



MICKY LEE

BUBBLES AND MACHINES

Gender, Information and Financial Crises



Bubbles and Machines: Gender, Information and Financial Crises

Micky Lee

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CHAPTER I

Introduction: Bubbles and Machines

Bubbles: elusive, temporary, and illusory.

Machines: rational, concrete, and useful.

The definition of an economic bubble appears to be very straightforward: it is 'a market phenomenon characterised by surges in asset prices to levels significantly above the fundamental value of the asset.'¹ The word 'phenomenon' assumes that an economic bubble is a temporary problem that can be solved and hopefully prevented in the future. The definition implies that the difference between the asset price and the fundamental value can be known if there is a better formula. An accurate calculation would require better machines. Better machines would control bubbles.

In a financial crisis, bubbles are the feminine; machines are the masculine. Crisis is said to be a temperamental moment in a largely stable market, an irrational moment in a mostly rational market. The term 'irrational exuberance'—first coined by Alan Greenspan (former chairperson of the US Federal Reserve) and later adopted by Yale economist Robert Shiller (2000) as a book title—pointed to the herds of investors who drive up asset price above the fundamental price. An irrational market is seen to be lacking control, a party that has gone wild.

To prevent the market from behaving irrationally, machines are invented to perfect the market. There are machines to report stock prices, machines to communicate between buyers and sellers, and machines to predict the market. Few have asked: can machines be irrational? Can technology do things out of intention? Will irrational machines produce information that leads to financial bubbles? In other words, are financial crises embedded in information technology? If irrational markets are inevitable outcomes of presumably rational machines, then how can we understand the gender discourse of financial information and financial crises?

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These questions may not make immediate sense, but this book aims to make sense of them. I answer the questions by discussing and illustrating how feminist political economic theories and Actor-Network Theory (ANT) of Science and Technology Studies (STS) enrich a political economic critique of financial crises. I argue that a critical political economic approach to communication is the most promising to understand financial crises because it takes into account the capitalist context in which crises occur and because it historicises technology and economy. Current political economic writings on financial crises have however neglected two areas: first, the gendered nature and gender ideology of finance capital. Not only are women used as resources to facilitate the flow of capital to and through financial markets, but gender is also made flexible to accommodate the flow. Second, financial information and finance capital are materially and technologically embedded. The materiality of financial technologies gives a qualitative property to financial information and finance capital, making them appear to be useful to the markets. Because specific financial information creates specific temporality and spatiality, multiple machines lead to multiple temporalities and spatialities. The disjuncture between them is the financial crisis, which can be illuminated from the vantage point of gender.

To advance the arguments that finance capital and the ideology of the crisis are gendered and that financial information is materially and technologically embedded, I develop four themes in this book.

Theme 1: Women serve as resources in financial markets. The circulation of finance capital relies on values produced by women in both the public and private domains.

Theme 2: Gender ideology is used to legitimise an unequal distribution of resources between women and men, and between developed and developing economies.

Theme 3: The production, distribution, and consumption of financial information—be it analogue or digital—rely on machines.

Theme 4: Financial markets are heterogeneous; a market assumes a specific spatiality and temporality which constitute an economy.

The two arguments of the book and the four themes will be unpacked later in this chapter but a concrete example will illustrate the two arguments.

‘It’s One Big Lie’: The Bernie Madoff Case

The discourse of the 2008–9 Global Financial Crisis left us with a few memorable phrases: ‘too big to fail’, ‘toxic assets’, ‘subprime mortgage’, and ‘it’s one big lie’. The latter was uttered by Bernie Madoff when he confessed that he ran the largest Ponzi scheme in US history. Madoff lured clients to entrust their money

in his company but he never invested it in financial markets. When the market was not in a crisis, he had no problem with money circulation. In a crisis mode, his clients withdrew money from their accounts and quickly emptied Madoff's bank accounts. According to news sources, Madoff confessed to his family one morning that 'it's one big lie.' He turned himself into the authorities and was sentenced to 150 years in prison and forfeiture of over \$17 billion.

The general public may find the Madoff story easier to understand than a complicated analysis of financial information. He was not the main culprit of the financial meltdown, but he provided a human face to personalise it. His rags-to-riches tale resonates well with most: born to working-class Jewish parents in Queens, New York, he married his high-school sweetheart and started a family and his own business after college. He was said to be very selective of his clients who were recruited from Jewish networks. Madoff constantly yielded double-digit returns for his clients even though his extraordinary success had raised a few red flags among financial analysts. Before Madoff's confession, he had lived the American Dream.

But this American Dream was one big bubble.

Journalists and commentators rushed to explain why the investors could not see through the bubble and why Madoff could maintain such an illusion for more than four decades. One common explanation is greed—an innate human flaw. Madoff *is* greed, deception, and immorality. The televised liquidation of Madoff's assets showed the struggling majority how the top 0.1% live. The victims who appeared in the documentary *Chasing Madoff* (2011; dir: Prosserman) were disgusted at how Madoff's extravagant lifestyle was built on the hard earned money of the working people. Women victims were particularly convincing in illustrating Madoff's immorality: some of them are single or widowed and lost their life savings; one was rumoured to be Madoff's mistress who trusted that he would take good care of her and her money. Via Madoff, the public could express their outrage at the insatiable Wall Street power players.

The Madoff story has provided materials for fictional and non-fictional films and television shows. Two post-crisis films, *Arbitrage* (2012; dir: Nicholas Jarecki) and *Blue Jasmine* (2013; dir: Woody Allen), satisfy the audience's desire to see bad people being punished. They also manage public anxiety by fictionalising the personal life of upper-class fraudsters. In both films, the filmmakers had to construct women characters because little was known about the private life of Bernie Madoff and his wife Ruth Madoff. In both films, the women characters reflect the immorality of wealthy con men.

