idea that stock and produce exchanges typify the operation of the free market was first articulated by nineteenth-century economists in the controversies documented above. Marshall (1961:328), for instance, named stock exchanges as the ideal example of the operation of the laws of supply and demand, and wrote: "Stock exchanges then are the pattern on

which markets have been, and are being formed for dealing in many kinds of produce which can be easily and exactly described, and portable and in general demand... At the opposite extremity to international stock exchange securities... are... things which must be made to order to suit particular individuals, such as well-fitting clothes." The casting of the stock exchange as the epitome of the free market thus has to be seen as a political move, which served to legitimate exchange transactions and construct its operations as transcendental logic.

In contrast to the political debates examined in this chapter, present reification of financial statistics has almost silenced critical questioning of their origins, compilation and cultural significance, even by those critical of financial capitalism. For instance, Doug Henwood's (1997) recent work on Wall Street, while highly critical of and very knowledgeable about financial practices and instruments, does not question the categories of knowing and defining the financial domain offered by financial practitioners. To a large extent, Henwood's book accepts and reproduces the rules of the legitimate production of financial knowledge. For instance, Henwood accepts that financial statistics, including price levels, interest rates and stock returns, compiled over certain historical periods, are unproblematic representations of financial reality (even if he does not like that reality). About the DJIA, Henwood (1997:21) notes that it is the most famous average, but "far from representative of the whole market. A broader index... is the Standard and Poor's 500, an index of industrial, service and financial stocks." By abstracting the DJIA from its political history while implicitly accepting that a representative average of the entire stock market is possible, Henwood undermines his own scope for criticism. Although he is critical of the increasing mathematisation of finance and economics, Henwood does not include statistics among the techniques of financial governance he discusses, nor does he advocate questioning and rethinking financial standards and measures among the possible strategies of resistance to the power of finance. In contrast, it is my contention that questioning finance and financial practices must involve a critical attitude toward the unwavering scientific authority of financial statistics, as well as toward the ways in which financial knowledge is produced more generally.

The interlude that follows will reiterate the main themes of this thesis, and argue that the large scale financial regulation which took place in the 1930s temporarily silenced the intense financial controversies of the nineteenth century. Chapter 5 will go on to demonstrate how the main themes of this thesis continue to have political importance in the 1990s. Finally, chapter 6 will consider the possibilities of repoliticising financial knowledge and will discuss alternatives to current ways of measuring and valuing in the financial domain.

Notes to Chapter 4

[1] Don Delillo, *Underworld*, 1997, New York: Scribner, pp.333-334.

[2] Linda Greenhouse, 'In Blow to Democrats, Court Says Census Must Be by Actual Count,' *New York Times*, January 26, 1999; see also Steven A. Holmes, 'Partisan Fight Flares Anew Over Handling of the Census,' *New York Times*, March 9, 2000.

[3] For an overview of the most important contemporary stock market indices in Great Britain, France, Japan, Canada, United States and Germany, see the *New Palgrave Dictionary of Money & Finance*, edited by Peter Newman, Murray Milgate and John Eatwell, 1994, pp.583-586.

[4] Information about the *Domesday Book*, its background and its counting methods can be found on the Domesday website: http://www.domesdaybook.co.uk

[5] In addition to the census, Anderson discusses the museum and the map as important instruments of imperial administration in his chapter ten of *Imagined Communities*. Like the census, museums were a means of consolidating the classifications of national, racial and cultural differences. Museums represented the colonial acquisitions in the imperial centres, and most European countries established National Museums during the nineteenth century (see also MacDonald 1998). The politics of museums and mapping have been well documented and are not directly relevant to the argument being made here.

[6] The history of statistics is well documented, and the tension between the enumeration of contingent events on the one hand, and the discovery of the laws of society on the other, is discussed in, for instance, Daston 1988; David 1998 [1962]; Hacking 1975; 1990; 1991; Porter 1986; Starr 1987; Stigler 1986.

[7] To Quetelet, average man was determined by time and place, and there was an average man for each age, each race and each country. In the 1880s, English physicist Francis Galton started making photographs of Quetelet's average man. According to Quetelet, the qualities of average man were never assembled in one individual, but Galton devised a technique by which a sequence of individuals may be successively exposed on a photographic plate, so "you could actually see the slightly blurred 'type' before your very eyes" (Hacking 1990:183). Thus Galton constructed images of what were to him fundamentally different human types such as soldiers, criminals and Jews.

[8] In conjunction with Section F., Babbage and his partners founded the London Statistical Society in 1834, which became the Royal Statistical Society in 1887, and still exists. These quotes are taken from the Royal Statistical Society's web-site (http://www.rss.org.uk, accessed in May 1999) which states its original purpose to be "to collect, arrange, digest and publish facts, illustrating the condition and prospects of

society in its material, social and moral relations; these facts being for the most part arranged in tabular forms and in accordance with the principles of numerical method."

[9] Instead, the definition of the meter was changed at the end of the nineteenth century. Today, the definition of the meter reads "a length equal to 1,650,763.37 wave lengths of the orange light emitted by the Krypton atom of mass 86 *in vacuo*" (Kula 1986:81,121). Thus, if the definition of the meter has changed, the desire to justify it as an immutable measure of nature has not. At no moment, thus, has the meter been simply accepted as the arbitrary length of the bar of metal kept in a Parisian vault.

[10] From the *Circulating Film and Library Catalogue*, New York: Museum of Modern Art, quoted at: http://www.cinemedia.net/NLA/nla_csilent.htm# griffith
See also the information provided about this film on the International Movie Database: http://us.imdb.com/Title?A Corner in Wheat

[11] Pre-modern economics, Foucault (1991b) argues, concerned itself with the model and the management of the family. What is distinct about modern economics thus, is the articulation of its problems and measurements in terms of the population, which "appears as absolutely irreducible to the family" (Foucault 1991b:99). However, in modern economics, Foucault (1991b:99) argues, the family remains an important unit of analysis, albeit "of secondary importance compared to population, as an element internal to population."

[12] On the connections between Jevons, Marshall and Edgeworth, see Schabas 1989. Schabas (1989:63) argues that these three figures pioneered the mathematisation of economics, and "Marshall's role in the rise of mathematical economics was of greater significance than has been commonly supposed."

[13] U.S. Supreme Court, U S v. NEW YORK COFFEE & SUGAR EXCHANGE, 263 U.S. 611 (1924). Full text of the decision is available at: http://laws.findlaw.com/us/263/611.html

[14] U.S. Supreme Court, BOARD OF TRADE OF CITY OF CHICAGO v. OLSEN, 262 U.S. 1 (1923). Full text of the decision is available at: http://laws.findlaw.com/us/262/1.html

[15] The twelve industrial stocks included in the initial DJIA were American Cotton Oil, American Sugar, American Tobacco, Chicago Gas, Distilling and Cattle Feeding, General Electric, Laclede Gas, National Lead, North American, Tennessee Coal & Iron, US Leather, US Rubber (Stillman 1986:41). Of these, General Electric is the only company still included in today's measurement of the DJIA. The DJIA was increased to 20 stocks in 1916, and to 30 stocks in 1928. It remains at 30 stocks today. The component stocks of the Dow Industrials change periodically. An overview of all the changes in Dow's averages since he first compiled and published them in the 1880s can be found at: http://www.e-analytics.com/dowchang.htm

[16] The railroad average consisted of the average price of twenty railroad stocks. In 1970, this average was changed to include air and other transport companies, and was renamed the Dow Jones Transportation Average. It still exists of 20 stocks today, which are listed at: http://www.e-analytics.com/dowcur.htm

INTERLUDE

The Normalisation of Financial Discourse in the Early Twentieth Century

Normalisation becomes one of the great instruments of power at the end of the classical age.

Michel Foucault[1]

Stock Market Regulation

It is generally argued that the 1930s saw a profound change in international financial networks entailing, as Helleiner (1994:28) puts it, "an important... break with [the] liberal tradition in finance." As a result of the 1929 stock market crash and the economic depression which affected all Western nations in the 1930s, the financial sphere was increasingly regulated and subordinated to national economic objectives. "The 1931 international financial crisis," writes Helleiner (1993:22), "marked the beginning of a kind of socio-ideological 'structural break' in financial affairs. As one German financier noted at the height of the crisis: 'What I have just experienced means the end of a way of life, certainly for Germany and perhaps other countries as well... The common vision of the future has been destroyed.' Largely discredited by the crises, the private and central bankers who had dominated financial politics before the 1930s were increasingly replaced at the levers of financial power." Thus, Helleiner (1994:30) documents how financial regulation was introduced in the US in order to "moderate competition, increase investor protection... [and] to make the Federal Reserve System more politically accountable." In Britain,

the Treasury similarly "assumed more influence over monetary affairs," increased surveillance over foreign lending, and became committed to a more interventionist monetary policy (Helleiner 1994:32). In short, this period in financial history is interpreted as entailing a submission, prohibition and regulation of financial practices. It is moreover assumed to be a period of political defeat of financial interests, signifying an end to the freedom of financial capitalism.

However, in contrast to this interpretation of qualitative change, this interlude will argue that the regulatory efforts of the 1930s, the creation of financial supervisory agencies, and the adoption of broad-based financial laws can also be seen as the normalisation and legitimisation of financial practices. In other words, while financial practices had been profoundly and openly contested in previous decades, the regulatory efforts of the 1930s entailed a normalisation of these practices, such that there was a continuity with previously formulated arguments concerning the intelligence and professionalism of financial practitioners. In consequence, it became possible to abstract stock trading from the field of political contestation, which in turn consolidated and legalised a professional domain for financial speculators.

Contestation and Examination

As we have seen in the previous chapters, the political contestation surrounding the boundary between finance and gambling, the morality of speculation and the meaning of the free market, lasted well into the twentieth century. Although the argument that speculation was an intelligent, responsible and professional practice was established by the turn of the century, the 1929 stock market crash caused a resurgence of critique of the financial sphere.

For instance, the US political magazine *The Atlantic Monthly* regularly published critiques of speculation and the stock market in 1930 and 1931, and called for reform of the financial system. In a 1931 issue of the magazine, Samuel Spring (1931:477) argued that financial practices such as speculation were the enemy of modern scientific achievements, and incompatible with "foresight

and cautious calculation," the very virtues that defenders of speculation sought to be associated with. "The demon of speculation," Spring (1931:477) wrote, "scattering wild booms and still wilder panics, hovers over us as the abiding affliction of our machine age... Seemingly a savage jest is being played upon our self-sure, scientific generation." Spring accused investment bankers of having sinned against business morality and prudence. "If there be an inherent weakness in the human mind or in the human heart involved in speculation," he wrote (1931:482-483), "this weakness primarily is not mob greed and mob stupidity, but rather it is the failure of our business leaders – primarily our investment bankers – to refrain from making dazzling, though largely fugitive, paper profits by exploiting unto the edge of disaster the possibilities of a mad market." Spring thus refuted Emery's thesis that amateur participation in the markets was cause of the evil of speculation, while using a discourse of temptation and sin to explain the 1929 crash. Spring (1931:484) concluded that "the future... of American prosperity depends partly upon the sound judgement, the courage, and the capacity for organised group restraint, as well as farseeing action, displayed by our investment bankers."

Another article in *The Atlantic Monthly* similarly argued that stock prices had surged due to the imprudent and irresponsible creation of credit. Financial economist Edgar Lawrence Smith (1930:108) argued that stock prices were based on "flimsy scaffoldings" and that stock quotes did not provide a reliable indicator of economic and corporate reality. Instead, Smith (1930:111) argued, credit should be better regulated, and bankers should undertake a systematic investigation of "the competence, character, and earning power of those to whom his bank is to extend credit." A final analysis in *The Atlantic Monthly* worth mentioning demonstrates that the controversy over gambling and speculation remained topical after the 1929 stock market crash. Thomas Nixon Carver (1930:249), Professor of Political Economy at Harvard University, argued that trading in futures "is as definitely a gambling contract as a bet on the outcome of a horse race or a throw of the dice." Regulation of futures trading and short-selling, Carver continued, must originate externally to the financial institutions. "Why should [the New York Stock Exchange] distinguish

between gamblers on the one hand and real buyers and sellers on the other," asked Carver (1930:255) in his article on the *Morals of Margins*, "A gambler's money is as good as an investors. Why should the Wall Street crowd try to stop gambling? They have the same reason that the owners of a lottery or a gambling den have – namely, none at all." Carver, however, was not unambiguously in favour of regulation of futures trading, fearing that 'legitimate' transactions would suffer as a result. Instead, he attempted to abstract the question of gambling and futures trading from the moral problematisation it was cast as, and presented it as a purely economic problem. Carver (1930:256) concluded that "[t]here is a strictly economic aspect of gambling. A certain amount of human energy and intelligence is expended in gambling which might otherwise be expended in productive work. That is a distinct loss to the nation and the world."

As a result of critiques in the wake of the 1929 stock market crash, the US Senate authorised hearings on the financial system in March 1932, to be carried out by the Committee on Banking and Currency of the Senate. The report delivered by the Committee, which came to fifteen volumes and was not completed and published until 1934, provides a thorough examination of US stock market practices. The 'Stock Exchange Practices Report' led to the adoption of two regulatory acts bearing on stock trading. In 1933, US Congress adopted the Securities Act, which requires public disclosure of information pertaining to securities that are publicly offered and which seeks to prohibit fraud. Secondly, in 1934 the Securities Exchange Act (SEA) was adopted, which created the Securities Exchange Commission (SEC) as the federal regulator of the stock exchanges.[2] These regulatory acts responded to the moral and economic critiques of speculation voiced in *The Atlantic Monthly*, amongst other places. President Roosevelt declared that the acts were designed to implement a "national policy to restrict, as far as possible, the use of... exchanges for purely speculative purposes" (quoted in Werner 1975:1244-1245). Similarly, a senator who supported the laws stated their purpose to be "to make the stock market places for investors and not places of resort for those who would speculate or gamble" (quoted in Werner 1975:1245).

Similarly, in the UK an investigative committee was appointed in 1929 to examine the monetary dealings of the 1920s and which, as documented by Gordon (1972), also found itself investigating the Great Depression and the surging unemployment after the 1929 stock market crash. The Committee on Finance and Industry, known as the Macmillan Committee, was established by the British Chancellor of the Exchequer, Philip Snowden, who denounced the US stock market crash before a Labour Party Conference by asserting that "[t]here has been a perfect orgy of speculation in New York during the last twelve months" (quoted in *The Banker's Magazine* 1929:907). The Macmillan Committee became preoccupied with distinguishing the working of the 'real' economy from the "veil of money," and asked its witnesses to state "their opinions as to whether and to what extent Britain's difficulties were due of monetary factors" (Gordon 1972:965). After hearing statements from the leading economists of the time, including Keynes, the Macmillan Committee concluded that the main monetary evil was the instability of the general price level, and its report advised active government intervention in financial matters. The Macmillan report, which was delivered in 1931, concluded: "we may well have reached the stage when an era of conscious and deliberate management must succeed the era of undirected natural evolution" (quoted in Gordon 1972:970).

While the reforms associated with these investigative committees are often assumed to signify increased state control over economic and financial life, they at the same time shaped, legitimised and depoliticised the financial sector, establishing it as a normal and clearly bounded sphere (Moran 1991:29). As lawyer Walter Werner has argued with respect to the 1933 and 1934 US acts which established the SEC, these did as much to create the moral and legal space for financial markets to operate as they did to curb speculation. The Exchange Act, Werner (1975:1251) points out, "confirmed the validity of existing exchange commission rate and membership practices."

Foucault argues that normalisation is one of the most important forms of modern power, with the examination and the audit among its most significant operative techniques. "The

examination," writes Foucault (1979:184), "is a normalising gaze, a surveillance that makes it possible to qualify, to classify and to punish." The examination is a ritualised procedure, Foucault (1979:184) goes on to say, which combines the "deployment of force and the establishment of truth." Foucault (1979:185) concludes: "in this slender technique are to be found a whole domain of knowledge, a whole type of power." I will argue in this interlude that the official examinations of the US and UK financial spheres which took place after the 1929 stock market crash entailed such a normalisation, in which the financial sphere was quantified, qualified and its excesses were defined and punished. This operation of power enabled the consolidation of the boundaries to legitimate finance and the production of financial truth.

This interpretation is made possible through comprehending power as a producing and enabling force, instead of a purely negative and prohibiting force. "We must cease once and for all to describe the effects of power in negative terms," Foucault (1979:194) writes, "it 'excludes,' it 'represses,' it 'censors,' it 'abstracts,' it 'masks,' it 'conceals.' In fact, power produces; it produces reality; it produces domains of objects and rituals of truth." It is in this sense that we can comprehend the exercise of power entailed in the adoption of federal stock market regulation as *producing* and *enabling* power. The regulatory efforts of the 1930s produced a legitimate professional domain for speculators; they produced regimes of financial truth embodied by rules for disclosure and registration; and they enabled the silencing of the political contestation over speculation which had predominated in previous decades.

The remainder of this interlude will summarise the main themes of this thesis, with illustrations from the 1934 Stock Practices Report. The purpose is to argue that finance as a coherent sphere of knowledge and practice had been established by the 1930s. More precisely, it was not until the formulation and consolidation of the limits of the financial sphere in law following the 1929 crash, that it became possible to reify financial practices, by erasing traces of their controversial, religious, cultural, moral, gendered and political origins. It was not until the legitimate boundaries of finance were marked, that it became possible to imagine finance as a

rational and separate sphere of human endeavour. However, the establishment of finance as a distinct sphere built on, and consolidated, earlier historical discourses which have been analysed in the previous chapters.

Theme 1: the Financial Markets and National Strength

The Stock Exchange Practices Report (SEPR), which resulted from the 1932-1934 hearings in the US, asserts at the outset the importance of financial markets for the well-being of the nation. "The business conducted on securities exchanges," the report (SEPR 1934:5) asserts, "has attained such magnitude and has become so closely interwoven with the economic welfare of the country, that it has been deemed an appropriate subject of governmental regulation... [T]he entire Nation has become acutely sensitive to the activities on the securities exchanges." The report (SEPR 1934:19) further expresses concern over the condition of "the Nation's credit," and the extent to which margin trading on the exchanges has allowed the surge in stock speculation.

In this manner, the 1934 Report repeated a theme which we have seen emerging during political debates examined in the previous chapters, whereby the smooth operation of financial exchanges is connected to national well-being and prosperity. In chapter 2, I have discussed how Defoe emphasised the indispensability of Credit for the Nation, in support of his argument that credit should not simply be banned or suppressed, but should instead be treated prudently and punctually. More than a century later, as discussed in chapter 3, defenders of speculation argued that their practices were indispensable to national prosperity. As one CBoT pamphlet put it; "the idea, scheme and theory of contracting for future performance... is the blood and bone... of our National... existence" (CBoT 1892:44). In Britain by comparison, financial journalist Walter Bagehot positioned England on top of a global hierarchy of states by virtue of its strong financial sector. "Everyone is aware that Britain is the greatest moneyed country in the world," Bagehot (1991 [1873]:2) asserted. The reason for British greatness, according to Bagehot, was to be found

in the character of the British people, whose enterprising strength gave them an evolutionary advantage. "Our people are bolder in dealing with their money than any continental nation," Bagehot (1991:2, 5) argued, "The rough and vulgar structure of English commerce is the secret of its life; for it contains the 'propensity to variation' which, in the social as in the animal kingdom, is the principle of progress."

A final example of the assumed connections between finance and national greatness is provided by the Congressional hearings in the wake of 'Black Friday,' when the famous speculator Jay Gould attempted to corner the gold market in 1869. Gould lent gold to a large number of brokers, and attempted to drive the price of gold up drastically when the due date of the loans came up.[3] In the Gold Report, which resulted from the hearings in the wake of Gould's activities, William E. Dodge, a prominent banker, accused Gould of unpatriotic behaviour and denounced speculation in gold as "gambling in the very life-blood of the nation, the currency of the country, in which every person, throughout the land, is interested" (Committee on Banking and Currency 1974 [1870]:19).

The discourse which connects finance to the wealth and well-being of the nation is at the heart of how we understand money and finance. The metaphor which casts money as the 'blood of the nation,' and the 'currency of the country' facilitates and underpins the imagination of the national economy as a field of government and intervention. Foucault traces the origins of the monetary trope *circulation*, which remains one of the most important ways in which modern finance is understood, to the birth of the credit-economy in the late seventeenth century. Previously, it had been believed that the total sum of gold and silver in nature reflected exactly the value of "all terrestrial things," a relation established by "Providence when it buried gold and silver mines under the earth" (Foucault 1994:172). In contrast, during the seventeenth century it was argued that "things take on value... in relation to one another," and that the relations between wealth and money "are based on circulation and exchange" (Foucault 1994:176-178). Circulation, then, became a fundamental category of analysis for money in the credit-economy, while the

liquid most frequently represented by money is *blood*. Foucault (1994:179) quotes an Austrian economist who wrote, as far back as 1684, that gold and silver are "the purest part of our blood, the marrow of our strength."

Casting money as the blood of the country is related to the trope casting the state as a body, which has a long lineage in European political discourse (Campbell 1998a:75). For instance, Thomas Hobbes made it clear that the blood flowing through the 'Body Politic' he envisioned was money. "Money [is] the blood of a commonwealth," Hobbes (1962 [1651]:188-189) wrote, money "passeth from man to man, within the commonwealth; and goes round about, nourishing, as it passeth, every part thereof; in so much as this concoction, is as it were the sanguification of the commonwealth: for natural blood is in like manner made of the fruits of the earth; and circulating, nourisheth by the way every member of the body of man." According to Hobbes (1962:189), this nutritive and vital role of gold and silver originated from their intrinsic value ("their value from the matter itself"), rather from value produced in exchange. Still, Hobbes (1962:189) offered a powerful and enduring trope by arguing that money passing through the heart of the body politic, "the public coffers," enabled the survival of the state. "And in this also, the artificial man [the commonwealth] maintains his resemblance with the natural," Hobbes (1962:189-190) concludes, "whose veins receiving the blood from the several parts of the body, carry it to the heart; where being made vital, the heart by the arteries sends it out again, to enliven, and enable for motion all the members of the same."

In the nineteenth century, the properties of the body-economy were tabulated and categorised, when economists such as Jevons started to emphasise statistics as the route to knowledge about the national economy. For instance, in a paper read before the Royal Statistical Society, Jevons (1866:242) calculated and tabulated "the average variation from week to week of the English country note circulation for the series of years 1845-62." Jevons's objectives with the measurement and tabulation of the country's currency were directly linked to his proposals for the Bank of England to manage and govern note circulation. Still, Jevons pointed out that the Bank's

actions were designed to assist the natural laws of circulation, instead of tamper with them. "We should learn to discriminate what is usual and normal in the changes of the Bank accounts, from what is irregular or abnormal," Jevons (1866:249) wrote: "It is a matter of skill and discretion to *allow for the normal changes*... [U]nder the present system the English currency is governed by the natural laws of supply and demand of a metallic currency, and not by merely artificial regulations" (emphasis in original). In another article in the *Journal of the Statistical Society*, the banker J.W. Gilbart (1854:298) similarly argued that the "circulation of England is... governed by uniform laws," which should not be tampered with. Gilbart (1854:289) heralded the fact that "questions relating to the currency... are now regarded as presenting topics for scientific investigation; and we believe that by no science can they be more clearly and successfully investigated than by the science of statistics." Through their scientific endeavours, Jevons and Gilbart reified the imagination of money as the circulation of the body-economy.