Cate Blanchett won the Oscars' Best Actress award for her portrayal of a swindler's wife in Woody Allen's *Blue Jasmine* (2013). Blanchett reportedly used Ruth Madoff as a muse. Jasmine is portrayed as a materialist, a liar, a traitor, and a hysteric. She (not born into wealth) embraces the lifestyle of the wealthy. She turns her nose up at her sister, a working-class woman. After learning that her husband has been unfaithful, she calls the FBI and reports her husband's fraud

to the authorities. With no real assets other than a closet of designer clothing, Jasmine moves to San Francisco to stay with her sister and tries to hold down a regular job. Her lack of employable skills leaves her with one choice: re-marrying rich. She nearly succeeds, but a lie that she tells breaks off the relationship. At the end of the film, she has a nervous breakdown and sits on a bench talking to herself. Woody Allen is critical of Jasmine's ethical decisions, which it is suggested are an indirect cause of her husband's death by suicide. The character of the husband is killed off early on and is not publicly punished or humiliated. In contrast, Jasmine's character lives on and receives the brunt of criticism from other characters such as the stepson and sister's boyfriend, and also from the director and the audience.

The *Blue Jasmine* story draws on two gender assumptions about financial markets. Firstly, women testify to the immorality of men. A dishonest man not only deceives others in public, but he also betrays those who love him. Stereotypes such as the betrayed wife, the needy mistress, and the expensive prostitute regularly appear in both fictional and non-fictional films about financial markets (Lee and Raesch, 2015). The second assumption is that a hysterical female figure directly leads to the downfall of a masculine one. In *Blue Jasmine*, the neurotic wife who exposes the husband's lies brings about the man's death. Despite the fact that it is the feminine that brings down the masculine, the masculine can control the feminine through inventing better technology to control feminine hysteria, as seen from the second explanation of how Madoff successfully deceived so many.

Financial journalists showed Madoff's clients' foolishness by wondering why they did not notice the red flags raised in Madoff's financial information. For example, clients had no electronic access to their accounts, only receiving hard copies of financial statements in the mail a few days after a trade took place.² In short, experts thought the delay in reporting information should have raised suspicion among investors. The experts assumed that 'real-time', digital information reflects a real market; digital prices cannot be false because they are not prone to human error, thus are 'pure' and free of human interference. Digital technology is believed to *simply* transmit information from an unknown central system—such as an abstract market—to the investors' screens.

The assumed quality of digital financial information being 'real', 'true', and 'accurate' is embedded in the medium and technology through which it is disseminated. When financial information is embedded in an analogue technology (such as the paper slips and printed statements in Madoff's case), the information is believed to be likely inaccurate or false. Better machines and technology are invented to produce better information after a financial crisis because ideal information is believed to be truthful, quick, and accurate.

Contrary to the assumption of ideal financial information, this book advances the argument that inaccurate, delayed, or fabricated financial information is as *real* as 'accurate', 'real-time', and 'true' financial information. Either

type of information creates a market of a specific temporality and spatiality. Even though Madoff did not invest clients' money in the financial market, he had facilitated a circulation of finance capital by putting clients' money in bank accounts in the names of himself and others. The banks then circulated Madoff's clients' money in financial markets. If he had stacked the money—in the forms of cash and gold—away in a cupboard, the money would not have constituted a market because no economic activity would have taken place.

To conclude, the Bernie Madoff case shows that finance capital is gendered because gender ideology is used to explain economic crisis: while women could be used to testify against men's morality, women's hysteria is also used to explain why crisis happens. The case also shows the materiality of financial information, that different technologies give different qualities to information which in turn constitutes different markets. In the following, I explain how critical political economy, in conjunction with materialist feminist theories and ANT, will shed light on the gendered nature of financial markets and the materiality of financial information.

Theoretical Framework

Among all communication perspectives to examine financial crises, a critical political economic perspective is the most promising because it pays attention to the historical nature of capitalism and the struggles that led to the domination of finance capital. A critical perspective also pays attention to the unbalanced power relation between the dominant group and the subordinate group. It asks how the unbalanced power relationships between developed and developing economies, between male bankers and women borrowers, stabilise capitalism. Lastly, a critical perspective also advocates for changes, that large-scale societal transformation is only possible when humans exercise their agency. Even though communication scholars from cultural studies and journalism studies have critiqued the relationship between financial crises and capitalist institutions such as the press and popular culture (see Lee 2014c), they stopped short at theorising the relation between finance capital and the media.

Because political economists are interested in the historical nature of capitalism, they reject ahistorical explanation of financial crises in popular culture. The Bernie Madoff case illustrates that human greed and investors' foolishness are often used to explain a crisis. This popular belief fails to take into consideration the broader political economic context in which financial markets operate. The emphasis on innate human nature implies that political economic contexts are irrelevant to human actions and that human actions do not constitute political economic relations. Unsurprisingly, innate human flaws have also been used to explain the tulipomania in the seventeenth-century Dutch Republic (see Ch. 2). Using human psychology to explain the markets also implies that financial crises are *natural* and can neither be stopped nor prevented. Political

economists do not think financial crises are *natural*, instead they point out financial crisis epitomise crises of capitalism.