The imagination of finance as the blood of the national body-economy does not contradict the operation of an *international* financial system. As Helleiner (1999b) argues, the consolidation of national financial space and the operation of international finance during the late nineteenth-century gold standard were two sides of the same coin. The introduction of the gold standard as a means of payment for international obligations was frequently also "the moment when states moved to consolidate the issuing of notes by granting monopoly note issue rights to a national central bank" (Helleiner 1999b:143). In fact, basing one's national currency on gold became seen as a source of national prestige and financial credibility. The creation of national homogenous currencies, for instance in the UK, US and Canada, was an active political process which involved the removal of foreign currencies from the national territory, issuing small denominations for working-classes, and outlawing private currency issues (Gilbert and Helleiner 1999; Zelizer 1999). As Gilbert and Helleiner (1999:7) demonstrate, this process was linked to a demand for macroeconomic management "in which a national token currency was actively managed by the state with the more inward-looking objective of promoting domestic industrial

growth." Although the gold standard is "often seen as a very cosmopolitan monetary order," Helleiner (1999b:139) concludes, "its establishment in the nineteenth and early twentieth centuries was usually associated with the consolidation of... state-managed 'national currencies.'"

The metaphors of currency and circulation, so powerfully used by Hobbes, and subsequently reified in the work nineteenth-century economists, underpinned the imagination of a domain of government and intervention for national financial policy-making. This, in turn, facilitated rather than contradicted the operation of international finance, which can be regarded as the interaction of several autonomous bodies, each managing their own circulation. Alternatively, the system of international finance has been imagined as one body, with one universal currency circulating through the system (for instance gold). This latter vision was expressed, for example, by Bagehot, who wrote in 1866, in support of British entry to a monetary union with France, Belgium, Switzerland and Italy: "If civilisation could make all men of one money, it would do much to make them think they were of one blood" (quoted in Perlman 1993:318; c.f. Helleiner 1999b:146).

Indeed, the trope money-as-blood has not lost its significance today. For instance, since the 1960s, national money supplies are divided in terms of different liquidities, referring to the ease with which one monetary form or instrument can be interchanged with another (Dodd 1994:xix). For example, M1, the narrowest official definition of money, is the most liquid category, consisting of currency, traveller's checks and bank deposits. The other categories, M2, M3 and L are less directly accessible, and are therefore called less liquid (see Mishkin 1992:30-33). The most liquid monetary category is called *currency*, which signifies a flow, the process of continuous onward movement, and a running, rapid motion, or circulation (*OED* 1989, Vol. IV:150).

Theme 2: Danger and Madness in Finance

The significance of casting the state as body, Campbell (1998a:80) points out, is to "permit and commission the representation of danger to the social body in terms associated with the representation of danger to the physiological body." In other words, if the national economy is represented as a body, and finance as the blood circulating through the body, how does this inform the representation of danger in the financial sphere? Although frequently the dangers to finance are identified retrospectively, in response to perceived crises, they are informed and made possible by representations of money and finance that exist prior to such events as the 1929 crash, for instance through the metaphors that cast money as blood or credit as a 'Lady.'

The healthy body and blood of the modern economy are threatened by a number of dangers, which, as I have argued throughout previous chapters, include madness, delusion, hysteria, excitement and passion. "Because the body is the most potent metaphor of society," Campbell (1998a:80) writes, quoting Bryan Turner, "it will not be surprising that disease is the most salient metaphor of structural crisis." In financial discourse, understanding danger in terms of disease takes on a particularly gendered dimension, with delusion and hysteria providing historically constant ways of understanding financial crises. For instance, the official government report in the wake of the 1869 gold panic stated: "The foundations of business morality were rudely shaken, and the numerous defalcations that shortly followed were clearly traceable to the mad spirit engendered by speculation... Hundreds of active, ambitious men were lured from the honest pursuit of wealth by the delusive vision of sudden fortune" (Committee on Banking and Currency 1974:19). Here we can recognise Fortuna's temptations, deluding and distracting the healthy and honest community of financial practitioners. Similarly, after the 1929 stock market crash, vice-president of the New York Stock Exchange, Richard Whitney (1930:4, 9) lamented the "distinctive emotional aspects" and the "public hysteria" that caused the crash.

Hysteria, of course, is historically constructed as a women's affliction. It is derived from *hystera*, the Greek word for uterus. Elaine Showalter (1997:15) discusses how classical healers

"described a female disorder characterised by convulsive attacks, random pains and sensations of choking," supposedly caused by the uterus wandering around the female body. In the nineteenth century, hysteria became cast as a mental disease, producing symptoms such as attacks, fainting, spasms, emotional outbursts and excessive sexual desire. For example, in 1866 one doctor enumerated the possible symptoms of hysteria, including "strange thoughts, extraordinary feelings, unseasonable appetites [and] criminal impulses," which may all "haunt a mind at other times innocent and pure" (quoted in Poovey 1988:37). Foucault (1999:138-139) documents how hysteria was understood as a "pathology of the imagination," and quotes one doctor who wrote: "This disease in which women invent, exaggerate, and repeat all the various absurdities of which a disordered imagination is capable, has sometimes become epidemic and contagious." Alternatively, Foucault (1999:141) argues, hysteria was argued to be a disease of the blood, related to excessive mobility "of all the fluids, which become so volatile, so inconsistent, that they are agitated by the least movement." Whether understood as a disease of the uterus, the mind, the nervous system or the blood, historically constant definitions of hysteria emphasise excess, passion and irrationality.

The model of the human body underpinning the medical identification of hysteria, Poovey (1988:36) points out, "is that of a closed system containing a fixed quantity of energy; if stimulation or expenditure occurred in one part of the system, corresponding depletion or excitation had to occur in another." Hysteric attacks were associated with disturbances in the proper working of the organic system, "disturbing the function of the organs" (Foucault 1999:147). Crises in the system, Poovey (1988:36-37) continues, were associated with female "biological periodicity," and doctors developed elaborate models charting and predicting periodical disturbances in the female body.

It becomes clear that medical discourses of hysteria and financial discourses of crisis have been linked. As Showalter (1997:16) documents, by 1900 hysteria had become a way of describing the malfunctioning of society in the US and Western Europe, frequently seen caused by "cultural

degeneration." Models of the financial system resembled Poovey's description of the model of the body in medical discourse; finance is similarly regarded as a delicate and closed system, vulnerable to distortions and disturbances which are quickly transported around the system. We have seen, for instance, how Edgeworth (1881:12) imagined the economy as a 'mécanique sociale' in which the movements of each soul were constrained by a maximum "energy of pleasure." Crises in the financial system became similarly linked to (biological) periodicity, most explicitly by Jevons, who, as discussed, calculated the financial cycle in decimals and linked it to the movements of the sun, but also by other influential nineteenth-century economists and financial journalists, such as Charles Dow. Bagehot (1991:61) offered a similar image of the financial system as a vulnerable and autonomous structure, when he wrote:

> It is of great importance to point out that our industrial organisation is liable not only to irregular external accidents, but likewise to regular internal changes; that these changes make our credit system much more delicate at some times than at others; and that it is the recurrence of these periodical seasons of delicacy which has given rise to the notion that panics come according to a fixed rule, that every ten years or so we must have one of them.

Figure 5 illustrates how Fortuna and her wheel, which symbolises instability and periodicity, was still important in imaging industrial and economic development in 1930.

Although in the case of financial crises it is mostly men who are affected by hysteria, symptoms similarly are assumed to include strange thoughts (including bad investment decisions), extraordinary feelings, and excessive appetites and desires (most notably for excessive credit and speculation). Panic and emotional distress are assumed contagious, able to cause "mass hysteria," which occurs, according to Showalter (1997:22), "when, because of panic and fear, people simultaneously contract physical or mental symptoms without any organic cause... It's contagious; it spreads from one afflicted person to another, but is usually abrupt and brief." Contagion, indeed, is a persistent and durable metaphor used to understand the spread of financial panic, and has to some extent become a technical term (see for instance Eichengreen 1996:35). One of the most influential historical articulations of mass hysteria is provided by Mackay's 1841 *Extraordinary Popular Delusions*, which describes stock speculation in the same terms as mass

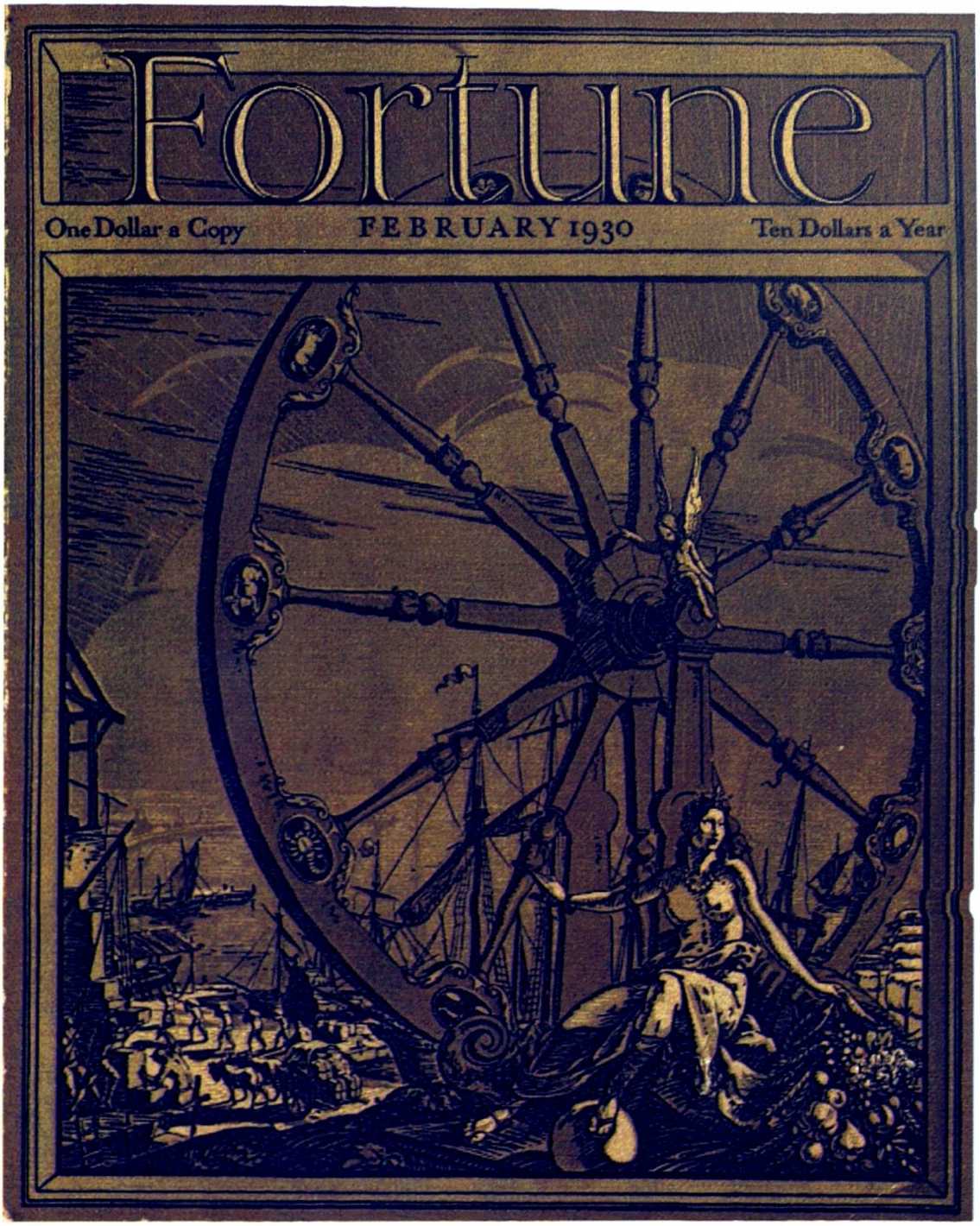

Figure 5: Fortune and her Wheel in 1930.
Cover of *Fortune Magazine*, volume 1, number 1, design by Thomas Cleland.[4]

madness and folly associated with alchemy, fortune telling, witch hunts and crusades. The mass hysteria caused by speculation, according to Mackay, involves moral deviance and excess. "During the progress of this famous bubble," writes Mackay (1995:71) of the South Sea Bubble,

> England presented a singular spectacle. The public mind was in a state of unwholesome fermentation. Men were no longer satisfied with the slow but sure profits of cautious industry. The hope of boundless wealth for the morrow made them heedless and extravagant for to-day. A luxury, till then unheard of, was introduced, bringing in its train a corresponding laxity of morals. The overbearing insolence of ignorant men, who had arisen to sudden wealth by successful gambling, made men of true gentility of mind and manners blush.

In 1934, the stock exchange practices report identified the causes of the 1929 crisis by drawing on such older and durable historical discourses. Most saliently, the dangers identified in the 1934 Stock Exchange Practices report were associated with excessive appetites and desires. "In retrospect," the report begins (SEPR 1943:5), "the fact emerges with increasing clarity that the excessive and unrestrained speculation which dominated the securities markets in recent years, has disrupted the flow of credit, dislocated industry and trade, impeded the flow of interstate commerce, and brought in its train social consequences inimical to the public welfare." As I have shown, the dangers associated with excess are a constant theme in financial history, and signify man's loss of self-control when faced with the temptations of Fortuna's goods. "Excited by the vision of quick profits," the report (SEPR 1934:9) continues, "persons in all walks of life... assumed margin positions which they had no adequate resources to protect, and when the storm broke they stood helplessly by while securities and savings were washed away in a flood of liquidation." A veritable "speculative fervour" broke out, the report (1934:12) argues, caused by "dangers in excessive credit for speculation." Finally, the report (1934:4) communicates that the financial system has been ill, and proposes to "lay the foundation for remedial legislation."

Theme 3: the Emergence of Financial Rationality and Normality

Through the construction of danger in the financial sphere, financial rationality and normality is assumed and invoked. As Campbell (1998a:59) points out: "Reason and rationalism are not simply modes of thought that are desirable; they are dispositions that are produced through differentiation from their opposites." Thus, articulations of financial normality and rationality are rendered possible through the simultaneous identification of abnormalities and irrationality in

financial practices. Articulations of financial rationality moreover constitute, invoke and debate a subject whom I have called 'financial man.' In other words, discourses of financial rationality assume, prescribe and regulate the field of possibilities for financial participants, thus exercising a 'normalising' power.

I have argued that two, related, articulations of financial rationality emerged through the debates examined in previous chapters. First, most notably in the work of Defoe examined in chapter 2, financial participants are called upon to demonstrate masculine virtues in face of Fortuna's temptations and dazzling promises. This strand of financial discourse persists after the debates that informed Defoe's representations, and resurfaces, for instance, in Whitney's speech about the 1929 crash. "No one, I am sure, likes panics," Whitney (1930:29) concludes in this speech to an association of stock exchange firms, "But if we must face such periods of adversity, we must do so boldly and like men." Articulations of masculine virtue in face of adversity include rationality, strong character and judgement, honour, courage, long-term vision, and, frequently, financial capacity. This was argued, as discussed in chapter 3, by Emery (1895:79) amongst others, who wrote that "[o]nly those men who have great experience, wide knowledge and the most improved means of obtaining information, combined with cool judgement, courage and the faculty of quick decision, are competent [to speculate]."

A second, related, articulation of financial rationality was rendered possible through the construction of finance as an independent system with its own laws and periodical movements. Understanding finance as an autonomous and biological system, I have argued, made possible the introduction of scientific virtues into financial discourse, including the virtues of distance, detachment, objectivity and calculation. To some extent, the articulation of scientific virtues in finance coincides with the discourse of masculine mastering of the self required for successful financial participation. As demonstrated in the work of Keller (1985), amongst others, scientific virtues are articulated through a gendered discourse in which self-negation and self-denial are, paradoxically, specifically masculine and heroic virtues. In this sense, masculine mastering in the

financial sphere has included self-mastery, in order to resist Fortuna's temptations and maintain cool-headed, professional judgement.

To some extent, however, the introduction of a discourse of scientific virtues into financial debates produced a profound tension in the arguments defending speculation. For, if financial phenomena such as markets and prices exist naturally and transcendentally, independent of human intervention, how could the speculators' function of creating and maintaining markets be justified? Moreover, if financial practitioners are cast as impartial readers of financial information, how could their specialist and professional functions be asserted at the same time? As briefly discussed at the end of chapter 4, this tension was an issue in the professionalisation of other practices, such as accounting, as well as in finance. Accountants objected to the standardisation and mechanisation of their practices, for fear this would cast doubt on their specialist functions and professional judgement.

The 1934 report provides a powerful illustration of the increasingly important argument that free markets, paradoxically, have to be created and maintained in law. The purpose of the Securities Exchange Act, enacted by Congress in 1934, Wolensky and Gellen (1999) demonstrate, was to "insure the maintenance of fair and honest markets," and to prohibit "the manipulation of securities prices and the use of manipulative and deceptive devices in connection with the purchase or sale of certain types of securities." Similarly, the Stock Exchange Practices Report (1934:30) asserts that the "true function of an exchange is to maintain an open market for securities, where supply and demand may freely meet at prices uninfluenced by manipulation and control. In the past this function has been fulfilled most imperfectly... Stock exchange representatives have... not regarded manipulative devices in general use as pernicious or violative of the principles of fair, free, and open trading." Again, the meaning and content of what constitutes a 'free market' is subject of political discussion here. On the one hand, the report asserts the natural existence of free and fair markets and locates the causes of the 1929 crash in widespread manipulation and distortion of these markets. On the other hand, however, the report

concedes that free and fair markets must be created and maintained by law and regulatory oversight. The next chapter demonstrates that this tension in financial discourse, and the discursive struggle over what constitutes the free market, was not an historical aberration but persists in the late twentieth century, as illustrated by the political controversy over the failure of the US hedge fund LTCM.

The introduction of scientific method into financial practices, based on the argument that markets are transcendental and transparent mechanisms, gained political and moral importance during the twentieth century. The decades after the 1929 stock market crash saw a surge in scientific and statistical analysis of stock market practices. Manuals advising how to invest in the stock market which emphasised statistical study and expert knowledge proliferated. The popular fallacy concerning stock trading, one such manual pointed out in 1934, is that in the stock market it is possible to "get something for nothing" (Schabacker 1967:3). Those who believe the stock market to offer opportunities for easy profit, Schabacker (1967:3) argues, fail to "estimate the long study, careful analysis, the systemic planning which account for Mr. So-and-So's success." Instead, Schabacker (1967:6) goes on to say, stock trading is a business which requires "time, study, thought and planning... just as one would expect to do in any other type of business, and thus to make eventual and consistent profit a logical reward rather than an unmoral gift of luck." Schabacker (1967:7-15) further points to the moral importance of "personal stewardship" and warns against over-trading, over-enthusiasm, haste and arrogance. Schabacker's manual consists of advice on technical study, including charting price movements, analysing financial data and calculating risk.

In conclusion, then, the acts passed in 1933 and 1934 regulated and normalised the financial sphere, by stipulating reporting requirements for financial transactions and requiring that investors have access to information concerning publicly listed companies. "The Exchange Act," Wolensky and Gellen (1999) summarise, "imposes registration requirements for securities traded on exchanges and for non-exchange traded securities [and] mandates that specific annual and

periodic reporting and record-keeping requirements be adhered to by publicly traded companies." These reporting requirements have been interpreted as a submission and restraint of financial practices. They can, however, also be interpreted as entailing the normalisation and depoliticisation of financial practices. The reporting requirements and registration procedures stipulated in the acts are 'rituals of financial truth' which produce a legitimate domain for speculators and enable the silencing of political contestation over financial practices. In this respect, it is interesting that the Securities Exchange Commission's website notes that the 1933 Securities Act is "[o]ften referred to as the 'truth in securities' law" (SEC 1999). Financial truth, in this sense, does not exist uncontested and before interpretation, but, paradoxically, emerges through legal and regulative requirements that designate the domain of finance.

The Legitimate Domain of Finance

The point of this interlude has been to reiterate the main themes discussed in this thesis, and to argue that a legal normalisation of financial practices took place in the 1930s. This normalisation entailed the legal stipulation of regimes of financial truth, the effective delineation of the boundaries to the financial sphere, and the depoliticisation of financial practices.

The point of this argument is not to deny that financial truth exists, nor to claim that the rituals of financial truth are fictional, nor that all financial discourses are false and misleading. On the contrary, the point of this argument is to demonstrate that the institutional and regulatory frameworks of modern finance, which are very *real* in terms of access to wealth and credit, have been shaped and produced through the political struggles examined in the previous chapters. Debates pertaining to speculation, currency and the free market underpin the institutional structure of modern international finance, which emerged in the first half of the twentieth century. It is in this sense that financial structures and institutions are not natural or evolutionary developments, but always implicated in politics. In other words, the debates examined in these

chapters demonstrate that there is nothing 'natural' or self-evident about the free market, the boundaries to the financial sphere, the way financial truth is produced and the ways in which the value of financial instruments is understood. All these concepts have been subject of fierce disputes and arguments, which, in turn, have shaped current financial structures and laws. While claims about the 'natural' and 'undeniable' operation of free markets are among the most powerful arguments in modern politics, this historical enquiry demonstrates that the free market has never existed as a natural and undistorted system, but has, on the contrary, been given meaning, and legal and moral operative space, through political debate and decision.

Furthermore, my insistence that regulation entails a depoliticisation of financial issues, should not be taken to signify a principled rejection of financial regulation. Transparency, reporting requirements and, in some cases, prohibiting financial practices can have important political functions and can broaden credit access. However, it should be recognised by those academics in IPE who propose regulation of (international) finance as a way to submit and constrain financial practices, that regulation has both a facilitating and a depoliticising effect. Underhill (1997:18) notes the enabling function of financial regulation when he writes: "regulatory requirements do as much to facilitate the extension of markets across borders as they manage and constrain the process." This argument is also made in a recent article in *The Economist* (2001), which argues in favour of regulating cross-border finance and notes: "though an unregulated market may sometimes be more efficient than a badly regulated one, a well-regulated one is superior to both." In my analysis, legal inscription of the boundaries between financial normality and financial deviance, has, quite literally, a legitimating function. In this manner, the domain of normal financial practices is inscribed and placed beyond the possibility of political critique. Chapter 6 will elaborate this argument and examine strategies of resistance and political critique which emphasise the repoliticisation of financial practices, instruments and measurements, thus providing an alternative to the call for financial regulation within the discipline of IPE.

In conclusion, then, the main themes of modern financial discourse were in place by the 1930s. This is not to say that financial law and politics did not change between the 1930s and 1990s, but that the ways in which we make sense of the financial markets, financial crises and financial legitimacy depends upon conceptualisations which were solidified by the early twentieth century. Specifically, the possibility of financial rationality depends upon a differentiation from its opposites, through a gendered discourse which contrast virtue and fortune. This discourse distinguishes rational, responsible, professional, cool-headed and productive financial practices from irrational, irresponsible, delusive, hysteric and wasteful gambling practices. The next chapter will argue that these gendered dichotomies still underpin the way we make sense of the financial sphere today.

Notes to the Interlude

[1] Michel Foucault, *Discipline and Punish*, 1979, New York: Vintage, p.184

[2] This information is provided by the SEC's website, see http://www.sec.gov/about/whatwedo.shtml

[3] If a company needs gold to pay a merchant at some point in the future, but is afraid of a price change in gold, this company may buy a *future in gold*, i.e. an option to buy gold at a certain fixed price at a certain fixed point in the future. The company will buy this future from a gold-broker, who is betting/expecting that the price of gold will go down before the due date of the future, and will thus make a profit. However, the gold broker may not possess the gold he is promising to sell, in which case the broker will be *short-selling* (i.e. the broker is selling something that he does not have). The broker can then borrow the gold from a third party, while promising to give it back at the particular due date. If on the due date the price of gold has gone down, the broker sells the gold to the company for the fixed price, while buying it on the market for the lower price to give it back to the third party - thus making the profit between the two gold-prices. However, if the price of gold has increased in the meantime, the broker will have to sell the gold to the company for the fixed price, and either take the loss, or attempt to roll over the position, i.e. borrowing gold from the third party for another time period.

In 1869, Jay Gould was the third party, who lent gold to brokers. However, Gould proceeded to buy all the gold in the market, thus driving up the price for gold before recalling all the loans. The brokers, or short-sellers, thus found themselves in what is called a *short-squeeze*: they needed to repay Gould in gold, but found the price of gold drastically increased because Gould owned all the gold in the market. If the strange situation would have emerged where the brokers need to buy gold from Gould for a high price to repay Gould in gold, Gould would have succeeded in *cornering* the market.

[4] This image is available from the interactive database of the Faculty of Art, Design & Humanities at the University of Brighton, at: http://cccw.adh.bton.ac.uk/schoolofdesign/MA.COURSE/LInfF29.html

In the editorial of *Fortune Magazine's* first issue, Henry Luce emphasised objective knowing of economic developments and wrote: "Fortune's purpose is to reflect Industrial Life in ink and paper and word and picture as the finest skyscraper reflects it in stone and steel and architecture." These words, combined with the cover image, make clear the continuity, rather than the break, between crediting Fortune with financial developments and the 'scientific' determination of business cycles.

CHAPTER 5

Scientific Finance and the Failure of Long-Term Capital Management

Like the Titanic, Long-Term Capital Management was supposed to be unsinkable.

The Economist[1]

The Sinking of LTCM

After the billion dollar hedge fund Long-Term Capital Management (LTCM) had been forced to seek assistance from the New York Federal Reserve in September 1998 in order to avoid bankruptcy, its demise was compared to the sinking of the Titanic. Having been founded by some of the most respected and prominent members of the modern financial world, the hedge fund had been considered unsinkable or beyond risk. Prior to its fall, LTCM reigned as the epitome of financial respectability, credibility and authority. It was set up, most notably, by two Nobel prize winners in economics, a former Federal Reserve vice-Chairman and a former top Salomon Brothers bond trader. Indeed, as LTCM founder Professor Robert C. Merton (1997:7) proudly asserted at the acceptance of his 1997 Nobel Prize in the Economic Sciences, "the remarkable collection of people at LTCM" was widely considered to be "the best finance faculty in the world."

That bastion of financial credibility however, almost went bankrupt in the fall of 1998. After three years of enormous profits, LTCM started incurring losses in the spring of 1998. When

in August of the same year Russia announced it could no longer service its international debt payments, LTCM's losses accelerated, culminating in a single day trading loss of US$550 million on August 21 (GAO 1999:39). By late September, LTCM's resources were depleted to such an extent that it faced default on its margin payments. The hedge fund appealed for help to the Federal Reserve, and in September a bail-out for the fund was organised by Alan Greenspan and New York Federal Reserve President William McDonough.

The seemingly impossible failure of this financial giant was front page news for a few days. A week after the bail-out, *The Economist* (1998:127) wrote: "The hedge fund's dramatic downturn and bail-out last week was the stuff of Hollywood disaster movies: fortunes laid waste, proud men (Nobel laureates no less) cut down to size, giant tidal waves threatening to drown some of Wall Street's snootiest institutions." In the UK, *The Times* measured out the greed of LTCM's founders: "The firm displayed greed on a scale not seen since the mythical Gordon Gekko in the late 1980s. In the most breathtaking piece of financial brinkmanship, the fund used its US$4 billion of capital as security to borrow another US$120 billion. Still not content, the fund managers then used the US$120 billion to borrow about US$1 trillion" (August 1998:5).

This chapter will present a detailed analysis of LTCM's history and failure in order to discuss how the case demonstrates the continuing political importance of the main themes of this thesis. The issues raised by LTCM's failure and subsequent bailout include the possibility, accuracy and legitimacy of financial science and the increasingly computerised practices of modern risk management. The case moreover provides a forceful reminder of the tension in financial discourse between the assumptions of transcendental markets – which are assumed to exist before or above human intervention and can be scientifically 'discovered' – and the articulation of the virtue of speculation in terms of market-making and price production.

This chapter argues that LTCM's rationale was the epitome of modern risk management, and thus exemplary for the contemporary financial industry. LTCM's trading strategies provide a powerful demonstration of what Stephen Green (2000:86), amongst others, calls "the

epistemological confidence of the modern risk order" which is defined by "the assumption that risk can be calculated. It is just a question of the right mathematics and enough information."[2] Chapter 3 concluded by showing how the identification, classification and calculation of risks provided a professional domain and political legitimacy for financial speculators. This professional domain of risk management has become increasingly computerised and mathematised in recent decades. Green (2000:81-82) writes that "[r]isk management as a system of interlocking technological, institutional and social forms of action has become entrenched in global markets because of its basic ability to combine the modern ambition for certainty about the future and capitalism's willingness to bring imagined futures into the realm of the market." Thus, the commercialisation and calculation of uncertain futures provides both political legitimacy and financial opportunities for speculative practices. Most importantly, the increasingly technical and mathematical nature of risk management practices has had a profoundly depoliticising effect on finance. Whereas Hardy, writing in the 1920s, was still not able to formulate his theories of risk classification without clarifying the difference between speculation and gambling, and emphasising the social evil of the latter, by the end of the twentieth century debates on risk are restricted to disputed statistics while the rationality and legitimacy of scientific risk management is no longer questioned (c.f. Green 2000:80-81).

I will argue that modern faith in the calculability of future uncertainties was both the motivation behind LTCM and cause of its demise. Instead of unearthing new 'secrets' about the hedge fund's activities and failure, the chapter will reread the mainstream interpretations and debates surrounding the LTCM case in order to emphasise the political content of financial modelling. LTCM's failure has resulted in a tentative renewed questioning of the legitimate bases of profit making in financial capitalism. This chapter will argue that the sinking of LTCM can be used as a site in which the epistemological confidence of modern risk management can be questioned, and which provokes a reassessment of the muted historical knowledges documented in the previous chapters.

Scientific Finance and the 'Right' Price

Chapters 3 and 4 documented how the scientific study of stock prices emerged as a moral imperative during nineteenth-century political controversies over financial practices in the US and UK. Financial study and scientific endeavour became a way for speculators to assert their productiveness and intelligence in face of growing opposition to their trades as fraudulent and gambling. I have demonstrated how Jevons's and Dow's metaphors cast the workings of financial markets in terms of natural universal laws, making possible the scientific study of finance. Another contemporary of Dow and Jevons who proposed to understand financial practices in terms of physics, was French physicist Louis Bachelier. Bachelier (1964:17) wrote in his doctoral thesis of 1900 that "it is possible to study mathematically the static state of the market at a given instant, i.e., to establish the law of probability of price changes consistent with the market at that instant." Given the nature of economic markets, Bachelier argued, we can compare the movement of stock prices to the movement of dust particles under influence of millions of tiny pushes given to them by molecules. In Bachelier's analogy, the aggregate behaviour of millions of speculators influences the movement of prices at any given moment. This comparison teaches that we can study the movement of stock prices as we study the diffusion of smoke in a room which proceeds mathematically along the normal distribution (or bell-curve) (Dunbar 2000:9-12).

Although Bachelier's *Theory of Speculation* had little impact at the time of writing, it has more recently been heralded as one of the most influential treatises in financial science. Most notably, LTCM founder Merton (1994:451-452) credits "Bachelier's magnificent dissertation on the theory of speculation" as being very influential on his own work. A direct lineage runs from Bachelier's studies of the movement of share prices to the mathematical trading techniques employed by LTCM. Paradoxically, the fundamental randomness of stock price movements as argued by Bachelier made the market inherently calculable. Simply put, Bachelier's suggestion that stock price changes are entirely random, means that the expected range of movements of stock prices over a given time can be calculated. If the starting point of a stock price movement is given

(for instance the current stock price), it is possible calculate the propensity that stock prices will move by a stated amount in any given period of time (Bernstein 1996:144-150).

At the heart of this reasoning is the conviction that markets are efficient, i.e. that they reflect all available information at any one time, producing an equilibrium price for securities. This equilibrium will be readjusted when stock prices move, for instance in response to new information which is introduced randomly into the stock markets (Bernstein 1992:126-145). This model of the market has been called the 'efficient market hypothesis,' developed, amongst others, by University of Chicago professor Eugene Fama. Fama argued that because of the combined intelligence of stock market analysts and investors, market prices "will reflect predictions based on all relevant and available information," thus making it impossible for any individual investor to spot opportunities where stock prices diverge from their "intrinsic" values and thus make profits (Bernstein 1992:134-135). This image of rational, efficient and equilibrating markets was the ideological addition that Bachelier's dry mathematical thesis needed before it could gain popularity in the 1960s and 1970s.

Despite Fama's arguments that it is the combined intelligence of investors that makes markets efficient, arguments on the statistical calculability of future stock prices, made possible by the work of Dow and Bachelier, forcefully demonstrate the tension between two possible formulations of financial rationality. On the one hand, financial rationality is cast as the impartial reading of financial information, making scientific and computerised calculation in finance possible. On the other hand however, financial professionals assert their legitimacy in terms of professionalism, experience and unique insight, which suggests that financial decision-making cannot be delegated to a formula or machine. This tension in financial discourse has become increasingly important during the twentieth century. For example, Bernstein (1992:28-38) documents how in the 1930s Dow's successor Peter Hamilton and the speculator Alfred Cowles expanded Dow's assertions that the market was inherently measurable and predictable, by analysing data from the 1920s and 1930s stock market with the help of one of the first IBM

calculating machines. Cowles himself had suffered substantial losses in the 1929 stock market crash and joined the legion of researchers, both public and private, who tried to unearth how this crash could have happened and how similar events could be avoided in the future. From his analyses, Cowles concluded that stock prediction by financial analysts was nearly worthless, and he found that "the best of a series of random forecasts made by drawing cards from an appropriate deck was just as good as the best series of actual forecasts" (Bernstein 1992:35).

In the 1960s and 1970s financial mathematicians continued to voice their beliefs that "a blindfolded monkey throwing darts at a newspaper's financial pages could select a portfolio that would do just as well as one carefully selected by the experts" (Malkiel 1990:24). In 1971, one of the most influential figures in the post-war development of financial science, Fischer Black, suggested in an article that "[i]t... appears that most investment management organisations would improve their performance if they fired all but one of their security analysts and then provided the remaining analyst with the Value Line Service [a statistical investment model]" (quoted in Bernstein 1992:136). Merton (1994:452) himself dismisses pre-1960s security analysis as profoundly unscientific: "during most of this period, finance was almost entirely a descriptive discipline with a focus on institutional and legal matters. Finance theory was a collection of anecdotes, rules of thumb and shufflings of accounting data." Naturally these conclusions angered finance professionals; for it implied that well-paid investment advisors delivered inherently useless advice. During most of the Bretton Woods years financial professionals were able to dismiss mathematical finance by arguing that academics were bad investors and had no real market experience. Financial mathematicians were confined to academic institutions such as the Cowles Commission for Research in Economics at the University of Chicago.[3]

In 1973 however, the articulation of an option pricing formula by Black and his colleagues proved a watershed in the articulation of financial mathematics as the site of *real* financial rationality. By the latter half of the twentieth century, no standardised pricing for controversial financial contracts such as options existed. Although options were used sporadically in the

nineteenth-century US markets, we have seen that they were not considered legitimate as they are not binding contracts and thus could not be said to 'contemplate' delivery.[4] Options on commodities had been banned in 1934 as a result of federal investigations into the 1929 stock market crash, but stock options were traded in small volumes from restaurants near Wall Street (Dunbar 2000:33).

In an article published in 1973, Fisher Black and LTCM founder Myron Scholes, both professors at the Massachusetts Institute of Technology (MIT), claimed to have developed a mathematical equation for the fair pricing of stock options, which became popularly known as the Black-Scholes formula. With the help of Bachelier's teachings on stock price movements, Black and Scholes reasoned that option prices could be calculated if one knew the current stock price and the average volatility of a particular stock. Black and Scholes (1973:639-640) expressed dissatisfaction with existing option pricing theories, as these all included unknown or unmeasurable components such as "the expected value of the stock price" at the time of expiry of the option, or the utility preferences of investors. As one finance professor later said in a BBC documentary about LTCM: "The mathematical models that were being developed during the 50s and 60s depended on inputs that were completely unobservable in the real world like expectations of investors which might differ very much from one investor to another" (Horizon 1999). Black and Scholes eliminated all such unmeasurable factors from their equation, and articulated a way in which to reduce the importance of the one remaining unknown component, the level of risk, through the continuous hedging of their positions. Although Robert Merton did not co-author the original 1973 piece, he did cooperate closely with Black and Scholes and provided an alternative justification for the Black-Scholes equation in the same year (Bernstein 1992:203-230). Merton's contribution to the formula literally originated in the field of rocket science, for he applied the complex mathematics developed by a Japanese rocket scientist to the theory of option pricing (Horizon 1999).

The Black-Scholes formula implies that there is one objectively true and fair price for a

stock option, despite the fact that this price is contingent upon all possible future prices of that stock.[5] Rather than as a contestable construction of the fair price of financial instruments, the Black-Scholes formula was heralded as the scientific discovery of financial truth. Such interpretation of their work was consolidated by the 1997 decision of the Nobel Academy to award Scholes and Merton the Nobel Prize in Economic Sciences (Black having deceased in 1995). In the press release accompanying this decision, the Royal Swedish Academy of Sciences wrote:

> Effective risk management requires that [financial] instruments be correctly priced. Fischer Black, Robert Merton and Myron Scholes made a pioneering contribution to economic sciences by developing a new method of determining the value of derivatives. Their innovative work in the early 1970s, which solved a longstanding problem in financial economics, has provided us with completely new ways of dealing with financial risk, both in theory and in practice. Their method has contributed substantially to the rapid growth of markets for derivatives in the last two decades (Royal Swedish Academy 1997:1).

Around the same time, *The Economist* (1997) lauded Scholes and Merton with the accomplishment of having "turned risk management from a guessing game into a science" which could be considered "among the most useful work that economics has produced."

Despite its claims to science and rationalism, it is important to see the continuity between the work of Black, Scholes and Merton, and earlier historical discourses of cosmological order and truth. The acceptance of the Black-Scholes formula as the discovery of the one 'right' price for options contracts resonates with Medieval formulations of the 'just price.' In the Middle Ages, Saint Thomas Aquinas condoned trade as long as it concerned 'just' exchange, whereby "that which was given and that which was received was of equal value" (Roll 1992:34). Aquinas made this argument with appeal to the doctrine of the just price as the intrinsic and divinely ordained value of a commodity or article, which was designed to prevent excessive profit-making and enrichment by trade (Roll 1992:34). As economic historian Eric Roll (1992:34) goes on to argue, it is not entirely clear what the doctrine of the just price was based on, and in practice the idea "expressed little more than that of the conventional price." The work of Black, Scholes and Merton similarly assumed that there is one intrinsic 'right' price for financial contracts, which

could be scientifically discovered. The price for options contracts is not ordained by God, but ordained instead by the laws of the market. However, the assumptions that money-market prices are determined by factors outside human reach accords to the prices the same true and undeniable qualities that Saint Thomas accorded to the values ordained by God. Despite their scientific and rational appearance thus, mathematical financial formulas are firmly rooted in cultural and religious history.

Very few participants in the financial markets were protesting this interpretation of the Black-Scholes formula, not even the security analysts so disrespected by Black and Merton. As the Nobel Academy rightly noted, the options pricing formula had contributed to an unprecedented growth in financial trading beneficial to a broad range of market participants. Within weeks of the formula's publication, Texas Instruments had developed a calculator allowing traders to price options without understanding the underlying mathematics (Bernstein 1992:227). Moreover, what Black, Scholes and Merton had argued was that with the help of options financial practitioners could create risk-free positions. As long as one purchases a set of options comprising the opposite positions to one's bets, large financial losses became theoretically impossible. Hedging one's bets originated as a gambling practice but has been identified as a way of reducing financial risk since the early twentieth century (*OED* 1989 Vol.VII:96). Thus, theoretically, Black, Scholes and Merton "could create a perfect equilibrium in which risks cancel themselves out" (Horizon 1999). Merton's innovation was called *dynamic hedging* and entailed a continuous computerised adaptation of one's portfolio in order to hedge out the risks. One broker interviewed for the BBC Horizon (1999) documentary explained the formula's assumptions as follows:

> The basic dynamic of the Black-Scholes model is the idea that through dynamic hedging we can eliminate risks, so we have a mathematical argument for trading a lot. What a wonderful thing for exchanges to hear. *The more we trade, the better off the society is because the less risk there is.* So we have to have more contracts, more futures exchanges, we have to be able to trade Nikkei futures in Japan, we have to be able to trade options in Germany. Basically in order to reduce risk we have to trade everywhere and all the time (emphasis added).

Continuous Markets

By the mid-1970s, Black, Scholes and Merton entered into their first experiment to apply their mathematical trading formulas to investment practice. Perhaps challenged by the oft-posed question to academics "If you're so smart, why aren't you rich?" (Malkiel 1990:131), they decided to purchase options that seemed underpriced according to their formula. But what should have been a successful investment fell flat when the company whose options seemed underpriced succumbed to a takeover bid from another company. Black (1989:7) concluded that this episode "helped validate the formula. The market price was out of line for a very good reason." At the same time, Black issued a warning which would later be disregarded by his colleagues. "It is not a good idea," Black (1989:8) wrote, "to insist on trading at the values given by the formula. The market may want to trade at prices away from those values for good reasons that the formula cannot consider."

In 1994, Scholes and Merton entered investment practice again,[6] this time in cooperation with former Salomon Brothers bond trader John Meriwether,[7] to set up the hedge fund LTCM. Hedge funds are defined by their unregulated and secretive nature: they are not allowed to advertise and they are exempt from restrictions on leverage and short-selling which apply to large investment funds such as mutual funds (Edwards 1999:190-191). Hedge funds were made possible through an exemption in the 1940 Investment Company Act which regulates speculative funds in the wake of the 1929 crash. This exemption stipulates that small funds with less than one hundred very wealthy and sophisticated investors need no governmental oversight. As a result of the secretive nature of hedge funds very few data about their activities are available, but since the LTCM debacle their number has been guessed to be around 3000 (Edwards 1999:192). It is widely agreed that hedge funds are speculative rather than insuring in nature, and allow enormously wealthy – qualified eligible participants (QEPs) must have at least US$5 million to their name – to make profits out of market fluctuations. Hedge fund participants tread the thin line between gambling and investing. After the fall of LTCM, Chairman of the US House Banking Committee

James Leach admitted: "hedge funds... are seen to be run-amok, casino-like enterprises, driven by greed with leveraged bets of... huge proportions" (HBC 1998:3).

Predicated on the philosophies of scientific finance in general and dynamic hedging in particular, the hedge fund started trading in 1994 with US$3 billion in capital.[8] Armed with new and sophisticated versions of their financial formulas and US$20 million worth of computer equipment, LTCM traders scanned the global markets for profit opportunities. As the LTCM prospectus stated: "We want to be global, and we want to have an ability to employ this technology in any country around the world" (quoted in Dunbar 2000:126). LTCM's preferred financial strategy was called arbitrage which assumes that in integrated financial markets the same or similar financial contracts have to be priced equally. Should discrepancies in these prices exist, for instance between different countries, an arbitrage dealer can make enormous profits when buying the underpriced and selling the overpriced contract, providing the trader has enough money at his disposal because profit margins are very small. As Scholes explained the trades to the BBC: "one way to think of us [is] as a gigantic vacuum cleaner sucking up nickels from all over the world" (Horizon 1999).

Arbitrage trading strategies are called 'market neutral,' because they profess to make a profit regardless of the development of market indicators such as stock market indices (Edwards 1999:195). Although the arbitrage trades undertaken by LTCM were much more complex than simple betting on the price convergence of two identical contracts in different countries, and often involved "chaining together... more than just two securities" (Dunbar 2000:126), they did rest on the common assumption of rational and equilibrating markets. Indeed, in his academic writings Merton had become champion of such continuous and complete markets in which every thinkable uncertainty can be insured at an intrinsic fair price. *Scientific American* summarises Merton's philosophies as follows: "With the right option investors can bet or hedge on any kind of uncertainty from the volatility of the market to the odds of catastrophic weather." However, *Scientific American* continues, "creating complicated financial instruments requires accurate pricing

methods for the derivatives that make up their constituent parts" (Stix 1998). Merton (1994:456) was dedicated to finding the 'right' price for all kinds of uncertainties, and called his market vision the "financial-innovation spiral" in which limitless amounts of custom-designed financial contracts spiralled towards the utopia of "complete markets and zero marginal transactions costs."[9]

LTCM quickly developed a reputation as Wall Street's 'dream team' or the Roll Royce of hedge funds (CNN 1998). The awarding of the Nobel Prize to Scholes and Merton coincided with the height of LTCM's success, at which time Merton (1997:7) boosted: "It was deliciously intense and exciting to have been a part of creating LTCM. For making it possible, I will never be able to adequately express my indebtedness to my extraordinarily talented LTCM colleagues. The distinctive LTCM experience from the beginning to the present characterises the theme of the productive interaction of finance theory and finance practice." In both 1995 and 1996, LTCM returned over 40% net profits to its investors (O'Brien and Holson 1998:C22). Despite the fact that LTCM charged as much as a 2% annual fee and 25% of profits, which was higher than other hedge funds, investors were anxious to entrust Meriwether and his colleagues with their money. By far the most significant investors into the fund were people from the financial industry itself, and "the list of firms investing or trading with Long-Term ultimately became a who's who of international finance" (O'Brien and Holson 1998:C22). Many in the financial establishment had studied under Merton and Scholes or had read their books which made them feel as if "they... were meeting with the high priests and... they were honoured to be asked to invest with them" (Horizon 1999). Meriwether legendarily solicited investments from guests at his Irish golf club, where informal meetings with financial executives often took place. Despite the personal and amicable relations LTCM maintained with its investors, the fund was very secretive and issued no more than an elementary monthly statement to its investors. Investors were obliged to commit their money for at least three years, and had no insight into LTCM's trading activities.