Political economists are also interested in understanding how the circulation of finance capital can be situated in the trajectory of capitalism. They do not assume any political economic system to be *universal*. Capitalism, along with communism/socialism, feudalism, and slave-based society, is a political economic system that is constituted by social relations resulting from historical struggles. Financial markets are however specific to a capitalist society because its sole function is to lubricate the flow of capital by extending the temporality of value realisation into the future. Madoff probably could not have established a successful business in a communist or slave-based society. A communist/socialist society privileges use value over exchange value; social beings would channel resources and energy to produce goods that can sustain lives such as food and shelter. Social beings in a communist/socialist society may not see the need to reinvest surplus capital in a market because they don't see the need to accumulate so much surplus. The dominant class controls resources (such as land) in a slave-based society by actively denying ownership to other classes.

Political economists do not see capitalism as a static system; it metamorphoses itself over history. According to Amin (1994), capitalism has arrived at a new phase since the mid-1970s when Western economies experienced stagnation. Three schools offer explanations for the long-term economic crisis: first, the regulation school believed that institutions play a role to stabilise an inherent unstable capitalist system. This approach sees history as systematic, logical and coherent. Second, the neo-Schumpeterian approach highlights the role that technology played in initiating and maintaining long-term economic prospects. This approach also believes in the systematic and cyclical nature of capitalism. Third, the flexible specialisation school believed that capitalism accommodates the competing paradigms of mass production and flexible specialisation.

What Have Political Economists Written About Financial Crises?

Political economists seized on the 2008-9 Global Financial Crisis as an opportunity to understand financialised capitalism. Here I review four different explanations of the crisis: financial market as a spatiotemporal fix of an inherent contradiction of capitalism (Harvey, 2010); the dialectics between value and anti-value (Harvey, 2018); the permeation of finance capital into spheres of production, circulation, and consumption (Lapavistas, 2009, 2011, 2014); and social production and resistance from the bottom-up perspective (Hardt and Negri, 2017).

The first explanation is offered by Harvey (2010) who wrote that financial crises epitomise the contradictions in capitalism: the financial market was invented to overcome the inherent problem of surplus overaccumulation by

extending the time for the absorption of excess capital. In a capitalist logic, the exchange value of a commodity must be higher than the cost to produce it. The capitalist will partially pocket the profit made in the market, partially re-invest the money in the market by acquiring more raw materials and labour power. However, capitalism is an inherently contradictory system because excesses always have to be invested in a market. Stagnation is an enemy of capitalism: capital not invested, goods not consumed, and labour power not bought are seen as harmful to the economy. In order to facilitate a continuous absorption of surplus, financial markets were created to offer capitalists a temporal fix to invest excess capital in return of future dividends. However, financial markets only absorb surplus capital, not surplus labour or goods. A rallying financial market only means that the wealthy will be better off, but the working class will not directly benefit from gains on title ownership. As a result, the financial market widens the disparity between the most affluent populations and the rest. According to the Organisation for Economic Co-operation and Development (OECD), income inequality was exacerbated in the past half-decade. Moreover the 1990s, the average income of the top ten per cent was seven times higher than the bottom ten per cent; in mid-2010 it was nine times higher.³

The second explanation of the crisis is the dialectics of value and anti-value. Harvey (2018) explains the financialised economy with debt being an anti-value in ‘the paths of value in “motion”’ (p. 6) in Marx’s political economy. Harvey highlights the dialectics of value and anti-value in the ecosystem of value production and distribution: value is only realised in circulation during which the negation of value occurs. To give an example, capitalists pay for labour hours and raw materials to produce commodities, but commodities on the shelf have no value until consumers buy them. Commodities that are left on the shelves for a long time slow down circulation. Because capitalism relies on a continuous circulation of capital, money, and goods, an economic crisis occurs when goods are left on the shelves for a long time. This signals that consumers may not have money to buy them and capitalists cannot recover the money invested in the production.

The dialectics of value and anti-value were applied to understand the debt economy because ‘it is fundamental to [understand] the crisis tendencies of capital’ (Harvey, 2018, p. 84). In a debt economy, loans and debt, as interest-bearing capital, are anti-value that circulates in the credit system. Debt can only be redeemed through claiming future value production. If the redemption fails, then a crisis occurs. At a personal level, an unemployed person will have a hard time repaying debt; at a national level, a bankrupt country may be forced by the World Bank and International Monetary Fund (IMF) to revamp its financial system. While Marx saw crisis as a moment of renewal because use value is degraded and exchange value is depreciated, Harvey (2018) is less optimistic than Marx because crisis forecloses the future, leaving no alternative for the present.

The third explanation of a financial crisis is the permeation of finance capital in the spheres of production, circulation, and distribution. Lapavistas (2009,

2011, 2014) asserts that the concept of financialisation is rooted in Marxist political economy, it that it signals an epochal change of capitalism, a systematic transformation of economy, and a problematic relationship between finance and the rest of the economy. Lapavitsas believes that finance capital is not separate from productive capital and that the 2008 housing crisis illustrates three trends of financialisation in mature economies: large multinational corporations relying less on banks; banks restructuring themselves and targeting individuals and households; and consequently financialising individuals' personal revenue in the form of debts and assets. Lapavitsas' stance on finance capital permeating productive capital is different from that of political economists belonging to the monopoly school. The different viewpoints will be explained in the next section.

The fourth explanation is offered by Hardt and Negri (2017), who examined financial crises from a bottom-up standpoint. They ask how a crisis is formed from the perspectives of social production and resistance. They argue that high inflation in 1970s had led to social grievance, which pushed government to pay for more services for the disfranchised. Governments then became ridden with debt, and transferred public debt to the private sector. The invention of new economic instruments and the growth of financial power generalise an economy of dispossession 'in which processes of extraction and mechanisms of debt spread exploitation across society' (p. 157). Hardt and Negri further detail that finance extracts value from the commons such as natural materials and societies: not only do industries such as mining and forestry depend on loans from financial institutions, industries of big data also capitalise on social relations. Similar to Lapavitsas (2009, 2011, 2014), Hardt and Negri disagree that finance capital only remains in the circulation sphere because it generates wealth through value extraction.