Still, in addition to the large investments that financial firms unquestioningly put at

LTCM's disposal, LTCM was given "VIP treatment" when dealing with most financial firms, was given unlimited credit and was exempt from paying margin requirements in derivatives transactions (Dunbar 2000:210). Such informal credit arrangements have been retrospectively blamed for LTCM's downfall, for instance by *The Economist* (1998:127) which wrote that: "Wall Street's finest were blinded by the reputations of LTCM's founders." However, these informal credit networks signal a continuity between modern finance and the original meaning of credit which pertains to respect and trustworthiness in business matters (*OED* 1989, Vol.III:1138). As I have argued in the first chapter, credit in the seventeenth century was generated through social networks which put great importance upon reputation: "to have credit in a community meant that your character was respected because you could be trusted to keep your promises and contracts" (Muldrew 1998:152). In the case of LTCM, its reputation made possible a leverage ratio of 28-to-1 which is common for the trading desks of large investment banks, though not for hedge funds (GAO 1999:7).

Although some interested parties have since tried to denounce LTCM's trades as highly exceptional, LTCM's rationale was the epitome of scientific finance. Dion Friedland, president of the Hedge Fund Association and chairman of Magnum Funds lamented after the LTCM debacle that "hedge funds as a group suffer from popular misconceptions that arise when a few funds suffer big losses." "Most hedge funds," Friedland argued, "are not... highly leveraged bond arbitrageurs like LTCM" (Hedge Fund Association 1998). Similarly, Steven Lonsdorf, president of Van Hedge Fund, who was called as an expert witness after LTCM's managers had declined to testify, stated before the House Banking Committee that "Long-Term Capital in our opinion is not representative of the hedge fund industry as a whole. It is an anomaly within the industry" (HBC 1998·209).

However LTCM's trading rationale was exemplary of modern risk management, defined by a profound faith in the calculability of future uncertainties. In the 1990s, hedge funds specialising in arbitrage proliferated, and one fund called Convergence Asset Management raised

US$700 million from investors who had been denied a chance to participate in LTCM (Dunbar 2000:197). In addition, LTCM's trades were being imitated by the large investment banks, such as Merrill Lynch, to such an extent that LTCM's managers worried that their profit opportunities would vanish. Indeed, one of the events that triggered LTCM's losses was Salomon Brothers' unwinding of similar arbitrage positions (Dunbar 2000:190-197). As financial journalist Roger Lowenstein (2001:235) puts it in a recent book on the case, "Long-Term was in fact the quintessential fund of the late twentieth century – an experiment in harnessing the markets to the twin new disciplines of financial economics and computer programming." More generally, the influence of the Black-Scholes formula on the financial markets has been widely acknowledged and by 1998 the aggregate notional amount of derivatives trades was more than US$130 trillion, partly due to the philosophy of dynamic hedging (BIS 1999:iii). As Goldman Sachs trader Emanuel Derman put it: "the Black-Scholes equation was to finance what Newtonian mechanics was to physics. Black-Scholes is sort of the foundation on which the field rests" (quoted in Stix 1998).

The Calculability of the Future?

In 1994 Robert Merton wrote a warning against excessive faith in mathematical financial modelling which he would subsequently disregard. "Any virtue can become a vice if taken to extreme," wrote Merton (1994:460-461), "and just so with the application of mathematical models in finance practice... At times the mathematics of the models become too interesting and we lose sight of the models' ultimate purpose. The mathematics of the models are precise, but the models are not, being only approximations to the complex, real world."

Merton's own warning supports the interpretation that the failure of LTCM was caused by a profound faith in the scientific calculability of future uncertainties and the concomitant arrogance of well-paid financial risk-managers. When LTCM started incurring losses in May and

June 1998, its board concluded that these losses were 'outliers,' a statistical term for extremely rare or nonsensical, and therefore statistically insignificant, measurements (Dunbar 2000:190-197). But LTCM's losses accelerated as a result of Russia's default and its capital base rapidly depleted, with single day trading losses exceeding US$500 million in August and September 1998 (GAO 1999:39). In LTCM's statistical models, such losses were calculated to occur once every 800 trillion years or 40,000 times the age of the universe (Jorion 1999:13).

One of the main problems with LTCM's purported scientific methodology and its "Spock-like analytical detachment" (Lewis 1999:5), is that it overlooks the fact that LTCM was *part* of the markets it was studying – and a very significant part indeed. As the report of the US General Accounting Office (GAO 1999:7) carefully put it, LTCM's positions "were considered very significant relative to trading in specific securities in [over-the-counter derivatives] markets." By the time of its collapse in 1998, LTCM was committed to more than 20,000 transactions and conducted business with over 75 counterparties (GAO 1999:7). The absence of any reflective attitude on the part of LTCM was not just an aberration in comparison to the fund's size, but the logical conclusion of its faith in modern risk management. As I have argued in chapter 4, discourses of modern objectivity exist by virtue of an ascetic ideal of complete analytical detachment which originated in the late nineteenth century when it became assumed that "the all-too-human scientists must, as a matter of duty, restrain themselves from imposing their hopes, expectations, generalisations, aesthetics, even ordinary language on the image of nature" (Daston and Galison 1992:81). As with the introduction of scientific method into financial analysis, the nineteenth-century scientific ascetic ideal was a moral imperative. What was at stake for the articulators of modern objectivity was the character of the scientist as well as the accuracy of his findings (Daston and Galison 1992:117-123). The nineteenth-century metaphor that cast stock price movements in terms of natural laws paved the way for the moral application of scientific methodology to financial markets and underpins the discursive move which abstracts the observer from the financial system s/he studies.

What seems to have eluded commentators who dismiss the events of the fall of 1998 – Russia's debt moratorium and LTCM's default – as abnormal and aberrant, is that normality is constructed in the very mathematical models which are supposed to measure it. In other words, when the LTCM collapse is assumed triggered by "non-normal behaviour" of capital markets (Young 1999:70), the fact that LTCM's models constructed a contingent image of normality according to the historical data used, is disregarded. Such mathematical modelling presumes that historical data are reliable indicators of future data, constructing a largely calculable and predictable future. LTCM's data inputs, however, were based on recent history, and seem to have assumed zero probability for rare or unusual events such as a stock market crash (Jorion 1999:13). LTCM thus also excluded from its data Russia's earlier default, when in 1918 the post-revolutionary state announced it would not honour the foreign debts incurred by the tsarist regime.

As I have discussed in chapter 4, Hacking (1990:162) notes that the very concept of *normal* as "usual, regular, common, typical" originated around the 1840s precisely through the identification of the *ab*normal in the mythical continuum that is represented by the bell-curve. Hacking notes that a profound tension is inherent in this *'scientific' conception of the normal*. "The normal stands indifferently for what is typical, the unenthusiastic objective average," writes Hacking (1990:169), "but it also stands for what has been, good health, and for what shall be, our chosen destiny. That is why the benign and sterile-sounding word 'normal' has become one of the most powerful ideological tools of the twentieth century."[10] Their objective ambitions notwithstanding, scientific articulations of normality offer a normative claim concerning the desirability and formats of financial stability, efficiency and rationality. Such a normative concept of normality allows the retrospective denouncing of the events of autumn 1998 as irrational and abnormal.

That the financial 'normal distribution' which assigns probabilities to price fluctuations, reflexively constructs its own averages and normalities was to some extent realised by Fischer

Black (1989:8), who wrote of the Black-Scholes formula that "traders now use... it so much that market prices are actually close to formula values even in situations where there should be a large difference." The 'right' or 'proper' price for which Black and his colleagues had been searching, and which they claimed to have scientifically discovered, thus became reflexively constructed in their own formulas. The Black-Scholes formula authoritatively but normatively prescribes one 'right' price for options contracts. As long as everyone trading in options-markets is using the same formula, this reflexivity poses no practical problems.[11] However, it must be understood that the Black-Scholes model delivers a normative prescription in the name of scientific objectivity. The philosophy of continuous finance and dynamic hedging entails, as the *broker quoted above* succinctly points out, an authoritative and mathematical argument for 'trading a lot.' This argument holds that through continuous financial trading the total level of risk in society is reduced, thus (supposedly) leaving everyone better off, while fuelling the growth of financial markets and brokers' commissions.

The hearings which took place before the House of Representatives in the wake of LTCM's failure demonstrate the political stakes of the question whether LTCM and its failure were abnormal and exceptional. On the one hand, the House hearings were used as a platform by a few members of Congress who wished to voice critiques of the legitimate bases of profit making in modern finance, which can be considered a reopening of the older, similar debates examined in previous chapters. Most notably, Independent Congressman Bernard Sanders from Vermont, who can be counted among Greenspan's most outspoken critics, said in his opening speech during the first hearing, held in October 1998:

> What we have here are banks that are willing to lend billions of dollars to one man so that he could gamble on whether interest rates go up by a half a percent or whether they go down by a half percent. But meanwhile these are the very same banks that refuse to loan money for economic development and job creation in communities all over America. Evidently there is not enough money in these banks to invest in job-creating small business, in job-creating family farming, in job-creating manufacturing, but there are unlimited amounts of money to be lent to gamblers in their nonproductive efforts to guess if interest rates will rise or fall (HBC 1998:24).

Sanders went on to express his concern over the "extraordinarily unfair distribution of wealth that

exists not only in our country, but throughout the world... [A]ccording to the United Nations... the world's 225 richest individuals have a combined wealth of over a trillion dollars, equal to the bottom 47 percent of the world's population. Two hundred twenty-five people have as much wealth as almost half of the world's population" (HBC 1998:101). Similarly, Congressman Hinchey linked the unequal distribution of wealth in the United States to the possibility of such an event as the LTCM failure. "The fact that you have an extraordinary amount of money in the hands of a very few people," Hinchey argued, "[means] that they are inclined to take risks with that money which they would not ordinarily do if the amounts available to them were appreciably less; and in that exercise they perhaps are endangering the rest of us more than they are themselves" (HBC 1998:126).

Also former Securities-Exchange Commission (SEC) President David Ruder spoke out in favour of hedge fund regulation on the grounds that "our capital markets should not be held hostage to the activities of a group of risk-takers who can operate in secrecy without regard to possible systemic effects (HBC 1998:188).[12] Finally, labour union leader Lawrence Parks questioned the productive bases of financial institutions such as LTCM when a second hearing on hedge funds was organised in March 1999. "What benefit to society," Parks (1999:2) asked, "could possibly justify Long-Term Capital's, other hedge funds', and particularly banks' and brokerage firms', ability to reap so much money from this activity [speculation]? Does this 'trading' result in any good or service that improves anyone's life?"

On the other hand, the argument that the LTCM failure was exceptional and abnormal was put forward by Greenspan and McDonough, who were asked to justify the bailout of LTCM before the Banking Committee. McDonough argued that while hubris may have set LTCM up for a fall, "it was the extraordinary events of August in global markets that appear to have tripped them" (HBC 1998:31). The Federal Reserve's involvement, as McDonough repeatedly pointed out, "has to be understood in the background of the extremely dangerously disturbed financial markets" (HBC 1999:31). "Had we not just experienced in August precisely this type of shock to

our credit markets," McDonough went on to argue, "had we not just seen a sudden, worldwide straining of investor confidence, had there not already been underway a flight of capital away from private credit and into Treasury securities, were much of the world not experiencing financial strain, then our judgements about the risks to the American economy of an abrupt and disorderly closeout of Long-Term Capital may well have been different" (HBC 1998:34). Greenspan and McDonough moreover argued that the Fed did not really do anything except provide advice, offices and coffee. Greenspan insisted that "the Federal Reserve Bank of New York's efforts were designed solely to enhance the probability of an orderly private sector adjustment, not to dictate the path that adjustment would take" (HBC 1998:40).[13]

Objecting to those who wished to make the LTCM failure a rallying point for critique of speculative capitalism, Greenspan justified LTCM's trading strategies with the argument that they support efficient and rational markets, and dismissed the market turmoil associated with the LTCM disaster as irrational and rare. Greenspan's justification built on the arguments concerning price production developed over a century ago:

> Many of the things which [hedge funds] do in order to obtain profit are largely arbitrage type of activities which tend to refine the pricing system in the United States and elsewhere, and it is that really exceptionally and increasingly sophisticated pricing system which is one of the reasons why the use of capital in this country is so efficient. It is why productivity is the highest in the world, why our standards of living, without question, are the highest in the world (HBC 1998:93).

So what if hedge funds earn "an extra bit of return on capital" for providing this social service, Greenspan (1998:2) asked. Such was also the reasoning of hedge fund president Leon Metzger, who offered the following rationale for hedge fund activity in his plea to avoid regulation: "Hedge funds play a positive role in maintaining the smooth operation of the financial markets... Hedge funds search out assets whose prices are temporarily out of line with fundamental values, helping to reestablish the true market value of securities by selling short an overpriced instrument and buying an underpriced one." (HBC 1999:61).

Criticism of financial speculation remains ineffective as long as defenders of these financial practices are able to claim that they are based on economic laws and financial normality.

However, a longer historical view as provided in this thesis teaches that rationales for financial speculation have often been politically contested and are beset with their own weaknesses and internal contradictions. Greenspan's and Metzger's arguments show the fundamental tension in the discursive justification of speculation and arbitrage. On the one hand, as we have seen, arbitrage and option pricing assume the existence of transcendentally just prices for financial instruments, allowing the scientific *discovery* of option prices. On the other hand, Greenspan and Metzger invoke the necessity of human maintenance of pricing systems, which, they argue, is effected through hedge fund activity. Clearly, if prices must be produced rather than discovered, the 'true market value' to which Metzger appeals, is a contingent human construct rather than a natural phenomenon. In contrast to Metzger's and Greenspan's formulations, then, it can be argued that monetary values do not exist objectively or transcendentally but are created in human acts of valuation, of which the Black-Scholes option pricing formula is but one example. Such discourses of valuation have to be fundamentally questioned in order to enable effective criticism of financial speculation, and in order to challenge the legitimacy deficit in finance.

Have the debates in the wake of the LTCM recapitalisation that took place not just in Congress but in the Western press at large, led to a reduction of faith in financial science and modern risk management? Although many financial analysts have since paid lip-service to the limits of financial science – just as Merton did in 1994 – one observable trend is toward increasingly complicated mathematical risk-management models. Much debate has assessed the shortcomings of present models of the bell-curve which is now believed to have newly discovered 'fat tails,' or thicker endings. In 1999, the *Financial Times* announced the discovery of a newly shaped bell-curve which can "deal with apparently unpredictable events, from weather forecasting to stock market analysis." This "new universal law" has been discovered by an international cohort of scientists including geologists and mathematicians and is being used in the insurance industry (Peel 1999). Several other remedies have been proposed in order to repair the shortcomings of the bell-curve, including 'stress testing' which studies the effects of large market

swings and other rare or unusual events on a given financial portfolio. Finally, Merton himself has not given up the search for increasingly complex mathematical models, and said in a 1999 interview that "the solution... is not to go back to the old, simple methods. That never works... The world has changed. And the solution is greater complexity" (quoted in Lewis 1999:15).

Increased desire for control of an uncertain future is further apparent in regulation proposals regarding derivatives which desperately seek to enshrine rules and requirements in a hope to avoid future financial controversies. At the hedge fund hearings for instance, angry Congressmembers demanded Greenspan's guarantees that similar catastrophes would be avoided. When Greenspan declined to give such guarantee, Congressman Frank said: "I am disappointed that you tell us we can do nothing except allow for repetitions of this [intervention]... Can we not increase [the Fed's] ability to prevent not the hedge funds, but the people who provide the fuel for the hedge funds, from making mistakes of a similar magnitude?" (HBC 1998:83). On the one hand, financial regulation may be a step toward questioning financial entitlement and the Hedge Fund Disclosure Act which has been passed by Congress in March 2000 as a result of the hedge fund hearings may make hedge fund activity more difficult and less profitable. On the other hand however, regulation can be considered to provide a legitimating framework for financial practices such as arbitrage, and regulators' ultimate goal of financial stability entails a faith in the perfectibility of financial markets not unlike that of LTCM's board. I will further discuss the depoliticising effects of financial regulation in the next chapter.

Still, not all financial practitioners look to financial science in the wake of the LTCM crash. Arguments emphasising the importance of financial experience and judgement have most notably been forthcoming from the financial industry's self-regulating efforts. The Counterparty Risk Management Group, a private sector group composed of many of LTCM's creditors and headed by former New York Federal Reserve President Gerald Corrigan, has argued that "too much focus is on the sophistication and precision of risk estimation models and not enough on

the more important managerial and judgmental aspects of a strong risk management program" (Corrigan and Thieke 1999:3). Risk management, Corrigan argued before the House hearing of March 1999, is an art and not a science (HBC 1999:80). Similarly, Mark Rubinstein of the University of California at Berkeley whose own models of financial science led to large losses in the 1987 stock market crash (Dunbar 2000:88-97), has recently argued that "traders' own rules of thumb about inferring future stock index volatility did better than many of the major modelling methods" (quoted in Stix 1998). However, such rearticulation of financial rationality in terms of professionalism and experience does not necessarily question modern faith in the predictability of and capitalisation on uncertain futures.

In contrast, it may be argued that financial markets are not a coherent and perfectly predictable system. In 1688, Joseph de la Vega's *Confusión de Confusiones*, which is regarded as one of the first treatises on speculation, portrayed the Amsterdam exchange as a madhouse. De la Vega (1996:173) warned future speculators that "he who has once entered the charmed circle of the Exchange is in eternal agitation and sits in a prison, the key of which lies in the ocean and the bars of which are never opened." De la Vega discussed techniques of speculation, options trading and short-selling through a series of dialogues between a share trader, a merchant and a philosopher. When in these dialogues the philosopher asks the share trader to explain the movement of share prices, the trader replies this is not possible, because "shares are enveloped in a veil of almost religious mystery such that the more one reasons, the less one grasps, and the more cunning one tries to be the more mistakes one makes" (quoted in de Marchi and Harrison 1994:62).

In the wake of LTCM, a few critical voices can be heard questioning the increasing human colonisation and capitalisation of the future. George Soros (1998:39) for instance, has argued that "we must lower our expectations about our ability to explain and predict social and historical events" before a real change in financial practices becomes possible. The BBC documentary Horizon moreover concluded its detailed investigation into the LTCM story with a remark

reminding of de la Vega's description of the Amsterdam money markets when it said that "the financial markets are places full of dangers and mysteries" (Horizon 1999). Such conclusions suggest that the confidence in modern risk management – which asserts that with the right mathematics and sufficient information it is possible to predict, calculate and hedge an uncertain future – is misplaced. Continuities with the past financial debates explored in this chapter moreover suggest that moral and political motivations remain part and parcel of modern financial management, its scientific claims notwithstanding.

Conclusion: Questioning Financial Entitlement

This chapter has argued that the near-failure of LTCM provides a site in which political debates concerning scientific financial trading have been reopened. It has discussed the cultural and political foundations of mathematical financial modelling as practised by LTCM. The fact that financial science emerged as a political response to financial debates means that financial models are always already political – instead of the objective reflection of financial truths which they are often assumed to be. The profound tension which exists in financial discourses between an assumed transcendental existence of market prices and the continued human intervention necessary for the smooth functioning of financial markets, supports the conceptualisation of global finance as a historically constituted discursive practice instead of a natural and coherent system. This discursive tension becomes most apparent in times of financial crises when the integrity of the system needs to be reaffirmed by the retroactive identification of financial irregularities. It was precisely through a retrospective denouncing of LTCM's failed investments as irrational and rare that a prior normalcy and rationality of financial transactions was rescued.

After being taken over by a consortium of its creditors in 1998, LTCM slowly sold off its positions and stopped trading in early 2000. This does not mean, however, that the criticisms made in this chapter have become redundant. As early as 1999, John Meriwether started to raise

money in order to set up a new hedge fund called JWM, which, he claims, "can withstand extreme events of the type experienced in 1998" (quoted in Lowenstein 2001:236). In an interview with the *Financial Times*, Meriwether has claimed that the events of autumn 1998 were irrational and that his only mistake was failing to see that other investors were copying his trades. "If we had the capital to maintain ourselves through the storm," Meriwether told the *Financial Times*, "[LTCM's] positions would have been quite attractive" (Silverman and Chaffin 2000:8). "[T]here are times when markets can be much more chaotic than one would ever predict," Meriwether concluded, "driven in a sense by human behaviour" (Silverman and Chaffin 2000:8). Meriwether's remarks assume that financial normality exists separate from or prior to human behaviour. Thus, human behaviour becomes the realm of the unpredictable and irrational.

More important than Meriwether's new hedge fund, however, is the fact that faith in mathematical and computerised risk management in general, and the Black-Scholes formula in particular, remain at the heart of modern finance. The legitimacy of financial speculation, as I have shown in previous chapters, has been articulated in terms of risk reduction and risk redistribution. The Black-Scholes formula assumes that through continuous trading the total level of risk in society will be reduced, thus leaving everyone in society – not just the brokers creating and selling expensive hedging contracts – better off. However, this is a contestable assumption. Beck (1992) discusses the politics of modern risk management and the way in which expert knowledge exerts increasing influence over political decision-making. Beck (1992:23) argues that "some people are more affected than others by the distribution and growth of risks, that is, *social risk positions* spring up" (emphasis in original). These social risk positions, according to Beck, have led to a new international inequality of risk-bearing.

Appropriating Beck's arguments in the context of financial practices, we can say that the LTCM case demonstrates the emergence of social risk positions and a new inequality of risk-bearing in two ways. First, financial instruments for hedging and speculation are expensive. If financial speculation is justified as providing insurance in face of an uncertain future, these

insurance technologies are accessible only to those who can afford to purchase them. What can be seen to be emerging is an unequal system of financial insurance, comparable to the proliferation of private health insurance in the US and, increasingly, the UK, which leads to unequal access to health care.[14] In an unequal system, only very wealthy companies can afford to keep hedging out the risks of their investments and management decisions. Large companies increasingly *seek to* hedge themselves against not just traditional insurable uncertainties such as fires, accidents or exchange rate fluctuations, but also against newly identified risks such as fluctuations in the company's stock prices and assets. "Behind this trend is the belief that if you can quantify a risk, you can hedge it," says one risk manager in the *Financial Times* (quoted in Booth 1999). French foodgroup Danone is one example of a company which seeks such continuous insurance, and is in the process of developing a financial risk strategy which seeks to "protect the group's bottom line from any type of risk" (Booth 1999).