Political economists have offered plausible explanations of financial crises but they have ignored the role financial information plays in crisis. For example, Harvey has not addressed how financial information is generated to measure the value of past, present, and future commodities. Hardt and Negri hint at information being extracted from social relations as a commodity, yet they neglect how financial instruments produce information of different qualities. I will suggest how an ANT approach will remedy these oversights later in this chapter.

What Have Political Economists in the Field of Communication Written About Financial Crises?

The Global Financial Crisis has led many communication journals to publish special issues in which journalism and critical scholars have analysed the relationship between the financial market, everyday life, and the media industry (see Lee 2014 for the scope of this literature, which cannot be adequately covered here). In this section, I focus on political economic work that is at the

forefront in critiquing a historical materialism of financial markets by understanding ‘how capital flows and how capitalism evolves’ (Lee, 2014a, p. 891). Some political economic work published in special issues are Chakravartty and Schiller (2010) in the *International Journal of Communication* and Fuchs, Schafranek, Hakken, and Breen (2010) in *triple C: Communication, Capitalism and Critique*. Given the brief length of this introductory chapter, it is impossible to summarise the conversations between political economists, but I will briefly state in the following what political economists from two schools of thought—the monopoly capital school and the digital capitalism school—have written about financial crises. Both schools of thought are able to fill the gap in the current political economic understanding of financial crises by taking into consideration the role of information in finance capital.

Political economists from these two schools have written about an information economy before the Global Financial Crisis; their critiques of the digital economy are highly relevant to an understanding of financial information. Both schools object to a mainstream economic view of information which believes that information is borne by prices generated in the markets, that perfect information leads to perfect competition, and that sellers and buyers have perfect knowledge of each other in a perfect market. Political economists question these assumptions by questioning the economic value of information. For example, Robert Babe (1995) points out a paradox in mainstream economic thought: if information is generated by prices in a market, then how can the market determine the price of information? In other words, while mainstream economists see information as economically neutral data, political economists see it as a commodity. If financial information is a commodity with exchange value, then how can it measure its own value? While both schools of thought have provided plausible explanations why financial crises occur, each of them has a major blind spot which I will explain in the following sections.

The Monopoly Capital School

The post-Second World War US experienced fast economic growth because of massive infrastructure projects such as interstate construction and military spending. However, the economy cooled down in the 1970s. In 1966, Baran and Sweezy wrote *Monopoly Capital* to forewarn that a concentrated market could lead to economic stagnation and inflation. Magdoff and Sweezy (1977) later explained that inflation and stagnation are inherent in a monopoly economy: a quick expansion of surplus leads to inflation; corporation-controlled prices and wages lead to stagnation. To combat a sluggish economy, the government looked for large-scale game-changing projects, such as the ‘information highway’ initiative in the 1990s. The financial sectors were all deregulated to allow for a freer flow of capital from the productive to the financial sectors. In the US, the repeal of the post-Great-Depression-era Glass-Steagall Act had allowed

commercial banks to engage in investment. In the UK, the Big Bang was implemented to make the London stock markets more competitive. Financial deregulation led to unfettered capital flooding the financial markets, which increased risk for both productive and financial capital. McChesney, Wood, and Foster (1998) and Foster and Magdoff (2009) applied the monopoly capitalism argument to critique the over-blown information economy in the late 1990s and the speculative housing market in the late 2000s. Those authors argued that new information and communication technologies had failed to bring along sustainable growth, like infrastructure construction, in the post-Second World War period. The speculative housing bubble not only failed to stimulate the economy in the long run, but it also created a massive fictitious capital.

The monopoly school sees fictitious capital as separate from productive capital. It has long been suspicious of an economy that is not production-based. Activities such as accounting, marketing, and information-generating—according to Marx—are not productive activities. To the monopoly school, accountants and marketers are parasites who feed on the surplus value created by productive labour. Marx wrote that profit in the financial market is ‘a mere appropriation of the surplus-labour of others’ (Marx 1999/1894, p. 303). Drawing on Marx, the monopoly capital school thinks the production of financial information creates a fictitious market; the value reflected from title ownership is not real value because there is no production of commodities. Financialisation is seen as a cover up of stagflation, since it gives an illusion of a growing economy (Foster and Magdoff, 2009).

The financial market not only does not resolve the problem of overaccumulation, but it also exacerbates the problem because surplus capital is more likely to be invested in the financial markets rather than in production. To give a concrete example, the gains in the financial markets only benefit very affluent populations. They may spend money on luxury property and goods, but they will not need many more daily necessities such as food and basic shelter to sustain their lives. Therefore, even though they may hire more household help, they do not necessarily hire thousands of farmers, factory workers, and construction workers to produce life-sustaining goods. The employment rate will not sharply increase if only a small fraction of surplus labour has exchange value. What makes the matter worse is that capitalists may see the financial markets as a faster way to make money, thus devaluing the temporality for profit realisation in production.

A flaw of the monopoly capital school is that it believes there are two kinds of capital: productive and fictitious. Productive capital is seen as ‘real’ while fictitious capital is seen as unreal. The digital capitalism school that will be discussed below has offered a good reason why the divide between productive and fictitious capital is artificial. Schiller (2007) stated that many production activities rely on information: large-scale farming relies on information technology such as GPS and data analysis, factory production relies on ‘just-in-time’ data. The belief that farming or factory work is all done by hand and by simple

machines is a romantic notion, not the reality. Adding to Schiller (2007), Lapa-vitsas (2014) agrees that finance capital is not fictitious and that the financial market is a refuge of surplus capital because they could not explain the huge nominal value of financial markets. He believes that the financial system is a set of ordered economic relations comprising of markets and institutions which profit-making motives contribute to capitalist accumulation. In other words, there is no distinction between productive and fictitious capital.