Secondly, the LTCM case demonstrates that the combined effects of the complex technologies of financial risk management do not guarantee the security and risk reduction they purport to provide. The proliferation of hedging involves assigning probabilities and prices to any thinkable contingent event, and requires elimination of unknown or unmeasurable factors from risk equations, just as Black and Scholes did in the options pricing formula. However, doubts have been expressed about the possibility and appropriateness of such calculations. In a recent speech, Federal Reserve governor Laurence Meyer warns that the absence of international standards of risk measurement may pose a threat to international financial stability. Meyer (2000) notes that financial institutions use outdated and inadequate models, and admitted that risk modelling is not a purely scientific exercise by concluding that "getting the numbers right is both a science and an art – and it is critical." Similarly, and uniquely among LTCM's founders, Myron Scholes has admitted that his objectives of mathematical risk management are essentially "very difficult to effect" (Horizon 1999). But despite these warnings, there is very little public and political debate on the appropriateness and accuracy of scientific models for financial risk management.

Significantly, the assumptions of the Black-Scholes formula remain unquestioned. The next chapter will come back to this point, and think through ways in which risk management practices can be opened to broader democratic debate.

The historical reading presented here does not just provide ammunition for a critique of speculation by examining earlier debates, but also exposes the contingency and insecurity of present financial rationalities. It is important to understand how this interpretation of the LTCM case seeks to move beyond the sharp material / ideal dichotomy, central to the understanding of political economy, which assumes that discourses of financial rationality exist secondary to material financial bases. Instead, I have argued that particular discourses of financial rationality make *real* material distributions and effects possible: they channel credit access and they create and distribute financial resources. Financial instruments such as options and futures, which provided the means to LTCM's profits, cannot be understood as material and unproblematic givens, but are made possible in discourses of scientific finance and masculine management of the future.

These arguments can be illustrated with remarks made by Judith Butler in a recent article, where she seeks to counter the claims that poststructuralist work fails to address questions of economic equality, redistribution and modes of production. Instead of being "merely cultural" or belonging to the realm of the superstructure, Butler (1998) argues, the discourses of gender and sexuality which are discussed in her work are fully part of material life and political economy. "[I]s it possible to distinguish, even analytically, between a lack of cultural recognition and a material oppression," writes Butler (1998:41), "when the very definition of legal 'personhood' is rigorously circumscribed by cultural norms that are indissociable from their material effects?" Discourses of sex and gender, Butler (1998:41) concludes, underpin a "specific operation of the sexual and gendered distribution of legal and economic entitlements."

Similarly, it can be argued that the objectified and authoritative discourses of scientific finance discussed in this chapter, and made possible through the historical struggles examined in the previous chapters, underpin the distribution of legal and economic entitlements. Specifically,

the discursively constructed legitimacy of risk management as a masculine and scientific practice regulates the value of financial contracts and renders possible the monetary entitlements of those engaged in large-scale speculation.

In conclusion, therefore, my analysis argues that historically grounded discourses of valuation regulate credit access and underpin financial entitlements by placing value on certain activities and reputations while devaluing others. Not only has arbitrage slowly been legitimised as a market perfecting enterprise, but the discourses of science and objectivity to which LTCM's Nobel laureates appealed reign as the epitome of modern authority and respectability. These discourses do not, however, exist transcendentally or unquestionably, but are subject to moments of destabilisation and reaffirmation. The debates – Congressional and otherwise – in the wake of the LTCM failure provide such a site of potential destabilisation. Instead, then, of accepting the discourse which casts the LTCM default as an aberration of financial logic and a tragic but isolated event, a profound questioning of the discourses of entitlement which allow LTCM to exist in the first place must be thought possible. Such possibilities are opened by examining the cultural and political roots of scientific finance which show that present financial structures are not immutable facts of (human) nature. The next and final chapter will go on to think through ways in which financial discourses of entitlement can be repoliticised.

Notes to Chapter 5

[1] *The Economist*, 'Long-Term Sickness,' October 3 1998, p.127.

[2] Other sources discussing the politics of modern risk management include: Beck 1992; Ewald 1991; Knights and Vurdubakis 1993; and Reddy 1996. Green's focus on the financial markets and his critical assessment of Beck's work makes his article my preferred source for the purposes of this chapter.

[3] A recent experiment in the context of National Science Week in the UK reminds of these experiments with random computer forecasting and drawing cards in order to assess whether stock price movements are statistically predictable or whether speculative investment requires professional study and experience in order to be successful. In April 2001, a psychology lecturer conducted an experiment in which an experienced investor, an astrologer and a four-year old girl were given a fictional £5,000 to invest in the stock market for one week. While the experienced investor looked at past performance of companies in

order to pick his preferred stock and the astrologer studied star constellations in order to decide, the child choose her investments randomly. In the declining market, all participants lost money during the experiment, but the child was proclaimed the winner because she preserved most of the £5,000 initially invested. The *Guardian* noted that the experiment had come under critique by "experts" who "insisted that investments can only properly be judged over at least 12 months" (*Guardian*, 'Girl, 4, Wins Share Tipping Contest,' March 24 2001).

[4] An option gives the right but not the obligation to buy a particular stock for a determined price at a set time in the future. Futures, in contrast, entail the obligation to buy or sell a particular stock or commodity for a certain price in the future. Futures contracts could thus claim to always 'contemplate' delivery, but this argument did not hold for options which do not have to be exercised.

[5] Futures and options contracts are examples of derivatives, which are financial instruments that derive their value from the value of another asset, such as a commodity, a particular stock or stock index. The value of a future or option contract is thus derived from the value of the underlying commodity (in case of commodity futures and options) or the underlying financial instrument (in case of financial futures and options).

The Black-Scholes formula is based on the following reasoning. The value of an option *now* is dependent upon the *future* price of the underlying stock, i.e. the stock price at the option's expiry date. But if Bachelier was right that stock price variations proceed along the normal distribution, then the chances of various future stock prices can be calculated, thus determining the current price of the option. The mathematics used by Black, Scholes and Merton are enormously complex and a very simplified account is given of their arguments here. For explanations of the formula that are accessible to non-mathematicians, see Bernstein 1992, chapter 11; Dunbar 2000, chapters 3 and 4; and the online transcript of the excellent BBC Horizon documentary about the fall of LTCM (Horizon 1999).

[6] Between these unsuccessful options purchases and the founding of LTCM, Scholes and Merton made one other attempt at making their mathematical formulas financially profitable. In 1976, they set up an options based mutual fund called Money Market/Options Investment, which would provide, according to Merton (1997:6), "downside protection to the investor while at the same time affording significant exposure to upside movements in the stock market." However, the fund found few investors and was not a commercial success (Dunbar 2000:78).

[7] Meriwether's claim to fame was his appearance in a 1989 sensationalist account of Wall Street practices as "the best bond trader on Wall Street," as well as the "King of the Game" *Lair's Poker* which was played on the Salomon bond trading floor (Lewis 1989:15). Meriwether was forced to leave Salomon Brothers in connection with a scandal around US government bond auctions (Dunbar 2000:112).

[8] Apart from Scholes, Merton and Meriwether, LTCM's founders included former Federal Reserve vice-chairman David Mullins. Good sources on the history and fall of LTCM include: Dunbar 2000; Lowenstein 2001; Stonham 1999a, 1999b; Horizon 1999.

[9] As both Bernstein and Dunbar note, such complete market utopia had been earlier proposed by Stanford economist and Nobel laureate Kenneth Arrow who "had a vision of a world in which everything was assigned a value on a market. In this utopia, every possible state of the world, past, present and future, from a stormy July evening in Patagonia to England winning the World Cup had a financial payoff associated with it" (Dunbar 2000:42; see also Bernstein 1992:216).

[10] Hacking's work and his investigations into the history of statistics build on Foucault's insights. In *Discipline and Punish*, Foucault (1979:183) makes the similar argument that disciplinary power is exercised through the measurements of performance, which function both "as an average to be respected [and] as an optimum towards which one must move."

[11] Currently the Black-Scholes formula *is* used on such a large scale in the financial markets, frequently by brokers and traders who do not understand its underlying assumptions and mathematics.

[12] Such clear-cut statements were not always forthcoming from current financial regulators who publicly supported Greenspan's and McDonough's actions. Regulators are quite obviously limited in their opposition to the financial establishment because of campaign contributions. During the hearings Congressman Hinchey mentioned "the sum of US$550 million in soft money being contributed to political campaigns in order to get around the propensity that anyone might have on this committee or elsewhere in the Congress to regulate these hedge funds" (HBC 1998:129).

[13] These remarks led Massachusetts Congressman Frank to comment: "you both deserve an award even by the standards of the Fed. The extent to which you have understated this is impressive. I am willing to bet if we had the transcripts of some of your private remarks—and you not being in the White House, don't have to worry about that—but if we had the transcripts of some of your private remarks, there would be a contrast between the degree of activism that was present when you were doing this and the kind of passivity with which you describe it today" (HBC 1998:80).

[14] Thanks to Erna Rijsdijk for suggesting this comparison to me in discussion.

CHAPTER 6

Repoliticising Financial Rationality

> [I]t is really against the effects of the power of a discourse that is considered to be scientific that the genealogy must wage its struggle.
>
> Michel Foucault[1]

Contingent Finance

This thesis has argued that the emergence of contemporary financial rationality was not the linear and frictionless history assumed by either financial publications or many authors within the discipline of political economy. The previous chapters have exposed and discussed the contingent and contested emergence of modern financial concepts. Chapter 2 has discussed the gendered discourses of credit and credibility which dominated eighteenth-century political discussions about the birth of the national debt in Britain and which still underpin the way we make sense of financial crises and instabilities in the late twentieth century. Chapter 3 has shown how the lack of a conceptual distinction between gambling and finance became an obstacle to the political legitimacy of financial exchanges, and has documented the public and legal discussions in Britain and the US which invoked, constructed, rejected and debated such distinction. Chapter 4 discussed how financial standardisation and the introduction of moral discourses of scientific objectivity into finance attempted to abstract financial practices from their religious, cultural and moral histories and cast them as scientific and virtuous endeavours. The interlude argued that these discussions

and controversies were to some extent stabilised and depoliticised with the introduction of large-scale financial regulation in the 1930s, which defined contested terms and stipulated requirements for the production of truth in finance.

Chapter 5, however, showed that the construction of financial rationality is not complete nor secure in the late 1990s, but remains subject to rearticulation and reaffirmation, especially in times of financial controversy such as the failure of LTCM. Chapter 5 concluded by pointing out that financial rationality is a discourse of entitlement: a discourse that renders possible the creation of credit, the channelling of wealth and the making of profits. By the late twentieth century, this discourse has normalised wealth creation and credit access which entitles LTCM's participants to their massive profits in the name of economic efficiency and financial rationality.

The purpose of a genealogy of finance is to argue that no logical or evolutionary trajectory for the development of financial rationality was implicit in history or human nature. Indeed, appeals to human nature and the natural evolution of financial markets emerged only through the controversies documented above, and cannot be seen in isolation of their historical articulation. Thus, the argument that speculation is inherent in human nature was developed by defenders of the exchanges during the nineteenth century, in order to legitimate and naturalise speculative practices. These arguments have to be seen in their wider social and historical contexts, as they were made possible by scientific discourses of the time, including social Darwinism. Similarly, the argument that financial exchanges are the epitome of the free market was formulated by nineteenth-century economists, enabling them to argue that financial markets can be studied scientifically and objectively.

In this historical context, Foucault's (1980:84) provocation to struggle "against the effects of the power of a discourse that is considered to be scientific" is particularly relevant. Instead of a natural reality and evolutionary product, then, I have argued that financial rationality is an exclusionary discourse – a discourse which exists through, historically and continually, excluding that which it deems external to its domain. Thus it has become possible, as I showed in chapter 1,

to formulate authoritative measures of economic well-being which praise Britain for its economic efficiency while one in five British children live in poverty. William Connolly points to the wider implications of such exclusionary practices *for the conditions of democracy*. "[E]quality must be viewed not simply as an end in itself," writes Connolly (1995:80/82), "but also as a condition of democratic pluralization... economic equalisation is a pre-requisite to effective democracy, but effective democracy is also a pre-requisite to equalisation. Each must be fostered for the other to occur." Connolly (1995:80-85) points not just to the barriers of democratic participation experienced by those without entitlements, but also to the deliberate withdrawal of the wealthy from participation in social life through commissioning private facilities, including health and education, and private security in the form of, for instance, 'gated communities.'[2] The connections between contemporary economic rationality and the proliferation of private security are not incidental, according to Connolly (1995:84), but indispensable: "New forms of discipline, regulation, and surveillance are introduced to promote economic growth under difficult conditions of realisation and to control or neutralise those populations excluded from its benefits." Hence, argues Connolly (1995:25), the attachment of "the legitimations of disciplinary society" to "the hegemony of the growth imperative" which defines contemporary economic discourse.[3]

The purpose of this final chapter is to discuss how resisting a linear and frictionless history of finance opens up possibilities for political resistance and alternatively imagined financial futures. It will revisit the exclusions necessary for financial rationality to operate, and think through ways of repoliticising these. Addressing the economic inequality fostered by contemporary financial practices coincides with the preoccupations of many authors in the field of political economy. However, in contrast to some of the literature in political economy, this chapter will argue that 'global finance' as a sphere of thought and action is never secure and stable, but is subject to continuous articulation, affirmation and rearticulation by financial practitioners. Considering finance as a performative rather than a monolithic mastering force pries open political spaces within financial practices.

This chapter commences by arguing that the modes of resistance to the power of finance which have been formulated within the literature of political economy can have a depoliticising effect. Then, I will explain how considering finance as a domain made possible through performative practices increases the possibility to observe and encourage flaws in the fabric of financial authority. Subsequently, the chapter will discuss three ways in which financial rationality can be repoliticised. First, I will discuss the way in which the relation between creditor and debtor is being repoliticised by the Jubilee 2000 coalition. Second, I will demonstrate that financial rationality is rendered possible through a particular definition of security which can be questioned and politicised. Third, I will show how technical financial knowledge and financial indicators are being opened up to democratic debate.

Regulation and Depoliticisation

As discussed in the first chapter, recent approaches in IPE have understood finance as a uniquely mastering force, or "a Phoenix risen from the ashes" (Cohen 1996). Finance is thus represented as a powerful monolith, directing and constraining the policy choices of national governments. I have argued that important authors in IPE, including Cohen, Cerny and Pauly, represent finance as a homogenous and clearly bounded entity, which stands in direct opposition to the national state. These authors assume a trade-off between financial power and state power – in which the former has significantly increased at the expense of the latter since the 1970s.

In response to the risen Phoenix of global finance, many authors have proposed the re-regulation of the financial sphere and have emphasised (concerted) state action as the way to submit and control the activity of financial institutions. Cohen (1996:276) summarises what has become one of the preoccupations of IPE literature, when he writes, "if states were so pivotal in the globalisation process, could they also turn back the clock if they wish?" By comparison, Cerny (1995:241) asserts that "the genie is out of the bottle," which has produced a fundamental shift in

states' capacities to regulate finance. Cerny (1995:241) argues in favour of "new, authoritative market-constraining measures to prevent both old and new kinds of market failure, i.e. to control and counteract perverse, unintended consequences that may have been caused by the original deregulation." The platform on which re-regulation of financial markets should take place, Cerny (1995:242-243) goes on to say, "must become more internationalised and/or transnationalised... First, an effective *international coalition* must be formed in such a way that no major state can impose a blocking veto" (emphasis in original).

There is a profound nostalgia for the Bretton Woods era in many critical assessments of the newly liberalised financial sphere within the discipline of IPE. In the words of Helleiner (1993:20), quoting Richard Gardner, the purpose of the Bretton Woods agreement was to "make finance the servant, not the master, of human desires – in the international no less than in the domestic sphere." Since the 1970s and 1980s, however, Helleiner (1993:40) concludes, "bankers... have become 'masters of the universe' rather than the 'servants' of Keynes and White's early plans." Hence, as Cohen's question above expresses, a preoccupation with 'turning back the clock,' or alternatively, in Cerny's metaphor, 'putting the genie back in the bottle.' Pauly offers a similar, if self-confessed hopeless, future. In order to foster "stable economic growth and shared prosperity," Pauly (1997:141-142) asserts, "a revival of the more flexible exchange rate mechanism of the Bretton Woods system" might be necessary. However, Pauly (1997:142) continues, "no such scheme has even a remote chance of seeing the light of day as the twentieth century comes to a close." Instead, Pauly (1997:142-143) pleads for increased international cooperation, "information-sharing, consultation, and consensus-building" between a "wide array of states" in order to control the financial sphere and provide international stability. As a final example, Martin's (1994:275) conclusion exemplifies Bretton Woods nostalgia when he writes: "whatever the form, the case for re-regulation is strong: the power of global money over national economic space has already been allowed to extend too far."

I will argue that the arguments made within IPE that re-regulation of financial markets on a global scale and through state cooperation is the *only* viable response to liberalised finance are flawed, for three reasons. First, as I have argued in the interlude with regard to the regulatory efforts which took place in the US and UK during the 1930s, regulation entails the depoliticisation of financial practices. Regulation and reporting requirements determine the domain of financial truth and normality, which is thus placed beyond political debate. This point can be illustrated with the regulation proposed as a result of the Congressional Hearings in the wake of the LTCM crash. The Hedge Fund Disclosure Act, which was accepted by Congress as a result of the hearings analysed in chapter 5, stipulates quarterly reporting requirements for hedge funds concerning their assets, positions, leverage and risks. At the same time as complicating the previously secretive freedom of hedge funds, however, the act legitimates and stabilises hedge fund activity as a respectable aspect of modern economic life. Indeed, the Act was designed specifically for that purpose. In a press release announcing the act, Representative Richard H. Baker, chairman of the House Capital Markets Subcommittee, states that "[t]he goal of the bill is to enhance market discipline and allow market participants to make better, more informed judgements about the creditworthiness of hedge funds." "After considering the report and testimony at several hearings held by the House Committee on Banking and Financial Services," Baker added, "I have concluded that the most appropriate response to the treatment of hedge funds is a measured, market-oriented approach of enhanced disclosure."[4] In short, the Hedge Fund Disclosure Act created a legitimate domain for hedge funds to operate, stabilised the controversy surrounding hedge funds, and, most importantly, silenced the critical questioning concerning discourses of entitlement and wealth distribution which took place during the hearings by Congressman Sanders and others. Regulation provided a depoliticisation, not just of hedge fund activity, but of wider questions concerning entitlement, credit access and the legitimate basis for profit-making, which were directly related to the LTCM case.

"Too often," Thomas Keenan (1997:172) writes, "a demand for politics takes the form of an evasion of the political." Keenan's statement seems particularly relevant in relation to the demand for regulation within the literature of political economy. Cerny, for example, is well aware that his conclusions entail a depoliticisation of financial practices. Indeed, Cerny holds out depoliticisation as the way in which re-regulation of global finance *should* be brought about. "[T]he substance of any agreement" concerning international financial regulation, Cerny (1995:243) writes, "must be limited enough in scope that it can be treated as a *technical issue* and dealt with by experts away from the political limelight. Politicisation, whether at an intranational or an international level, might well prove to be an insuperable barrier, if not always to the conclusion of any specific agreement, then to its effective implementation" (emphasis in original). Cerny's explicit objectives to depoliticise are remarkable for someone professing, elsewhere, to aim to 'globalise the political and politicise the global' (Cerny 1999). However, Cerny's scope for politicisation of financial practices is profoundly limited by the concept of financial markets his work implies. As quoted above, the reasons Cerny (1995:241) advocates financial regulation is, in the first instance, to prevent "market failure" and to prohibit market distortion. Thus, Cerny offers an understanding of 'markets' as pre-given, clearly bounded and autonomous entities. However, as I have argued in chapter 4 and the interlude, there is nothing natural or self-evident about understandings of the (free) market. On the contrary, the meanings and measures of what constitutes the free market have been subject of political debate and contestation, and have been stabilised only through those regulatory structures that render legitimate financial transactions possible and create the space for the free market to operate. What eludes Cerny, therefore, is the point that the market and regulation are not forces pulling in opposite directions, but are mutually constitutive and do not exist independently of each other. However, my argument that regulation entails a depoliticisation must not be seen as a principled rejection of *all* regulatory efforts, but, instead, seeks to emphasise this mutually constitutive role of law and market, and advocates an

increased openness to wide-ranging practices of financial politicisation within the study of political economy.

The second reason why holding out re-regulation as only viable alternative to liberalised finance is flawed is that the objectives of regulation share their epistemological assumptions with financial rationalism itself. The objectives of re-regulation are cast most commonly in terms of preventing financial crises and providing financial stability. "[M]y particular question... is," Strange (1998:18) writes, "Where are the truly serious flaws in the system which threaten its stability and even survival?" Strange (1986; 1998) takes the 1929 stock market crisis and the depression of the 1930s as benchmark of disaster and is preoccupied with identifying strategies and policy choices which can prevent such events in the future. Underpinning Strange's call for financial stability is a concept of security which connects certainty to autonomous state action. As I will elaborate in a later section of this chapter, financial rationality is founded upon a similar epistemology which connects safety, certainty and security. Although there is a marked difference between Strange's work (1998:179), which repeatedly insists that "we do not – cannot – know the future," and the degree of faith in predictability displayed by the financial industry, I will argue below that preoccupations with future stability within the literature of political economy fail to pose a profound challenge to the notions of security and predictability which underpin financial rationality.

A third reason why Bretton Woods nostalgia and calls for re-regulation are inadequate, is because they entail a degree of defeatism which in its own way has a depoliticising effect. As demonstrated by the quote from Pauly (1997:142) above, revival of the Bretton Woods system is thought to lack the "slightest political momentum." Strange (1998:187) also expresses doubts about whether it is "practicable" to "[turn] the clock back to a time of strict exchange controls, state intervention in investment and production, and the closing – in effect – of international financial markets and the channels that link them together."[5]

Indeed, more generally, the representation of finance as a homogenous and clearly bounded system attributes to the power of financial institutions a degree of effectiveness and autonomy which seems impossible to refuse. Cerny (1994:326) for instance, writes: "It is the way that financial flows are structured... that gives global financial markets their autonomy and their capacity to impose embedded financial orthodoxy on governments and societies." The work of Stephen Gill has also represented finance as a powerful monolith. Gill and Law (1988:78) conceptualise the power of capital as structural power, defined as a "self-reproducing" economic and ideological power. In structural power, the material and normative aspects of authority converge to form a consistent "framework of thought," which conditions "the way individuals and groups are able to understand their social situation, and the possibilities of social change" (Gill and Law 1988:74). Structural power is defined through its consensual rather than coercive nature, and comprises the powerful processes by which certain interests are articulated as universal interests.