This book brings up another flaw of the monopoly school's theorisation of the financial markets: that this school denies the materiality of finance capital and financial information. I assert that financial information are material goods because they are embodied in and through technologies through production, distribution, and consumption. For example, 'real-time' financial information is only possible because of the trading screen; stock price updates were only possible in analogue trading because of the telegraph. Therefore, financial markets are as materially constituted as consumer goods, even though they do not produce tangible goods.

The Digital Capitalism School

Political economists from the digital capitalism school are not entirely convinced by the 'monopoly capital' argument. As mentioned earlier, this school argues that digital information constitutes a 'real' economy because information is crucial to the production sector; agricultural production and manufacturing rely heavily on information to create surplus value. Furthermore, the digital capitalism school points out that information is a commodity in a capitalist society. Political economists such as Mosco and Wasko (1988), and Schiller (2007) highlight the commodification process of information by showing how large corporations privatise public information. Once information is commodified, it is a fetish with an exchange value. For example, advertisers pay a lot to buy information about their targeted customers. However, this information about a specific demographic has little value outside an advertising campaign; it does not help to combat global warming or to build better schools. Information as resources differs from information as commodities. The former is a non-economic good, the latter economic. Political economists desire more information to be public goods because it helps decision-making for the greater goods.

Mosco (1988, 2004, 2014) adds to the 'digital capitalism' argument by showing the power that the information and telecommunication sectors have over national governments. With the help of neo-liberal states, the largest information and technology companies can set a price on information, making an erstwhile public resource into a privatised good. For example, local towns and cities have the capability to build their own broadband network and offer low-cost or free Wi-Fi to residents, but big telecommunications corporations lobby

government to prohibit cities from doing so. As a result, residents have to pay for unreliable, expensive broadband services.

Although the digital capitalism school has underscored the exchange value of information in a market, I argue that this school tends to lump all kinds of digital information together and assume all digital information is qualitatively identical (Lee, 2014a). In their line of argument, there is no difference between the types of commodified information: financial information, Google search results, and digital media are the same as long as they are assigned an exchange value in the market. The digital capitalism school's argument cannot explain why private financial information firms such as Reuters and Bloomberg restrict subscription to professional traders. While Google and television stations welcome as many users and viewers as possible, private financial information firms limit their markets. A limited market means financial information has an exclusive nature. This exclusivity explains why subscribers are willing to pay a hefty price to access this information. The difference between information as in Google search results and information as in stock prices shows that information has different qualities. These qualities help set prices for information.

The digital capitalism school has correctly pointed out that information is a commodity, but it has not attended to the spatiality and temporality of information. The quality of information depends on a certain spatiality and temporality in which a commodity is produced. First, commodities are embodiments of labour power; they must be produced within a time frame in a physical location. Financial information is *not* automatically produced in a market; someone somewhere is paid to write an algorithm to calculate prices; someone somewhere is paid to design a user interface that displays the information. Second, the exchange value of an information commodity depends on the spatiality and temporality of information (Lee, 2013). Financial information companies justify the high exchange value of financial information by the advanced technologies that bridge physical distance and transmit timely information. Different kinds of information are expected to have different spatialities and temporalities. The spatiality of financial information is global: New York traders begin their days learning how the London Stock Exchange closed; traders in the City wake up learning how the Tokyo Stock Exchange closed. The temporality of financial information is immediate; slow and delayed financial information is worthless. In this sense, financial information is very different from information about neighbourhood restaurants. We do not care how other patrons rate restaurants in cities where we don't live in or visit. We also do not care if patrons are rating the restaurant while eating. We prefer online restaurant reviews that have detailed descriptions and mouth-watering pictures. Third, as a commodity, information transforms the symbolic and material space and time. Information is not independent of the technology that produces, distributes, and consumes it. Information is also not independent of space or time. In other words, space and time do not pre-exist for technology,

instead they are simultaneously created when information is created. By paying attention to the spatiality and temporality of the information commodity, I acknowledge that infrastructure (such as broadband cable) has to be built for digital information; buildings (such as those housing stock exchanges) have to be constructed for congregated financial activities. In this sense, not only is information material, but space and time are material as well. In the next section, I turn to writings on materiality in the communication discipline to discuss how they may advance an understanding of financial information being material.

How Have Media Studies Scholars Studied Materiality?

Media studies scholars have not always paid attention to the materiality of media technologies because they have a concerted interest in texts rather than material life (Gillespie, Boczkowski, and Foot, 2014). Materiality is defined as references to physical things and the irreducibly relational characters of reality (Sterne, 2014); as well as the physical character and existence of objects and artefacts that make ‘things’ useful and usable (Lievrouw, 2014). Materiality is said to be a complex, heterogeneous, multidimensional idea and is open to a variety of interpretations, emphases, and disciplinary assumptions (Gillespie, Boczkowski, and Foot, 2014; Suchman, 2014). Drawing on these definitions, it is argued here that materiality is not simply about the material nature of things, but how this material nature conditions human-technology interaction. According to Gillespie, Boczkowski, and Foot (2014) and Lievrouw (2014), technologies act on users by pressing on certain material practices. Lievrouw (2014) uses the term ‘material affordances of technologies’ to describe ‘the physical properties or features of objects and settings that ‘invite’ actors to use them in particular ways’ (p. 23). To this end, she calls for media studies scholars to examine the interplay and mutual shaping of technological tools, human actions, and social/cultural formations. Boczkowski and Siles (2014) also highlight the interplay between texts and technologies. They coined the notion ‘texto-material assemblages’ to describe the bundling of texts and materiality. Writings on materiality underscore how materially embedded financial information conditions human-machine interaction in specific ways. Using the Madoff example, financial statements printed on paper slips invited investors to take a glance and store it. Online financial statements, on the other hand, invite investors to interact with the interface and to return to the online site for constant updates.