Gill's (1990) argument that there exists a hegemony of financial interests is important because it demonstrates how ideas and discourses concerning the proper meaning of the free market and the proper role of national governments are subject to political debate and historical change. Moreover, Gill's (1995) work on disciplinary neo-liberalism discusses the political effects of the economic techniques of surveillance and auditing which are an important operative domain of financial rationality. However, the identification of a financial hegemony implies a consistent, unitary and coherent regime of government, firmly directed by financial institutions and important financial participants. Thus, Gill (1990:45) quotes Gramsci's definition of the hegemonic 'moment' as "bringing about not only a unison of economic and political aims, but also intellectual and moral unity, posing all the questions around which the struggle rages not on a corporate but on a 'universal' plane, and thus creating the hegemony of a fundamental social group over a series of subordinate groups." A hegemony thus exists by virtue of the convergence of all material, ideological and moral aspects of a problematic into a universal framework. The micro technologies of disciplinary power and "the intensification of surveillance in the workplace and in the streets,"

discussed by Gill (1995:40; 2000), are interpreted as the progressive extension of the power of capital into daily life. Gill's argument here bears important similarities to Connolly's assertion that economic inequality and the privatisation of security are linked. However, Gill's identification of the progression of disciplinary neo-liberalism into all domains of life awards to the power of capital a degree of homogeneity and structural coherence which I would like to question. The next section will argue that understanding financial power as made possible through a particular financial rationality places more emphasis on the contingencies, insecurities and 'spaces of freedom' in financial networks.

Repoliticising Finance

In contrast to the depoliticising conclusions of some authors within political economy, this chapter will think through ways in which financial practices can be repoliticised. A genealogy is motivated precisely by finding insecurities and uncertainties in that which is represented as stable, coherent and self-perpetuating. Politicising 'global finance' requires a historicity which "disturbs what was previously considered immobile;... fragments what was thought unified;... shows the heterogeneity of what was imagined consistent with itself" (Foucault 1984a:82).

Instead of occupying a singular political position, Keenan (1997:154-155) shows, Foucault was preoccupied with imagining and bringing into existence "new schemas of politicisation." In an interview, Foucault explained plainly the political objectives of a genealogy. "[H]istory serves to show how that-which-is has not always been," Foucault (1988a:37) argued, "that the things which seem most evident to us are always formed in the confluence of encounters and chances, during the course of a precarious and fragile history. What reason perceives as *its* necessity, or rather, what different forms of rationality offer as their necessary being, can perfectly well be shown to have a history; and the network of contingencies from which it emerges can be traced" (emphasis in original). Discussing the contingent history of rationalities, according to Foucault, enables

political criticism and enables imagining alternative futures. "It is fruitful," Foucault (1988a:36) adds, "to describe that-which-is by making it appear as something that might not be, or might not be as it is." In this manner, "by following lines of fragility in the present," it becomes possible to "grasp why and how that-which-is *might no longer be* that-which-is" (Foucault 1988a:36, emphasis added).

It is here that the "space of freedom" emerges in rationalities or orders of reason (Foucault 1988a:36). Rather than being completely oppressive, one-directional and all-encompassing, orders of reason always entail, according to Foucault, the possibility of freedom or revolt. Put simply, if financial rationality is a particular mode of government, which prescribes 'normal' and 'rational' choices and behaviour within a domain called finance, this still implies a field of choice or possibility, even if some choices may lead to financial exclusion or predicates of madness. As Foucault (1988b:83-84) puts it, "The characteristic feature of power is that some men can more or less entirely dominate other men's conduct – but never exhaustively or coercively... There is no power without potential refusal or revolt." On another occasion, Foucault emphasised the importance of freedom in his analyses of power. "When one defines the exercise of power as a mode of action upon the actions of others," Foucault (1982:221) wrote,

> one includes an important element: freedom. Power is exercised only over free subjects, and only insofar as they are free. By this we mean individual or collective subjects who are faced with a field of possibilities in which several ways of behaving, several reactions and diverse comportments may be realised... Consequently there is no face to face confrontation of power and freedom which is mutually exclusive (freedom disappears everywhere power is exercised), but a much more complicated interplay.

It is important to understand the differences between Foucault's understanding of the complex interplay between freedom and power, and the representation of financial power as hegemonic or universal. For instance, concepts of hegemony as articulated within political economy frequently presume a one-directional power relationship between the ruler and the ruled. In a Gramscian hegemony, individuals either have power *or* are subjected to it, largely by virtue of their class-position. Keenan (1997:139-140) summarises this view in which power and freedom are mutually exclusive: "[P]ower, understood as domination or the imposition of constraint, works by

'fraud, illusion, false pretences,' by preventing our purposes and desires from reaching fulfilment (or perhaps even formulation) and then masking that fact."[6] Similarly, formulations in Gramscian IPE emphasise the misleading cunning of power, and imply a notion of 'false consciousness' by which the subordinated come to believe in normative propositions that are antithetical to their genuine (class) interests.

In contrast, in Foucault's understanding individuals both exert and undergo power. "There is no binary and all-encompassing opposition between rulers and ruled at the root of power relations," Foucault (1998:94) argues, "one must suppose rather that the manifold relationships of force that take shape and come into play in the machinery of production, in families, limited groups, and institutions, are the basis for wide-ranging effects of cleavage that run through the social body as a whole." Indeed, subjects are constituted in and through relations of power, as Campbell (1998b:511-512) explains: "Foucault's being human is necessarily implicated in and produced by those relationships of power... [This] means that relations of power in and of themselves can neither be avoided nor considered 'bad,' for without them... society could not exist." In Foucault's formulation, power is no longer understood as forbidding and misleading, purposely wielded by one group over others, but as producing and regulating the network of social relations.

The indispensability of power relations for society does not mean that it has become futile and irrelevant to study power relationships. On the contrary, Foucault (1982:223) points out, this new point of departure "makes all the more politically necessary the analysis of power relations in a given society, their historical formation, the source of their strength or fragility, the conditions which are necessary to transform some or to abolish others. For to say that there cannot be a society without power relations is not to say either that those which are established are necessary, or, in any case, that power constitutes a fatality at the heart of societies, such that it cannot be undermined." While there is no power without the possibility of resistance – "violent resistance, flight, deception, strategies capable of reversing the situation" – Foucault (1989c:441) points out

elsewhere, "states of domination do indeed exist. In a great many cases power relations are fixed in such a way that they are perpetually asymmetrical and allow an extremely limited amount of freedom."

This chapter will argue that, while power relations made possible through financial discourses are undeniably asymmetrical, strategies of resistance and repoliticisation must not just be thought possible in a distant future, but must be identified and encouraged in the present. Just as power does not emanate from one clearly defined source, resistance may emerge from multiple sources and in many possible ways. Instead of "a single locus of great Refusal," says Foucault (1998:95-96), "there is a plurality of resistances, each of them a special case: resistances that are possible, necessary, improbable; others that are spontaneous, savage, solitary, concerted, rampant or violent; still others that are quick to compromise, interested, or sacrificial; by definition, they can only exist in the strategic field of power relations."

It is important, again, to observe the differences between Foucault's propositions and current understandings in political economy. Cox, for example, holds out a broad-based counter-hegemonic challenge as the desired form of resistance against the financial establishment. "[T]he practical problem," Cox (1999:15) writes, "remains of forging links among divergent disadvantaged groups that would bind them together in a counter-hegemonic formation." However, reducing the multiplicity of possible refusals and resistances to a single force or movement can be seen as an exclusionary political project in itself.[7] Instead, political economy might open itself to theoretically supporting 'a plurality of resistances.'

The next section will further elaborate the theoretical basis on which finance can be conceptualised as a fallible discursive practice rather than a mastering force, with the help of the work of Butler. The subsequent sections will discuss three strategies of repoliticisation which are taking shape in the era of liberalised finance. These sections will emphasise the internal weaknesses, uncertainties and insecurities of contemporary financial rationality.

Performing Financial Rationality

Throughout this project, I have argued that it is fruitful to consider global finance as a historically constructed discursive practice instead of a natural and coherent system. Financial practices do not exist above and beyond human action but are in need of constant enactment and affirmation by financial practitioners. This section will argue that considering 'finance' as a domain made possible through performative practices focuses attention on the multiple ways in which financial power can be (and is being) challenged.

In discourse theory, a performative is that which enacts or brings about what it names – the quintessential example being the priest whose words 'hereby I thee wed' enact the marriage. Still, says Butler (1993:13), we cannot consider the priest's power to be "the function of an originating will," as it is dependent upon prior institutions of power and ritualised formulas for enacting marriage. The power of the priest, in this example, is not a totalising sovereign power, *nor* is it solely a mechanic derivative of prior structures. As Butler (1997:26) puts it, "the subject is neither a sovereign agent with a purely instrumental relation to language nor a mere effect whose agency is pure complicity with prior operations of power."

I contend it is possible to think of 'finance' as a domain made possible through performative practices. The practice of finance is defined through certain conditions of intelligibility which determine what money and monetary instruments are, and how they can be measured, deployed and multiplied. These conditions of intelligibility have a historicity which precedes and constrains participants in the financial sphere. At the same time however, these discursive conditions enable and shape financial agency. Like the priest, financial agents are neither sovereign subjects nor reducible to the mechanics of financial power structures. Instead, they are regulated through historically constituted financial discourses, but also acquire the authority to perform, affirm and amend these discourses. "[A] general theory of the performativity of political discourse," Butler (1997:40) writes, understands "performativity as a renewable action without clear origin or end [which] suggests that speech is finally constrained neither by its specific speaker

nor its originating context." In other words, financial participants articulate and execute financial decisions or strategies, but are not sovereign originators of their actions.

Thinking through Butler's formulation in a more concrete way, the importance of financial education and examination becomes clear. In the first chapter I have discussed how instruction in financial rectitude and economic citizenship have become increasingly important for obtaining jobs, housing etc. Children are targeted from an increasingly young age to acquire financial skills and become responsible financial agents. Those unable to successfully negotiate the criteria for modern financial responsibility are effectively excluded from economic citizenship, and suffer diminished credibility (c.f. Gill 1995:20-27). At the level of financial experts – those participating in financial decision-making, being employed by banks and other financial institutions – a proliferation of financial education can also be observed. Expensive and prestigious Masters of Business Administration (MBA) courses can be considered to govern not just abstract or expert knowledge of financial participants, but to govern also behaviour, dress, self-understanding and sense of community for those who participate in them. In this sense, financial education is part of the constitution of agents and their interests. Financial agents do not deliberately and consciously delude subordinate classes, but emerge within a domain of explicit and implicit norms which regulate the limits of the sayable for legitimate participation in the financial sphere (c.f. Butler 1997:133).

Butler's (2000:14) theory of performativity has affinities with a theory of hegemony, understood as "the ways in which power operates to form our everyday understanding of social relations, and to orchestrate the ways in which we consent to (and reproduce) those tacit and covert relations of power." However, and in contrast to the way in which a theory of hegemony has been articulated within political economy, Butler emphasises the instability of power and the multiplicity of possible resistances. Performativity precisely opposes concepts of "mechanical and predictable reproduction of power," by placing emphasis on the continued performance and enunciation of financial governance: "If... a structure is dependent upon its enunciation for its

continuation, then *it is at the site of enunciation that the question of its continuity is to be posed*" (Butler 1997:19, emphasis added). In other words, despite the rigorous training and education financial agents are initiated by, their performances do not flawlessly reproduce previous formulations, but may reformulate, rearticulate, transform, and even fundamentally question financial orthodoxies. Thus, thinking of finance as made possible in performative practices has consequences for the way in which resistance and change is conceptualised. "[P]ower is not stable or static, but is remade at various junctures within everyday life," writes Butler (2000:14), "[m]oreover, social transformation occurs not merely by rallying mass numbers in favour of a cause, but precisely through the ways in which daily social relations are rearticulated, and new conceptual horizons are opened by anomalous or subversive practices."

Considering financial rationality as a performative practice increases the possibility to observe and encourage flaws or tears in the fabric of financial authority, a possibility that seems largely foreclosed in formulations of autonomous and self-propelling financial structures. One recent instance of dissent which tears the fabric of financial authority is Joseph Stiglitz's public criticism of the IMF's policies with regard to the 1997-1998 Asian financial crisis. At the time of the Asian crisis, Stiglitz was chief economist at the World Bank, as well as being a former top advisor of the Clinton administration. Stiglitz can be considered a financial agent in the sense discussed above, and has taught at Stanford, Yale and Princeton universities amongst others. During his work at the World Bank, he supported the creation of institutional and legal frameworks for the effective operation of financial markets in the former Eastern Bloc. Despite this financial credibility however, Stiglitz criticised the IMF in an article published in *The New Republic* in April 2000. In this article, Stiglitz accuses the IMF of being secretive, undemocratic, authoritarian and arrogant. "The IMF likes to go about its business without outsiders asking too many questions," Stiglitz (2000) writes, "in theory, the fund supports democratic institutions in the nations it assists. In practice, it undermines the democratic process by imposing policies." Moreover, Stiglitz accuses the IMF of using outdated and inappropriate economic models which

exacerbated the Asian economic crisis. The arrogance of economic science which assumes its theories to be universally applicable means that "[IMF] economists frequently lack extensive experience in the country [they assist]; they are more likely to have firsthand knowledge of its five-star hotels than of the villages that dot its countryside." Despite this lack of precise historical and economic knowledge, Stiglitz (2000) asserts, "the older men who staff the fund... act as if they are shouldering Rudyard Kipling's white man's burden. IMF experts believe they are brighter, more educated, and less politically motivated than the economists in the countries they visit."[8]

Stiglitz's statements demonstrate the multiplicity of sources from which dissent and resistance to financial practices may emanate. While Stiglitz should be firmly considered in the camp of the 'rulers,' his actions may contribute to change in institutionalised financial practices. Although Stiglitz surrendered his credibility with the financial establishment, and left his position at the World Bank in order to be able to voice his critiques, his arguments have been widely circulated and discussed. According to one journalist, they have "opened the door wider on an institution whose processes have had little real public scrutiny. [They] also provided heavy ammunition for the street protesters who flocked to Washington to rail against the IMF's and World Bank's policies towards developing countries" (Gray 2000:15). Institutional change may be imagined as an incremental rather than a revolutionary process, and Stiglitz's actions provide a small tear in the performance of financial authority.

In Butler's formulation, the fact that social institutions are not static entities but instead depend on the continued performance and rehearsal of conventional formulae, is precisely what makes them vulnerable. At the same time, certain concerns and statements have been assigned to the exterior of the financial domain, and speaking them risks expulsion from the financial sphere. Still, financial agents are not mechanical reproducers of financial orthodoxies: precisely their education and initiation as financial practitioners awards them a degree of authority and autonomy. Thus, political space may be pried open precisely at the site of enunciation, at the borders of the 'speakable': "as we think about worlds that might one day become thinkable, sayable, legible, the

opening up of the foreclosed and the saying of the unspeakable become part of the very 'offence' that must be committed," writes Butler (1997:41/139). Not only did Stiglitz say the unspeakable – by asserting, for example, that IMF staff "frequently consists of third-rank students from first-rate universities" – but he also actively attempted to broaden political debate on financial policy. "If there's one thing I've learnt in government," Stiglitz (2000) concludes, "it is that openness is most essential in those realms where expertise seems to matter most."

In modern financial rationality, responsibility is not clearly located with one actor or group of actors. The operation of financial rationality depends upon "hierarchised, continuous and functional surveillance" which keeps financial participants in their place and prescribes their possible fields of action (Foucault 1979:176). Thus, borrowing Foucault's (1979:176-177) terms, we can think of financial rationality as

> organised as a multiple, automatic and anonymous power; for although surveillance rests on individuals, its functioning is that of a network of relations from top to bottom, but also to a certain extent from bottom to top and laterally; this network 'holds' the whole together and traverses it in its entirety with effects of power that derive from one another: *supervisors, perpetually supervised.* The power in the hierarchised surveillance of the disciplines is not possessed as a thing, or transferred as a property; it functions like a piece of machinery. And, although it is true that its pyramidal organisation gives it a 'head,' it is the apparatus as a whole that produces 'power' and distributes individuals in this permanent and continuous field (emphasis added).

At the same time, Stiglitz's decisions illustrate that responsibility and change *are* possible in the machinery of disciplinary power. Indeed, according to Keenan (1997:137), Foucault's "gesture of dislodging the subject from any position of control, and exposing it instead to the... difficulty of its occupying a discursive space and time whose rules cannot be transformed at will, does not imply the symmetrical 'end' of responsibility... but rather... the asymmetrical emergence of a different responsibility." Responsibility emerges at the site of enunciation and rearticulation, as an unpredictable "stumbling block" in the operations of financial power (Keenan 1997:152-153). Thinking of financial rationality as made possible through performative practices, responsibility emerges at the sites in which daily social relations are rearticulated and in which new conceptual horizons are being opened (Butler 2000:14). Thus, responsibility, like power, becomes not something statically owned or possessed, but a possibility always present in relations of power.

Accordingly, the following sections will discuss three sites of rearticulation and repoliticisation which demonstrate the emergence of new responsibilities in the era of liberalised finance.

Debt Sanctuaries

This section will analyse how the current Jubilee 2000 initiative, the global campaign that was founded in 1996 to demand the cancellation of all international debt owed by poor countries in the millennium year, can be seen to repoliticise the relations between creditor and debtor. Spaces of freedom have always existed in relations of financial power, in the form of debt sanctuaries and debt relief. Chapter 3 has shown that nineteenth-century US courts were not afraid of siding with traders who had lost on the stock markets, by annulling futures contracts and other financial obligations. Indeed, an explosion of moral discourse on the subject of meeting one's payments and keeping one's honour takes place precisely in the absence of absolute guarantees or unquestioned naturalness of obligations. This section goes on to argue that possibilities of refusal and spaces of freedom have become increasingly asymmetrical in modern financial rationality, but that the relations between debtor and creditor are dependent on a moral discourse which can be repoliticised.

In contrast with modern credit-rating practices and tightly regulated repayment schemes, historical evidence suggests that debt enforcement has often been erratic and irregular. For example, in his satirical dialogues describing the seventeenth-century Amsterdam money-markets, de la Vega mentions the possibility of an 'appeal to Frederick,' which annulled the obligations of a futures contract:

> Frederick Henry... a shining star in the house of Orange Nassau, promulgated (with wise motifs) an ordinance for these provinces, according to which he who sold shares for future delivery without putting them on the time account should be exposed to the danger (because he has sold something he does not own) that the buyer will not take the pieces at the time fixed upon. When speculators looked for protection through this recourse (which is called 'to appeal to Frederick,' in accordance with the name of that famous governor), the storms stopped, the attacks ceased, and the disturbance died down... (de la Vega 1996 [1688]:152-153).

The 'appeal to Frederick' effectively allowed the annulment of contracts for short-sales if buyers were about to loose from them. As we have seen, short-sales were regarded as highly suspect throughout the history of finance, because they involved the sale of shares by someone who did not own them, for delivery at a future date. According to de la Vega (1996:153), most people would appeal to Frederick "only when compelled to do so, I mean only if unforeseen losses occur to them in their operations." But some, de la Vega complains, abuse the possibility of this appeal, and consider their personal advantage more valuable than their credit and their honour. De la Vega (1996:154) concludes: "the fact is... that, while Adam was ashamed of his nakedness, there are men at the exchange who are not ashamed that (to the disadvantage of their creditors) they have kept hold of their money." De la Vega (1996:153), in other words, constructs a moral discourse around the practice of appealing to Frederick, and asserts that those making use of it were frequently "gullible" and "gamblers."

By comparison, in seventeenth and eighteenth-century Britain, debt sanctuaries existed, to which debtors could escape when they were unable to repay their debts (Barty-King 1991:5-8 and 73-84). At this time debtors were jailed, and were frequently worse off than their fellow inmates because prisoners had to pay for food and lodging to the prison warden (Barty-King 1991:29-84). With their debtors imprisoned, creditors had *little* chance of getting their money back. Still, creditors were frequently supportive of laws for the imprisonment of debtors. Debt sanctuaries were legal enclaves where debtors could not be arrested and taken to prison. These sanctuaries had ecclesiastical origins, and were directly linked to Christian prohibitions on usury. One sanctuary, for instance, was located in Edinburgh's Holyrood Park, which provided refuge for all sorts of criminals, but from 1560 onwards for debtors only. Some debtors lived in the refuge temporarily, some permanently, as is mentioned in Charles Mackie's (1819:105) description of Holyrood palace and grounds: "[t]he whole of this Park still affords an Asylum to insolvent Debtors, whose persons dare not be seized at the instance of their creditors so long as they reside within its precincts." According to Mackie (1819:109), "the privilege of this sanctuary is strictly limited to

civil debts. No protection is afforded for breaches of the peace, or crimes of any description. There are accordingly a number of persons either insolvent, or who have experienced sudden reverses of fortune, which they hope to retrieve, constantly resident in the houses within the boundary."

De la Vega's moral sense that it is not precisely the *money* which was at stake in the negation of financial contracts but the honour and credit of the debtor, can also be found descriptions of the eighteenth-century debt sanctuaries. For example, an extended description of the Whitefriars sanctuary in London features in Sir Walter Scott's historic novel *The Fortunes of Nigel*, when in the second volume Scott's hero suffers a blow to his fortune. The moral fibre of Whitefriars' inmates was questionable, according to Scott (1822:146), who composed the following initiation song for the entrants of Whitefriars:

> From the blight of the warrant (...)
> From the Bailiff's cramp speech,
> That makes a man thrall,
> I charm thee from each,
> And I charm thee from all.
> Thy freedom's complete (...)
> To be cheated and cheat,
> To be cuff'd and to cuff;
> To stride, swear and swagger,
> To stare and to stab,
> And to brandish your dagger.

Indeed, Scott's description of Whitefriars firmly establishes the lost honour of debtors who decided to seek refuge and failed to confront their creditors. The inhabitants of Whitefriars are portrayed as drunken, loud and lawless gamblers – and once again, financial irresponsibility is associated with female unruliness and prostitution. In "the ancient Sanctuary at Whitefriars," according to Scott (1822:128-129),

> the wailing of children, the scolding of their mothers, the miserable exhibition of ragged linens hung from the windows to dry, spoke the wants and distress of the wretched inhabitants; while the sounds of complaint were mocked and overwhelmed in the riotous shouts, oaths, profane songs, and boisterous laughter, that issued from the ale-houses and taverns, which, as the signs indicated, were equal in number to all the other houses. And, that the full character of the place might be evident, several faded, tinselled, and painted females looked boldly at the strangers from their open lattices.

Thus, while the possibility existed for debtors to abscond their legal financial obligations, they were still regarded as moral outlaws of society.