I differentiate the concept of materiality from materialism. The former is about the physical properties of things and their existence in human lives while the latter is a method to understand historical changes. Harvey (2018) further differentiates physical materialism from historical materialism. The former only takes into account things and processes that can be physically documented

and directly measured. The latter recognises the importance of immaterial but objective powers, such as value and capital. Value is an immaterial concept; it has to be represented in money's form (such as cash, cheque, credit card, 'I owe you' note). The materiality of money form urges human beings to act on it. A banknote dropped on the ground may prompt a lucky passerby to pick it up while a credit card on the ground demands a kind-hearted passerby to report the loss. Historical materialism of money forms asks how these represent historical changes. For example, who governs value represented by money tokens such as banknotes and precious metals.

ANT and STS Theories on Information and Economy

ANT is the first approach that will enrich a political economic understanding of financial crisis because it attends to the materiality, temporality, and spatiality of financial information. Actor-Network Theory (ANT) belongs to Science and Technology Studies (STS), which encompass a relatively loose body of literature that approaches sciences and technologies from historical, cultural, social, and rhetorical viewpoints. As previously mentioned, media studies scholars pay insufficient attention to the materiality of media technologies. Equally, STS scholars ignore media technologies. Gillespie, Boczkowski, and Foot (2014) explain this with the perception of media technologies having little social significance. They believe that media and ANT scholars could engage in a fruitful dialogue if they acknowledge that media technologies are complex, sociomaterial phenomena; and that technologies are not things, but products of distinct human and institutional efforts. In this section, I summarise ANT and STS writings on information and economy that may challenge political economists to think of the materiality of information technologies. The writings of economic sociologists Alex Preda and Karin Knorr Cetina, and of ANT scholars Michel Callon and John Law, have informed the theoretical framework of this book.

Like political economists, economic sociologists Preda (2009) and Knorr Cetina (2005) reject a mainstream economic view of information. They do not believe the financial market generates, processes, and distributes information. Instead, they believe information is 'contingent, communitarian' (Pardo-Guerra, 2010, p. 86) and is technologically and materially embedded. Information is cognitively processed raw data that are manifested through material objects such as screen displays and written formulae.

ANT scholars such as Michel Callon, John Law, and Bruno Latour do not believe in using social theories to explain an economy. They do not think 'socialising' and 'humanising' economic actors would gain insights into an economy. Their rejection of a social explanation can be reasoned by Latour's rejection of the notion of 'society'. He proposes that the concept 'social' be used to describe the assemblage of human and non-human actors. 'Social' is a glue that connects all human and non-human actors during the process of assemblage. Both

human and non-human actors pick up roles in the network by taking up the network's attributes. STS scholars believe both human and non-human actors have an agency in a network; non-human actors are neither different from nor superior to human actors. In this line of argument, humans do things to non-human actors as much as non-human actors to human actors. One good example is the urgency to respond to a ringing telephone or an incoming text. To STS scholars, we are not responding to other human actors in the network, but to the non-human actors instead.

Unlike political economists, who prefer to see an economy as a macro concept and capitalism as a political economic system, STS scholars prefer to *trace* the movements of capital in a material space. Michel Callon (2007a) suggests that sociologists should see economics as an assemblage of human and non-human actors such as material devices (the keyboard, the screen) and techniques (such as algorithms).

Callon (2007a) does not think economics is merely discursive, so sociologists should not spend time unveiling the ideology of economics. Instead, he thinks economics is performative—it makes the markets 'more real' (Callon, 2007b). Metrology and calculation are two techniques that perform a market. Formulae to calculate GDP and employment rate do not reflect an objective economy, but make an economy real. Lastly, economic models obscure the technologically and materially embedded devices in the measurement and calculation process.

Applying STS writings to analyse the dot-com financial crisis (Lee, 2014a), I have argued that technological devices are introduced to the stock markets in order to make them appear like an external 'thing' devoid of human interactions. In actuality, technological devices enable the formation of a specific kind of market. This specific market is believed to be natural, autonomous, and objective until a financial bubble bursts. After a financial market collapses, journalists and regulators blame the devices for causing market failure.

Political Economy and ANT: A Possible Common Ground?

Finding a common ground between a critical political economy of communication and ANT is not an easy task. At present, there are few conversations between both parties. However, it can be speculated that political economists of communication would be wary of ANT. Nevertheless, some scholars believe ANT could be incorporated into a political economic critique of capitalism.