The practice of imprisoning debtors persisted until 1869, when the new Debtors Act prohibited imprisonment for debt except in cases of fraud, and most imprisoned debtors were released. The act was a product of decades of political struggle and debate, during which the responsibilities of the debtor and the moral relations between debtor and creditor were at stake (Barty-King 1991:119-149). While some participants in these debates claimed that "credit is... imprudently given, to the real injury of the customer who is induced to buy what he cannot pay for" (quoted in Barty-King 1991:127), the responsibility for the relationship between debt and credit was overwhelmingly assigned to the debtor. "These thriftless persons," wrote one journalist in 1859, "are often driven in the end to do very shabby things. They waste their money as they do their time; draw bills upon the future; anticipate their earnings; and are thus under the necessity of dragging after them a load of debts and obligations which seriously affect their action as free and independent men" (quoted in Barty-King 1991:142).

Still, it is precisely with the ending of debt imprisonment, and the emptying of the debt sanctuaries, that the (moral) relation between debtor and creditor became entrenched as a technology of power in the Foucauldian sense. This is foreshadowed, for instance, in the writings of James Neild, treasurer of the 'Society of for the Discharge and Relief of Persons Imprisoned for Small Debts Throughout England and Wales,' a charitable institution which collected funds to have debtors released and which supported reform of insolvency laws. In 1802, Neild wrote that imprisoning debtors seldom led to the repayment of the debts, and that it was in the best interests of creditor and debtor alike to abolish such laws. "If therefore imprisonment could be avoided," Neild (1802.23-24) continues, "a man in distressful and precarious circumstances, convinced that the greatest evil which could befall him under a reverse of fortune would be to give up all his property for the payment of his debts, would then, with a calm and honest firmness, submit to his creditors, make a true disclosure of his circumstances, and a liberal surrender of his effects, relying

upon their clemency, as it would establish a confidence between men." Neild thus advanced his case for debt forgiveness by emphasising the moral obligation and responsibility of the debtor to honour his financial contracts. It is significant that the moral boundary between creditor and debtor was *strengthened* in conjunction with the abolition of imprisonment for debt. As Neild (1802:26-27) points out, the Society for Relief of Imprisoned Debtors maintained a moral distinction between deserving and undeserving debtors, "preferring to relieve those whose characters best warrant attention," and using a debt classification system as "the means of checking the career of the thoughtless and extravagant."

According to Nietzsche (1996:44), there is a connection between the concept of 'guilt' as sin or bad conscience, and "the very material concept of debt," which are both denoted by the German word *Schuld*. The pleasure of corporeal punishment, Nietzsche argues, frequently took the place of material repayment in European history. "In order to instil trust for his promise of repayment," Nietzsche (1996:45-46) writes,

> in order to impress repayment as a duty and obligation sharply upon his own conscience, the debtor contractually pledges to the creditor in the event of non-payment something which he otherwise still 'possesses,' something over which he still has power – for example, his body or his wife or his freedom or even his life... In particular, however, the creditor could subject the body of the debtor to all sorts of humiliation and torture – he could, for example, excise as much flesh as seemed commensurate with the size of the debt. For this purpose, there have existed from the earliest times precise and in part horrifically detailed measurements, *legal* measurements, of the individual limbs and parts of the body (emphasis in original).

After the abolishment of slavery and imprisonment of non-paying debtors, the debtor's obligations, previously regulated by punishment, came to be regulated through the guilty conscience and the "powers of freedom" (Rose 1999). The moral duty to observe financial obligations can be considered among the "values and presuppositions given in the name of freedom and liberty" that act upon and regulate free subjects in modern society (Rose 1999:11). The corporeal freedom for debtors, then, was made possible through technologies of debt management and credit rating. We have seen that in the eighteenth century Defoe was one of the first to articulate financial rationality in this way, by making a connection between good bookkeeping and a clean conscience. As Barty-King (1991:166) recounts in his history of debt and

debtors, credit management became institutionalised not long after imprisonment for debt was abolished, and the accountancy profession became preoccupied with "organising respectable credit for respectable people." The new technologies of credit-rating and debt honouring, however, operate with more force and more consistency than ever before, and have made the occurrence of debt forgiveness and jubilees (almost) unthinkable.

Despite the abolition of slavery, torture and imprisonment for non-paying debtors, a strict regime of guilt and punishment still underlies modern debtor-creditor power relations. Indeed, according to Nietzsche (1990 [1886]:159), the modern regulation of debt/guilt (*Schuld*) is dependent upon "the spiritualisation and intensification of *cruelty*" (emphasis in original). Nietzsche's argument that modern debtor/creditor relations depend not upon a relaxation of punitive measures, but on an internalisation and intensification of cruelty, seems nowhere more appropriate than in regard to the current international debt problematic. Loans made to 'developing' countries in the 1970s by Western banks and governments continue to paralyse the poorest countries in the world, with some countries owing more than twice their Gross Domestic Product (GDP) in debt (Dent and Peters 1999:10-11). Most loans were made with flexible interest rates, and when in the early 1980s international interest rates soared, many countries found themselves unable to keep up payments. Despite a number rescheduling efforts, many sub-Sahara African and Latin-American countries still struggle to keep up interest payments, and can no longer hope to be able to service the debt principals themselves. In fact, many debtor countries have by now paid a manifold of the principal amount of their debts in interest. At the same time, through the accruement of interest and the devaluation of debtor currencies, international debt obligations are greater than ever (Kamp 2000:40). This has led to a situation in which there is a net flow of payments from African countries to the IMF, which has gained effective governance over many indebted countries (Pettifor 1998:120). Many indebted countries, Oxfam has documented, spend more on interest rate payments than on "health, education and basic nutrition" (Strange 1998:113).

In 1996, James Wolfensohn, president of the World Bank, launched a debt relief initiative aimed at large-scale reduction of the levels of international debt of Highly Indebted Poor Countries (HIPC). The initiative, Wolfensohn noted in an accompanying statement, "deals with debt in a comprehensive way to give countries the possibility of exiting from unsustainable debt. It is very good news for the poor of the world."[9] Despite the fact that the HIPC Initiative in scope and aims does go beyond earlier debt relief initiatives, such as the Brady Plan of 1989 (Felix 1994:368), a logic of guilt and calculated punishment can still be demonstrated to underlie the new initiative. Under the initiative, countries have to qualify for debt relief after a 'Debt Sustainability Analysis,' prepared by staff of the World Bank and the IMF, which measures debt-to-export levels, and which determines "whether a country is facing an unsustainable debt situation after the full application of the traditional debt relief mechanisms." This new framework, the World Bank goes on to say, "not only adds greater certainty to the calculations, but will *in most cases* increase the amount of relief actually provided."[10] The complex calculations of debt sustainability analyses aim to determine the *minimum* amount of debt reduction which would provide "a solid basis for HIPCs to... strengthen their development efforts, particularly in the area of poverty alleviation" (World Bank 2001:3). In one instance, Dent and Peters (1999:55) note, this careful calculation and changing of balance sheets led to a reduction of Mozambique's yearly debt service burden from US$104 million to US$100 million.

Fears of renewed indebtedness and of debtor irresponsibility are at the heart of Western opposition to debt cancellation. It is feared that developing countries which have incurred debts in the 1970s but 'squandered' the money on luxuries and corruption, are not properly punished for their sins and may even be encouraged to continue such irresponsibilities after the debt relief. The calculated punishment of the HIPC initiative and the fears of leniency expressed by Western governments and creditors illustrate Connolly's arguments concerning 'a call for revenge' underlying modern discourses of justice and responsibility. According to Connolly (1995:42) "a call to revenge forms the least discussed and most pervasive force in the desire to punish." This

call to revenge, Connolly (1995:46) goes on to show, is regulated through the forgetting of all ambiguity and porosity of 'responsible agency' as a category: "The porous category of responsible agency provides perhaps the largest container into which the spirit of revenge is poured in contemporary moral and legal practices." While authors such as Foucault and Butler have demonstrated the problems of the category of sovereign agency, "the most compelling practices of merit, desert and respect within Western cultures require attributions of responsibility to maintain themselves," writes Connolly (1995:46). "There are powerful cultural pressures then," Connolly concludes (1995:46), "to obscure this tension between the social indispensability of responsibility and the problematical desert or merit of those to whom it is applied."

Thinking through the problem of international debt with the help of Connolly's arguments, it becomes clear that 'a call for revenge' underlies the constitution of debtor states as responsible agents who must be punished for their sins of corruption and financial irresponsibility. The constitution of debtor states as responsible agents at the same time absolves Western creditors from responsibility. As Popke (1994:265-266) puts it, the actions of the IMF and the World Bank in relation to debtor countries are "scripted as the fault of individual countries. Like the unruly child or the credit card junkie, the problems of these countries are the result of certain avoidable actions against which they have been cautioned. By emphasising individual responsibility, the IMF deflects attention away from the harmful policies of the industrialised nations." Casting debtor states as individual responsible agents allows the calculated punishment measured out by the World Bank, which remind of the precise measurements of flesh excised from the bodies of pre-modern debtors (Nietzsche 1996:46). At the same time, the discourse of individual responsibility allows the forgetting of the shared responsibility underlying the debt crisis.

The objectives of the Jubilee 2000 coalition stand in sharp contrast to the allocation of individual responsibility, calculated punishment and the desire for revenge underlying creditor actions. Jubilee campaigns for the uncalculated cancellation of all unpayable HIPC debts. According to Jubilee, international debt relations are a new form of slavery, and its campaign

emphasises the comparable brutality of the debt crisis and the Atlantic slave trade.[11] I have argued in this thesis that financial rationality was articulated in conjunction with the material and appropriative claims of colonial conquest, and that the beginnings of long-term credit were inextricably connected to the accumulative possibilities of the Atlantic slave trade. By emphasising this historicity of financial practices, Jubilee disturbs the normalised performance of financial rationality. According to campaign president Ann Pettifor, the Jubilee initiative is explicitly intended to question the right of international creditors to uphold their standards of financial rationality above all other concerns. "International financial relations are dominated at all stages by creditors who decide on the conditions for repayment, closely monitor the implementation of conditions, and determine whether to offer rescheduling," Pettifor (1998:119-120) argues, "[c]reditors act as plaintiff, judge and jury in their relations with debtors." The asymmetrical power relations based on the moral superiority of creditors have been institutionalised in international financial relations and, according to Pettifor (1998:121), debt servicing by poor countries has become "accepted by public opinion as an unpleasant but necessary by-product" of economic rationality.

The Jubilee 2000 campaign challenges existing articulations of the relation between creditor and debtor in which the moral responsibility for the financial obligation is entirely assigned to the debtor. As two of the founders of the Jubilee campaign explain, the Jubilee in the Old Testament teaches that the creditor has a moral duty to forgive the debt when the debtor cannot pay. In biblical teachings, say Dent and Peters (1999:23), this is related as the "natural and proper thing to do with unpayable debts." Similarly, Dent and Peters (1999:30) urge financial institutions to refrain from collecting debt if it is "only repayable at a social cost which no honourable banking institution would seek to impose." Thus, Western creditors have to take responsibility for promoting the loans and imposing excessive interest rates on them, according to the Jubilee coalition. As Pettifor (1998:119) puts it, "The Coalition does not use the phrase 'debt forgiveness' in its campaigning. This would imply that the 'sin' of falling into debt was committed

solely by elites in debtor countries. Rather, the elites of the more powerful nations are considered co-responsible... [M]ost credits are aggressively promoted to encourage poor countries to buy British goods – particularly arms." Jubilee opposes the calculative and punitive regime which underlies the World Bank initiatives, and emphasises the lack of historical continuity between the borrowing governmental elites of the 1970s and 1980s, and those servicing interest payments now. Jubilee's rearticulation implies that debtor counties cannot be treated as responsible sovereign agents.

Through its broad-based campaigning, Jubilee has effectively repoliticised a number of issues conventionally beyond public and political debate. The relations between debtor and creditor, the priority of financial rationality, the calculations of the World Bank and the accountancy principles underpinning international debt flows have become questioned and scrutinised in Jubilee's publications. In contrast to many authors in the discipline of political economy, who take the containers and calculations of financial rationality as unquestioned, 'material' starting points to their inquiries, and who, as I have demonstrated, sometimes even advise depoliticisation as effective strategy, Jubilee has called for broad-based public knowledge and debate on the principles of financial rationality. Jubilee 2000 believes that everyone "can understand and grapple with supposedly complex financial matters," as Pettifor writes in Jubilee's December 2000 report.[12] The following section elaborates the importance of challenging complex financial knowledge for the repoliticisation of financial practices.

Knowledge and Security

Undermining the naturalness and 'scientificness' of modern financial rationality requires, most importantly, questioning and *repoliticising* technical financial knowledge. I have argued in this thesis that critics of modern financial power relations too often accept uncritically the containers and calculations provided through financial discourses. For instance, Henwood (1997), in his

outspoken critique of Wall Street, fails to fundamentally challenge the way in which knowledge is constituted in the financial industry and uncritically accepts the measurements of markets and investment provided by financial rationality. Cerny, by comparison, while critical of financial power, assumes 'markets' to be external and pre-given entities, which cannot be fundamentally questioned, but which have to be ruled in and remedied of their negative social consequences.

In contrast, this research argues that it is politically important to question the 'sedimented objectivities' of financial knowledge, and show that the measurements and containers of financial rationality are not as secure, scientific and *normal* as they purport to be. The possibility of finance to be considered a science hinges on particular notions of time, predictability and security. In contrast to Medieval conceptions of time as belonging to God and inaccessible and unpredictable to mortals, financial discourses are dependent upon the slow articulation of the future as knowable and scientifically predictable. Thus, the moral and economic legitimacy of financial practices has been articulated in terms of providing security in face of an uncertain future. Most notably, speculation has slowly been legitimised as an indispensable practice which allows economic participants to sell off their 'natural' business risks to a professional risk-bearing class, thus providing security from (un)expected events. This section and the next will discuss how the redefinition of prevalent notions of security offers a second site of repoliticisation in the era of liberalised finance.

As well as a military and strategic term, security is properly understood to be a financial term.[13] The financial meaning of security originates from the pledge, promise or caution given in relation to an obligation or debt, which, again, reminds of Nietzsche's remarks on the pledging of life and wife to the creditor in case of non-payment. The *Oxford English Dictionary* records the following entry as far back as 1592: "Without good securitie they will lend Nobody mony." This sense of security as a loan collateral is also related to the meaning of the term 'bond' as promise or pledge in financial dealings. The meaning of security evolved to mean a creditor's document, held as a guarantee for repayment, and subsequently became a noun, a general term for stocks and

share certificates. Financial practitioners came to be called 'security analysts,' as in the following *OED* reference from 1872: "The labour of a stockbroker consists in purchasing securities on behalf of his customers, he receiving a fee in the form of a percentage on the purchase or sale of the security." When in 1934, US Congress established a federal regulator for financial markets as a result of investigations into the 1929 stock market crash, it was called the Securities Exchange Commission (SEC). More recently, securitisation is the name given to the process by which financial assets such as loans are transformed into marketable instruments. In this process, a large number of small loans (for instance mortgages) is bundled and sold to a financial investor (for instance a pension fund) (Mishkin 1992:305-307). Securitisation has increasingly come to mean the constructing, assembling and selling of tailor-made financial instruments for large investors and speculators, and has in recent decades encouraged an increase in speculation.

According to Michael Dillon (1996:120), "we stand too uncritically under the prejudice of the opposition between security and insecurity." The political significance of a search for security, argues Dillon, is that it seeks to expel and exclude that which is defined as causing insecurity. "It is evident," writes Dillon (1996:120-121),

> that any discourse of security must always already, simultaneously and in a plurality of ways, be a discourse of danger too. For example, because security is engendered by fear (fundamentally aroused by the uncanny, uncertain, different, awesome, and uncalculable), it must also teach us what to fear when the secure is being pursued... Because security is engendered by fear it also calls for counter-measures to deal with the danger which engenders fear. Hence, while it teaches us what we are threatened by, it also seeks in its turn to proscribe, sanction, punish, overcome – that is to say, in its turn endanger – that which it says threatens us.

Thinking through Dillon's formulation in the context of financial security, it becomes possible to observe that the security provided through financial practices seeks to expel and punish that which is associated with Fortuna. Being unpredictable, fickle and tempting, Fortuna symbolises the uncertainties of time and the vagaries of life. Since the Middle Ages, Fortuna has been the personification of disorder, chance and chaos. She is traditionally associated with time and is sometimes seen to do the work of time, such as controlling the seasons, causing ruin and presenting opportune moments (Patch 1967:115-117). She was often depicted with a wheel to

represent variation and change, or standing on a ball to represent the instability of her wishes. She was considered wilful and unjust, and was expected to lash out precisely at those who feel happy or secure. According to Patch's (1967:85) detailed study of Fortuna in Medieval literature, she is "just the envious, vindictive creature to throw dice with mankind and shout her laugh of triumph when she wins, to set traps for the sufferer, to snare the unwary, to wage petty warfare on the deviant."

In financial debates in the eighteenth and nineteenth centuries, the dangers represented by Fortuna also became embodied by the gambler. Fortuna had always been considered the natural patron of games and gambling, and was sometimes seen to play dice with mankind. As I have argued, the increased association of Fortuna's evils with gambling and gamblers served to carve off a legitimate space for financial practices. Idleness, irresponsibility, criminality, drunkenness and perversity were dangers that became associated with gambling. H.S. Martin (1919:77), defending the New York Stock Exchange, wrote in 1919: "Gambling is always immoral. Aside from the fact that the gambler is usually inherently dishonest, gambling produces nothing of value; Speculation produces something and is therefore not immoral." In the words of another author of a stock market tract, the affinities between gambling and Fortuna's cult are clearly detectable. "Gambling is wholly based on superstition," this author wrote in 1936, "It is a practice ill adapted to an age of science. It has its early origin in the practice of divination and sorcery... It is the dark jungle-land from whence there still issue untamed beasts of prey to make havoc among citizens" (MacDougall 1936:i). As I have argued, female unruliness, deviance and prostitution are recurrent themes in the construction of discourses of danger and gambling which underpin the articulation of financial rationality.

The gendered discourses of danger constructed through references to Fortuna and gambling, then, have made possible a particular identity of financial man. "Discourses of danger," says Campbell (1998a:170), "by virtue of telling us what to fear, have been able to fix who 'we' are." As Adorno and Horkheimer (1997 [1944]) argue in their interpretation of the myth of

Odysseus, the modern rational and coherent self is made possible precisely in opposition to danger. Only through his adventures and experiences which force him to confront danger, are Odysseus's identity and self-consciousness formed. For instance, in his confrontation with the Sirens, whose song cannot be resisted but whose devious ways bring destruction, Odysseus's virile character is moulded. "[T]he allurement of the Sirens remains superior; no one who hears their song can escape," Adorno and Horkheimer (1997:33) write, "Men had to do fearful things to themselves before the self, the identical, purposive, and virile nature of man was formed." The Sirens, of course, bear resemblance to Fortuna, whose desirable riches were often similarly located on a slippery and inaccessible rock, symbolising the dangers involved in attaining them (Patch 1967:129-136). In Adorno and Horkheimer's (1997:61-62) analysis, man's confrontation with the Sirens provides a mythical basis for rational economic man:

> the Odyssey is already a *Robinsonade*. Both Odysseus and Robinson, the two shipwrecked mariners, make their weakness... their social strength. Delivered up to the mercy of the waves, helplessly isolated, their very isolation forces them to recklessly pursue an atomistic interest... This was to be confirmed later on by bourgeois economics in the form of the concept of risk: the possibility of failure becomes the postulate of a moral excuse for profit. From the standpoint of the developed exchange society and its individuals, the adventures of Odysseus are an exact representation of the risks which mark out the road to success.

By comparison, Fortuna's dangers can be considered a mythical foundation for rational, foreseeing, disciplined, mastering financial man, who provides security in face of her dangers. It must be emphasised that only through such (gendered) identification of danger, has it become possible to think of financial rationality at all. The opposites which define financial rationality have historically included – and here the connections between the realm of 'finance' and broader Western culture and society are evident – the "dangerous, chaotic, and anarchical realm in which the evil, mad, drunk, arrogant and savage people are found" (Campbell 1998a:60).

In conjunction with these particular and gendered notions of danger, then, a particular notion of security was constructed to carve off a legitimate realm of finance. A specifically masculine and supposedly scientific notion of certainty and foresight became articulated in opposition to Fortuna's dangers. This notion of security operates by "synchronising security,

safety and certitude" (Constantinou 2000:288). In other words, financial security is predicated on the presumption that "to be secure is to be safe is to be sure. To secure is to protect from danger is to *know* the danger and how to go about doing the protection. This constitutes the security problematic as automatically and exclusively a question of providing safety and producing knowledge" (Constantinou 2000:288, emphasis added). Thus, financial man is cast as the confident dispeller of doubt. Such was, for instance, the argument of banker George Rutledge Gibson (1891:30-31) when addressing a Bankers' Convention in 1891:

> the stock broker, if at all fitted for his vocation, takes a wide interest in affairs, nothing escapes his observation, and he is constantly on the watch for news and opinions that may have any bearing upon any of the securities dealt in on the exchanges... he reflects upon the past and peers into the future to discover all the springs which move the money market, public sentiment and national prosperity or adversity. As a rule, he is genial in manner, liberal in his views, generous in his nature, a warm friend, a good liver and a keen observer.

Increasingly, financial education and judgement have clustered around mathematical and scientific study of stock prices with two important consequences. First, this development banks on the reputation of science and scientific endeavour as a disinterested, truth-seeking and noble exercise. Secondly, this development has made it possible to shield finance from the political domain and the public struggles which plagued it since the birth of a credit economy, with, as we have seen, the English paper wars in the eighteenth century and the US bucketshop debate in the nineteenth century as highlights.

Insecurity

The articulation of the identity of financial practitioners in terms of providing security through rational calculation and disinterested study underpins the legitimacy deficit in finance. Financial practices have been increasingly shielded off from public debate and democratic decision-making (see for instance Underhill 1997:18-19). In Butler's terms, the 'mastering' of practices which is required to be initiated as financial agent, shapes and constrains what one might say in this capacity. At the same time, those who have not been subjected to such financial education, are not

considered legitimate speakers/agents in the financial domain. However, its complex mathematical formulas aside, we have seen that financial practices, even modern financial practices such as LTCM's rationale, are founded upon specific notions of danger, time, uncertainty and calculability, which can be (and have repeatedly been) challenged. It is important to see that those critics within political economy who advise increased (Bretton Woods style) financial regulation as remedy against excessive financial speculation, do not necessarily challenge the fundamental notions of time and predictability that financial practices are founded upon, but strive for similar guarantees of security and predictability.