Political economists who have written about environmental justice and geography have the most heated debate about using ANT to critique capitalism. The criticism is summarised as follows:

- (1) ANT is a discussion, not a theory: Fine (2005) critiques ANT's understanding of economics as atheoretical, seeing ANT as only promoting endless description of network formation. ANT is also said to be

- uninterested in critiquing different types of actor-networks (Castree, 2002).
- (2) ANT is ahistorical and asocial: ANT is criticised for conflating human and non-human into the same things (Castree, 2002). Fine (2005) critiques ANT methodology that posits 'universal notions around actors and networks without regard to specificities that allow and justify the positing of particular forms of dualities' (p. 93). Consequentially, ANT scholars have a hard time differentiating actors from non-actors in the network.
 - (3) ANT has ignored the power of capitalist markets: Fine (2005) and Garcan (2005) believe that ANT is incorrect to assume that markets are historically variable, and each actor-network is unique. They believe capitalism homogenises all variants in the network. Therefore, Fine (2005) has called for a critical political economy to understand the historical nature of capital and to examine the dialectics of the unfolding of structures, processes, relations, and tendencies.
 - (4) ANT does not understand Marxist theories: Garcan (2005) argues that ANT sees Marxist theories as homogenous, and that ANT therefore misunderstands Marxism as involving a rigid society/nature dualism. He contends that relational Marxism, especially Marxist ecological theories, have taken into account the relations between human and non-human actors (such as people and nature). This linkage parallels ANT's concern for agential nature. Moreover, Garcan (2005) has argued that Marx's materialist conceptualisation of labour process implies actors because both labour and nature act as a 'social (people-people) and metabolic (people-nature) relation' (p. 128). Moreover, labour creates a mix of nature with society, which is not unlike ANT's hybrid concept that points to the formation between actors and objects. Ecological Marxists have acknowledged the messiness of the formation of nature-social interaction.

Despite the criticism, some political economists believe ANT's rejection of dualism allows for a flexible understanding of humans and non-humans. For example, Söderberg and Netzén (2010) see a parallel between ANT and Open Marxism (such as the work of Michael Hardt and Antonio Negri), in that both try to overcome dichotomous thinking and see the world as an unfolding of networks of actors, class struggle, and the contingent process that undermines a view of a stable world. Castree believes that ANT will add to Marxist geographers' critique of the nature-society dualism by showing capitalism to be: 'a plethora of otherwise qualitatively distinct econatural networks that have a common processual form or logic' (p. 130).

Castree (2002) has offered a convincing account of how a 'weaker' reading of ANT can be incorporated to green Marxism. A 'weaker' version of ANT is sceptical of binary thinking, asymmetry, limited power of agency, and a centered conception of power. At the same time, this 'weaker' reading acknowledges that

actor-networks are driven by similar global and systematic processes; social processes are more directive than natural, and an asymmetry of power. A 'modest' version of green Marxism is also required to accommodate a weaker reading. A modest green Marxism believes that capitalism is not the only exclusive force to examine socio-natural relations. It also believes capitalism has neither a totalising effect nor privilege social actions.

Political economists in the field of communication have not chimed in the discussion of drawing on ANT to critique capitalism. In fact, Couldry (2008) is the only lengthy piece to have discussed how ANT could be incorporated into media studies. Couldry thinks the major insight lent by ANT is its rejection of the assumption that *the media are already social, and thus are natural channels to represent social life and social engagement*. He believes ANT would help point out how the media are highly specific actor-networks that represent social life, and how they are a spatiality of association through which power is hardwired into actions and thoughts in organisations. Despite Couldry's optimism, he cautions that ANT does not offer explanation of the networks once they are formed: how do they develop? How are they reinterpreted? What are the long-term consequences? Couldry is also cautious of power differentials between human and non-human actors. To him, human actors matter more because of 'social consequences that are linked to how these differences are interpreted and how they affect the various agents, ability to have their interpretations of the world stick' (p. 102).

From an ANT perspective, I argue that financial information and finance capital are materially and technologically embedded. As I argued in the previous section, information is not independent of the technology that produces it. In other words, financial information does not exist before the invention of machines such as the ticker and the trading screen. Furthermore, information picks up the attribute of the technologies that transmit it: stock prices printed on a ticker tape were only as quick as the speed of the telegram and the printer. Because information is not monolithic, financial information constitutes multiple, concurrent, heterogeneous markets; each of them occupies a different spatiality and temporality. The attention to the materiality of financial information will fill in one gap of the current political economic critique of financial information. In the following, I argue how the critique can be further enriched by drawing on feminist political economic theories.

A Bizarre Love Triangle? Feminist Political Economy, ANT, and Critical Political Economy

To reconcile the difference between critical political economy and ANT, and to quench political economists' doubts about ANT, I argue in this section how gender may bridge the gap. Feminist political economic theories and ANT may appear like odd bedfellows because feminist political economists have not

widely applied ANT in their analysis. Similarly, ANT scholars who have written about economics have little to say about women and gender. However, Sterne (2014) believes that constructivist theories—such as feminist theories—only differ from ANT in strategy and politics. He explains that both are politically-minded and assume the politics of knowledge. However, feminist theories presuppose power relations exist before the researchers analyse the construction of power, while ANT deals with power from a managerial standpoint. Suchman (2014) also hints at the usefulness of ANT by calling for a feminist critique that ‘recovers the lived experience and the embodied, situated interaction of those immediately implicated in particular assemblages, the material practices and cultural imaginaries that create and articulate those arrangements, and the political/economic investments that sustain them’ (p. 136). In the following, I first discuss what a feminist political economy of communication is, what feminists have written about financial crises and financial markets. Then I argue why feminist political economic theories can bridge the differences between critical political economy and ANT.

What is Feminist Political Economy?

Feminist political economy will fill a gap in contemporary writing on financial crisis. Feminist political economists study ‘the gendered production, distribution, and consumption of goods and resources; and the examination of how ideology is used to stabilise unequal relations’ (Lee 2011, p. 83). This approach believes that gender is both grounded in material realities and constructed in discourses. This approach aims to unveil gendered concepts such as finance capital and global economy, in particular how women have been treated as resources and how gender is made flexible to accommodate capital flow.

A feminist political economic analysis validates individual experiences by understanding how patriarchy and capitalism shape the gender and economic experience of women and other marginalised groups (Riordan, 2002). One way to understand lived experiences is from the vantage points of space and time: who has the right to access markets and to regulate the marketplace. Specific financial information and technologies were invented to grant women access to the credit market. Financial information about those women did not exist *before* women became debtors; it was created once women became borrowers.