This section will argue, however, that concepts of certainty and predictability offer a particular *kind* of security, which generates credit and profits in particular ways. The security provided by financial rationality prioritises the ownership of the future by those who can make claims to accurate prediction and calculation, and, simultaneously, the closing down of democratic openness and contestation over the indeterminate future by those who cannot make such claims. In other words, colonising and commercialising the future through financial instruments reduces democratic debate to a set of narrowly calculated alternatives. This section will challenge and destabilise these prevailing notions of security and predictability.

Instead of providing security against objectively existing dangers, financial rationality *creates* particular definitions of insecurity. That the identification of danger in the form of uncertainty, chaos and disaster, is precisely what makes finance profitable, was recognised by Strange more than ten years ago. The existence of speculative finance, she argues in *Casino Capitalism*, depends on "those who are eager to make a fortune by responding to widespread demand for greater certainty... A speculative market therefore actually *requires* uncertainty. It also needs risk-aversion on the part of others" (Strange 1986:110-111, emphasis in original). Strange's remark begins to point to two important features of modern risk management. First, financial speculation which professes to provide security does not just *react to* but *creates* particular definitions of insecurity. There is a circular argument propping up the financial sphere: while pretending to eradicate

uncertainty from business ventures, finance identifies and invents more and more possible uncertainties to be hedged. Beck (1992:56) realises that the commercialisation of uncertainties is potentially infinite, and says: "risks are a bottomless barrel of demands, unsatisfiable, infinite. Unlike demands, risks can be more than just called forth... [M]arkets of a completely new type can be *created* by varying the definition of risk, especially demand for the avoidance of risk – open to interpretation, causally designable and infinitely reproducible" (emphasis in original). As noted at the end of the previous chapter, such infinite creation and commercialisation of insecurities ultimately provides security only to those who can afford the continuous purchase of hedging instruments, and mostly to those who construct and sell these instruments.

The second important aspect of modern risk management is that it requires risk-aversion on the part of others. As we have seen, contemporary morality conceives of responsibility in terms of secure futures, thought possible through hedging, calculation and insurance. While it was once considered immoral to purchase life insurance because it was perceived to speed up the death of the insured, it has now become immoral *not* to insure against all types of business risk. Only such moral framework can legitimate, for instance, Merton's ideal of 'continuous time finance' in which every thinkable uncertainty can be commodified, priced and sold.

However, the concept of security which connects safety and certitude is only one of multiple possible meanings which can be given to security. In other words, current notions of morality and security on which financial practices are founded have prevailed over other possible definitions of security. One such alternative definition of security, noted by Der Derian (1992:75), is the sense of security as "a careless, hubristic, even damnable overconfidence," as in the following *OED* reference from 1575: "They...were drowned in sinnefull securitie." We have seen that it is precisely such overconfident security which was punished by Fortuna, who reputedly lashes out to those believing themselves happy, rich and secure. The moral condemnation of those who attempt too rigidly to control, hedge and predict the future has been written out of contemporary financial discourses. Reopening this historical meaning of security, which suggests

that it is not always desirable to actively control and submit the future in order to attain a (false) sense of security, chips away at the legitimacy of modern financial risk managers and their desires to mathematically predict and commercialise the future.

Constantinou (2000:288-289) has offered an alternative discourse of security, which "[resists] securitisation," in other words, which does "not offer rhetorical legitimation to different regimes of power or justify the intervention of security experts and practitioners." Appropriating Constantinou's arguments in the context of financial practices, it becomes possible to think through notions of security which do not legitimate current financial rationality, and which do not call for intervention of financial experts. Constantinou (2000:290) offers the possibility of understanding the struggle leading to security not as "a fight to eliminate the danger but of literally facing up to the danger. That is to say, to fight to reach a mental state where one is secure-in-danger, where one can dwell... next to one's enemy in security, without surrendering, or dominating, or making friend of the foe." The state of being 'secure in danger' can be interpreted as a different way of dealing with Fortuna; pertaining not to the desire to dominate and master her, but to a desire to learn to live with instability and to respect the indeterminacy of life as a locus of democratic openness. In this alternative sense, "security is... not a given or permanent condition but continuous, spiritual, seafaring agon. To emerge secure, one must free oneself and withdraw from the obsessive mental cares one is commonly submerged to. To remain afloat one must... learn to live with fluctuidity and instability" (Constantinou 2000:292). Not surprisingly, this alternative notion of security echoes representations of Fortuna, whose vicissitudes were often associated with the sea (McWilliam 1995:cxxxvi).

One outspoken critic of the claims to certainty and security made by financial rationality is hedge fund manager and philanthropist George Soros. Soros (1999:24) has repeatedly argued that "economic theory set itself an impossible task when it tried to imitate physics" because financial actors play an active role in shaping the future that they are supposed to reflect. The notion of market equilibrium which underpins the analogy between physics and economics, Soros (1999:36)

argues, is a theoretical construct "rarely observed in real life" and entirely inappropriate for understanding financial markets. Instead, Soros (1997:50) argues that financial practices are reflexive because "prices are not merely the passive reflection of independently given demand and supply: they also play an active role in shaping those preferences and opportunities." I have demonstrated that the idea that financial participants *create* the future they purport merely to predict was an important legal and political argument in the bucketshop debate. For example, in the early twentieth century Supreme Court judge Taft noted this contradiction in financial discourse when upholding the constitutional legitimacy of the Grain Futures Act. The recognition of reflexivity in financial practices, however, stands in sharp tension with the articulation of finance as a scientific and disinterested practice. In order for modern financial rationality to continue operating, this tension must be silenced and subjugated, not at one historical moment, but repeatedly and continually.

In contrast to prevailing notions of security and knowledge, Soros (1998:39) has argued that "we must lower our expectations about our ability to explain and predict social and historical events" before a real change in financial practices becomes possible. Soros's critique echoes subjugated notions of security as 'damnable overconfidence,' which question the rights of those who confidently predict and commercialise the future. Instead of a new model or a new universally valid law, Soros's (1994:2) argument introduces an element of "indeterminacy into social events... It interprets social events as a never-ending historical process and not as an equilibrium situation." Soros's conclusions point to the necessity for greater openness about and political scepticism towards calculative and expert financial practices. While Soros's arguments have been dismissed by established economists as un-scientific, ill-informed and unacceptable,[14] they provide an important provocation for those working in the field of political economy, which does not currently question the assumptions and predicates of economic and financial theory.

Respect for the indeterminacy of life and criticism of expert financial knowledge must not been seen as a rejection of care for the future or a passive resignation to Fortuna's blows. On the

contrary, while defining security in terms of certainty and knowledge underpins a legitimacy deficit in financial practices, different orientations to danger and security promise to reopen the financial domain to political discussion. Recognition of the limits of human capacity to predict and control the future enables, in Reddy's (1996:228) words "enlarged room for social and political contestation [of]... the indeterminate future. It enables the indeterminate future to be transformed into an open political domain, rather than existing as an undemocratically and scientistically defined and mapped out horizon of alternatives." Translating Reddy's remarks to finance, moving away from untamed belief in mathematical predictability would allow more room for democratic debate, and opens the possibility of a plurality of agency within the financial sphere.

Measuring the Market

As Keenan explains, Foucault's work demonstrates that there is no uncontaminated or innocent space in which 'pure' or scientific (and financial) knowledge can develop, away from power structures. "[W]here knowledge is concerned, power relations do not simply say 'no,'" writes Keenan (1997:149), "[o]n the contrary, according to Foucault's hypothesis, they stimulate, excite, incite knowledge." Foucault understands power relations as not simply forbidding or suppressing, but as producing and inciting. This argument makes it possible to think of critique not as the progressive liberation from false knowledge, but as the simultaneous production of a *different knowledge*. In fact, the point of a genealogy is to show that different knowledges always have existed – that the 'progress' of modern calculation and rationality has depended upon the silencing and forgetting of a plurality of protests, questions and insecurities, which Foucault (1980:81) has called "subjugated knowledges." What a genealogy does, Foucault (1980:83-84) continues,

> is to entertain the claims to attention of local, discontinuous, disqualified, illegitimate knowledges against the claims of a unitary body of theory which would filter and hierarchise and order them in the name of some true knowledge and some arbitrary idea of what constitutes a science and its objects. Genealogies therefore are not positivistic returns to a more careful or exact form of science. They are precisely anti-sciences. Not that they vindicate a lyrical right to ignorance or non-knowledge... We are concerned, rather, with the insurrection of knowledges that are opposed

> primarily not to the contents, methods, or concepts of a science, but to the effects of the centralising powers which are linked to the institution and functioning of an organised scientific discourse within a society such as ours.

The previous chapters have remembered and reassessed the protests and questions of disqualified and illegitimate knowledges, which have been silenced by representations of financial history as the progressive development of modern rationality. However, the disqualified insights and questions concerning the logic of financial rationality are never completely forgotten, and continue to potentially disturb and threaten the security of financial knowledge. They can be seized upon by those who aim to produce different knowledges in the face of growing economic inequality.

This final section will analyse how the calculation and significance of financial indices and measurements offers a third site in which financial practices are being repoliticised. These markers are important, I have argued in chapter 4, not only because they are read as authoritative indicators of national economic well-being, but also because they have become definitions of *the markets*. In other words, while no pre-political or self-evident definition of 'the financial market' exists, financial indicators have assumed the role of defining the markets and embodying their objective movements. In addition, financial indices have become the basis of a number of new financial instruments and investment opportunities. Since the 1970s, it has become possible to invest in 'index-funds,' which technically replicate the composition of 'the market' and are assumed to provide safer investment strategies than the purchase of a carefully selected basket of stocks. These investment strategies are based on assumptions of continually rising market indices, and, as Bernstein (1992:248-249) explains, "[t]o perform as well as the index [is] to perform well above average, and at lower levels of risk." The emergence of index funds has given rise to a number of index-based speculative instruments, including wagers on rising and falling indices.

Financial Times journalist Philip Coggan demonstrates that, despite their scientific and authoritative image, ambiguity continues to exist around the construction of indices within the financial industry. The indices are increasingly important, Coggan (2000a; 2000b) writes, because

they are used as benchmarks for investment performance. In other words, if index-funds have made it possible to buy a portfolio consisting of the entire market, funds which invest differently are obliged to show better performance. However, Coggan (2000a) points out, "some people argue that the leading indices not only fail to reflect the true performance of the market but have led to dangerous distortions, particularly in the form of the dominance of the technology and telecommunications stocks." Coggan's (2000a) preoccupation with guaranteeing that the index is a "true measure of market performance," demonstrates his adherence to financial rationality, expressed by people like Dow and NYSE economist Meeker, who, as we have seen, believed that technological progress and calculative sophistication was all that was needed to arrive at a true and undistorted representation of market value. Indeed, the current trend towards using broader market indices, such as the Wiltshire 5000 index watched by Greenspan, implies that objectivity in indexing can progressively be attained.

However, Coggan's acknowledgement of the problematic nature of many current indices unwittingly offers a site in which financial measurements can be politicised and questioned. What, indeed, is represented by current authoritative indices and economic measurements, and what are the normative judgements obscured in their scientific image? Such questions have been poignantly raised concerning the validity of the Gross Domestic Product (GDP) as a measurement of national economic wealth and well-being by *Washington Monthly* editor Jonathan Rowe.[15] Pointing out that traffic jams, pollution, litigation services and hospitals all contribute to growing GDP, and that the "fastest growing occupations in [the US] include debts collectors and prison guards," Rowe (1999) politicises established economic knowledge and statistical measurement. Rowe seizes upon historically disqualified knowledges to support his political argument, by reminding us that the Nobel-prize winning economist Simon Kuznets, who designed and compiled the national accounts on which the GDP are based, had deep reservations about this indicator. As early as 1934, Kuznets argued before US Congress that "the welfare of a nation... can scarcely be inferred from a measurement of national income" (quoted in Cobb, Halstead and Rowe 1995). Kuznets's

reservations were dismissed by economists looking for "concepts that can actually be measured," and the GDP has acquired the "appearance of empirical certitude and expert authority" (Cobb, Halstead and Rowe 1995). In contrast, Rowe and his colleagues have designed proposals for a different measurement of national wealth, which includes household and volunteer work but discounts for the depletion of natural resources, security expenditures and increases in the inequality of income distribution.

Current economic and political obsession with continually rising stock market indicators similarly obscures the fact that environmental degradation, increased economic inequality and the spread of disease and disaster may all contribute to a rising stock market. Chapter 4 has discussed how Dow's initiatives in compiling stock market indicators were specifically designed to abstract financial practices from such political and social critiques, and move them into a domain of scientific and disinterested study. While Dow emphasised in his writings that his average would go up as well as down, current continuous calculation of the Dow-Jones average and newer, more complex indices, have intensified pressures for listed companies to deliver continually rising stock market value.

At the same time however, different knowledges *are* being produced by those who criticise the short-term growth imperative of financial rationality. By way of conclusion, I will discuss two alternative articulations of financial measurement which have grown out of dissatisfaction with current stock market indicators. While alternative measures in their own way affirm faith in the objectivity and calculability of financial practices, and are easily allied with social conservatism, it is important to observe and encourage such challenges to technical financial authority. Indeed, the existence of a plurality of possible indicators undermines the supposed objectivity of the ones which dominate the news, thus prying open space for doubt, choice and democratic discussion of financial issues.

First, the Dow-Jones company itself, which owns and produces leading stock market indices, has developed a 'sustainability index' in response to growing consumer demand for

investment opportunities into companies with good social and environmental performance (Cowe 2000:22). In contrast to the continually calculated DJIA, The Dow Jones Sustainability Group Index (DJSGI) emphasises long-term growth and transparency of its calculation. The Index includes companies which "seek to increase long-term shareholder value by incorporating responsible economic, environmental and social behavior into their business strategy [and which] invest in product and service innovations that use financial, natural and social resources in an efficient and economic manner over the long term."[16] The sustainability index, while still adhering to the economic logic of growth, gives individual investors and pension funds an opportunity to invest with regard for social and environmental issues. More importantly, the index implicitly raises questions concerning the politically problematic nature of other leading indices.

A second sustainability index, which offers a more profound questioning of financial rationality and the economic growth imperative, has been developed by the economic think-tank the New Economics Foundation (NEF), based in London. While acknowledging the problematic nature of "fighting indicators with indicators," the NEF has designed sustainability indicators which are discounted for environmental depletion and social inequality. In a move which opens up economic indicators to democratic participation, the NEF works with local communities "to decide the indicators that will make a difference to them – from the number of shops stocking local produce to the number of childcare places available."[17] At the same time, the NEF seeks to question current accountancy practices and valuation models, striving for more socially and environmentally aware accountancy.[18] Thus, multiple resistances are taking shape in the era of liberalised finance which do not promise to overthrow the financial establishment, but which do question, disturb and undermine the containers and categories of financial rationality and the supposed objectivity of financial knowledge.

Conclusion

The debates analysed in this thesis have shaped the regulatory and institutional structures of modern international finance. In an era when financial practices are closed off from democratic politics through the assertion that finance is too specialist for broad-based public debate, the exposure of contingencies and ambiguities in financial practices must be regarded as a political critique in itself. Rather than taking and occupying a singular political position, this last chapter has begun to think through ways in which new schemas of politicisation are taking shape in the era of liberalised finance. This chapter has emphasised the multiplicity of ways and the multiplicity of sources from which the seemingly secure knowledge of financial rationality is being questioned and disturbed. Instead of looking for a single locus of 'great Refusal,' or the emergence of a "collective will" which opposes the power of capital (Gill 2000:138), this chapter has identified ways in which "new conceptual horizons are opened" by the ensemble of practices which subvert, rearticulate and challenge financial rationality (Butler 2000:14).

These strategies of disturbance and repoliticisation should not be seen as solely operating in the margins of financial rationality, or as being interesting but futile resistances. On the contrary, this thesis has demonstrated that the insecurities and contingencies of financial rationality are at the heart of the ways in which financial discourses have taken shape and continue to take shape. Thus, it is significant that some of the rearticulations and repoliticisations analysed in this chapter are at the heart of the financial establishment. Stiglitz's exposure of inadequate economic analysis and modelling used by the IMF forcefully demonstrates the continuing problematics of considering economics and finance as a science. Soros's questioning of financial rationality similarly has historical resonance and exposes the continuing insecurity of the argument that financial markets can be scientifically studied and predicted. Soros's financial credibility and experience both guarantees an audience for his arguments (for instance, he has repeatedly testified before the House Banking Committee) and sits as an uncomfortable contradiction at the heart of financial normality. Coggan demonstrates that financial indexes and measurements are being

questioned within the financial industry, as well as outside it. Other resistances originate outside of what has been constructed as the legitimate financial domain, and pry open political space in different ways. Jubilee's arguments have been taken seriously by politicians in the US and the UK, and have forced World Bank president Wohlfenson to defend himself publicly. The legitimacy of the GDP is being questioned by the French and Australian governments, and is being reconsidered by the European Parliament and the United Nations (Cobb, Halstead and Rowe 1995).

Financial rationality should not be thought of as a stable or secure accomplishment, but as something which requires the continuous and repeated suppression of disqualified knowledges in order to be able to operate. Insecurities and resistances are thus always part of financial discourses. At the same time however, the multiplicity of resistances to financial rationality should not be understood as a subversive collective, working in unison towards the eventual overthrow of financial orthodoxies. Resistances themselves work in different, contradictory and insecure ways. The rearticulations and the new conceptual horizons analysed in this chapter do, however, promise democratic openness and the disturbance of the sedimented objectivities of financial rationality.

Rather than something to be feared, disturbing the secure knowledge of financial markets and questioning current concepts of predictability and certainty, should be a cause for rejoicing, as it opens political space for alternatively imagined futures. Nietzsche's *Fröhliche Wissenschaft* (1974:280) celebrates the political possibilities opened by the disturbance of secure knowledge, in words that remind of Fortuna's seafaring indeterminacy: "At long last the horizon appears free to us again, even if it should not be bright; at long last our ships may venture out again, venture out to face any danger; all the daring of the lover of knowledge is permitted again; the sea, our sea, lies open again; perhaps there has never yet been such an 'open sea.'"

Notes to Chapter 6

[1] Michel Foucault [1976] 'Two Lectures,' in Colin Gordon (ed.), *Power/Knowledge: Selected Interviews and Other Writings*, p.84.

[2] Mike Davis (1990:224) has written extensively on the proliferation of private security in the US and argues that "the market provision of 'security' generates its own paranoid demand. 'Security' becomes a positional good defined by income, access to private 'protective services' and membership in some hardened residential enclave or restricted suburb."

[3] A similar argument is made by Stephen Gill (1995:1), who notes that security technology and economic ideology converge in what he calls "disciplinary neo-liberalism" (see also Gill 1997:21). The continuity and differences between Gill's work and my arguments will be further discussed below.

[4] 'Baker to Introduce Hedge Fund Bill,' Press Release, Subcommittee on Capital Markets, Securities and Government Sponsored Enterprises, September 22, 1999. Available at: http://www.house.gov/financialservices/92299bak.htm
The full text of the Hedge Fund Disclosure Act (HR 2924) is online, and available via: http://www.house.gov/financialservices/bills106.htm

[5] Strange does go on to explore alternatives to Bretton-Woods style reregulation, such as the institution of an international bankruptcy court which would curb the power of international creditors. However, she calls this idea "naïve" and writes that "utopian ideas are apt to hinder more than they help. By encouraging people to dream about the ideal world, they distract them from doing what can be done in the real world" (Strange 1998:172-173).

[6] Keenan, here, criticises the concept of power offered by Charles Taylor. However, Keenan's statement offers an apt description of the way power is conceptualised in the work of Gramscian IPE, which assumes class identity to be a pre-political asset and which conceptualises hegemony as the process by which agents come to believe in political propositions that oppose their 'genuine' class interests. I have discussed this issue in chapter 1.

[7] A recent article by Gill (2000:136) places more emphasis on the multiple sources from which resistance might stem and advocates an "inclusive politics of diversity." However, within these plural and diverse resistances, Gill (2000:138) seeks to identify "the realisation of a collective will," which he sees emerging through broad-based protests such as in Seattle in 1999.

[8] For a comment on the significance of Stiglitz's resignation see also Henwood (2000).

[9] 'The HIPC Debt Initiative: Debt Relief for Sustainable Development,' *The World Bank Group*. Available at: http://www.worldbank.org/hipc/about/hipcbr/hipcbr.htm

[10] The HIPC Debt Initiative: Debt Relief for Sustainable Development,' *The World Bank Group*, emphasis added. Available at: http://www.worldbank.org/hipc/about/hipcbr/hipcbr.htm

[11] In its December 2000 report, Jubilee explains the significance of the symbol of the chain which has accompanied its campaigning as follows:

> The chain represents the enslaving nature of the debt burden which undermines development, dignity and even people's sovereignty. It is a sobering fact that in the last four years the debt crisis has led to the deaths of more people than the brutal Atlantic slave trade carried out over decades. Yet the stark imagery of the chain has always had a double meaning. When people form a human chain, alongside anger there is an immense sense of the power of people linked for a common cause. We remember that a popular international movement in

the 19th century, after a long struggle, brought about the end of the slave trade. The chains of debt are not yet broken, but they have been loosened; and as people continue to join hands against debt bondage, we will prise the chains of debt apart. (Jubilee 2000 Coalition, 'The world will never be the same again,' edited by Marlene Barrett, December 2000. Available at: http://www.jubilee2000uk.org/final/index.html)

[12] Jubilee 2000 Coalition, 'The world will never be the same again,' edited by Marlene Barrett, December 2000. Available at: http://www.jubilee2000uk.org/final/index.html

[13] All references to possible meanings of 'security' in this paragraph are from the online *Oxford English Dictionary*, unless indicated otherwise.

[14] In the *New Republic*, Nobel-prize winning economist Robert M. Solow dismisses Soros's arguments as unscientific and ill-informed. An exchange between Solow and Soros can be found in 'Global Capital Markets: an Exchange,' *The New Republic*, April 1999, page 24, available at: http://www.soros.org/textfiles/writings/041299_Exchange.txt

Soros (1994) has repeatedly expressed his "frustration" at the situation "where I am taken so seriously but my theory is not... It is treated as the self-indulgence of a man who made a lot of money in the stock market."

[15] Criticising GDP as a measure of economic activity has earlier been a prerogative of feminist economists, who argue that traditional women's activities, including household work, child-rearing and social care are not included in measurements of GDP and are not financially rewarded (see for instance Bakker 1994 and Nelson 1996). These criticisms are taken up buy Rowe's 'Redefining Progress' coalition.

[16] The Dow Jones Sustainability Group Index, 'First Anniversary, Annual Review 2000 & Index Composition 2000/2001,' p.12. Available at: http://www.sustainability-index.com/pdf/DJSGI_Presentation2000_E.pdf

[17] New Economics Foundation, 'Tools for the New Economy: Indicators of Sustainability.' Available at: http://www.neweconomics.org/Default.asp?strRequest=toolsforne&strContext=indicators

[18] See also the Institute for Social and Ethical Accountability, a professional accountancy body which aims to include measurements of corporate responsibility in conventional valuation models: http://www.accountability.org.uk

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