Feminist political economy is grounded in historical materialist feminisms such as Marxist and socialist feminisms. Marxism and feminism are often said to mirror each other because the former critiques capitalism and the latter patriarchy, but their merging of both is not deemed feasible. For example, MacKinnon (1982) believes that Marxism and feminism both pose a fundamental question: ‘Is male dominance a creation of capitalism or is capitalism one expression of male dominance? [...] Is there a relationship between the power of some classes over others and that of all men over all women?’ Despite

Marxism and feminism sharing the same fundamental problem, MacKinnon (1982) believes that one subsumes the other. For example, she thought while socialist feminists have brought in a gender perspective to a Marxist analysis, their only contribution is to theorise women's labour in terms of housework. Similarly, Ferguson, LeBaron, Dimitrakaki, and Farris (2016) argued that the earliest materialist feminists failed to understand the interdependent relations between production and reproduction and thus also failed to explain the role of gender and sexuality in forms and structures of oppression.

MacKinnon (1982) has overlooked the disagreements among materialist feminists. While some believe that reproductive labour should be a vantage point of capitalism, others believe that gender's material beings are grounded in discourses. Selma James and Mariarosa Dalla Costa (cited in Haiven, 2014) aim to examine women's reproductive labour in the household, which is believed to be a site of women's oppression. In the household, men's labour power is sustained by women's domestic labour that is made invisible in capitalism. Because women's reproductive labour is not seen to contribute to the production of surplus, it is devalued. More recently, materialist feminists who subscribe to a social-reproductive perspective (Ferguson et al., 2016) believe that capitalism is organised in deeply patriarchal institutions, processes, and values. Therefore, they aim to examine activities that are associated with the maintenance and reproduction of people's lives because they provide the foundations on which market, production, and exchange rely. Bhattacharya (2017) rightly asks the question 'who produces the conditions of existence for workers?' The answer to this question reveals the amount of mental, physical, and emotional work that goes into ensuring the workers have the competencies to labour for capitalists. Jarrett (2016) however believes that reproductive labour power illustrates the contradictions between exploitation and agency in a digital media capitalism: while reproductive labour is exploited and commodified in the market, it also resists being a commodity in the market. Therefore, reproductive work provides an angle to examine digital media labour that manifests both material and immaterial labour that are integral to the digital media economy.

In the face of the global economy, the definition of reproduction has been expanded beyond the household, it includes: how social beings care for each other, sustenance, cultural and ideological reproduction, and community building. Social reproductive feminists have expanded analysis of economic sites beyond the household; they also look at the informal economy, daily and intergenerational, and social reproduction of social beings. Social reproductive theorists aim to show that the spaces of production and reproduction are not separated, but conjoined (Bhattacharya, 2017). Unlike feminist economists, who tend to look at the economies at a macro level (see Karamessini, 2014; Rubery, 2014; Walby, 2009 below), Ferguson et al. (2016) focus on gender relations at the micro level.

Hennessy (1993) and Hennessy and Ingraham (1997) (see Sullivan, 1999) have advanced a form of materialist feminism which distinguishes itself from

materialist Marxism by attending to the question of social analytics and social relations that are grounded in material conditions. Hennessy (1993) believes that the ‘discursive turn’ has pointed out how subjectivity as constructed by language and culture is a key to analyse the intersection between gender and class. She believes that materialist feminists do not need to give up a Marxist critique of totalities when they incorporate subjectivity because ‘what gets to count as “reality” [is] through the assumptions it valorizes and the subject it produces’ (p. xiii). To respond to the rise of the global economy and neo-liberal ideology, Campbell and McCready (2014) state that materialist feminists should pay attention to not only patriarchal capitalism, but also capitalist, colonial, and heteropatriarchal histories and organisations of power. In an interview with Haiven (2014), Federici pointed out that women disproportionately bear the cost of neo-liberal capitalism because they are denied access to common land while asked to provide more free labour and care work. She believes that financial capitalism has developed a new relationship between women and capital in which women are brought into direct contact with capital, making women directly confront capital without the mediation of male family members.

This book aims to build on materialist feminists’ insights and conceptualise gender as both material beings and discursive constructs. Because gender relations are conditioned by the dominant mode of production and they are specific to each mode of political economic arrangement, it is wrong to assume that gender relations have advanced from an agrarian to a feudal and then a capitalist society. Similarly, it is wrong to assume that women in a capitalist society are better off than they are in agrarian and feudal societies.

As suggested earlier, the rise of the financial market is not natural because a non-capitalist political economic system does not require a constant lubrication of capital. Thus feminist political economists ought to examine how gender relations—as institutions—constitute financial markets. Finance capital is a gendered process. The essence of capitalism is the circulation of capital wherein gender is moulded to facilitate and hinder capital flow. Class differentiates women’s experiences as gendered and class beings: while middle-class men rarely ask their wives to manage family finance, working-class women are responsible for the family money (Zelizer, 1989). Middle-class women’s femininity, in comparison to working-class women’s, is seen to be less suitable for manual jobs outside the home. However, working-class women’s labour has less exchange value in the market than men.

How Feminist Scholars Have Studied a Crisis Economy

Here I summarise what feminist scholars outside and within the communication field have written about gender and financial crisis. Karamessini (2014) has argued that austerity poses a major challenge for gender equality because it reduces demand for female labour and eliminates services for women and

children. She has also critiqued government's bailout for being short-sighted because the measure only benefits the rich and harms women's long-term advancement. Rubery (2014) has pointed out the impact of the recession and austerity programmes on the wider labour market, as well as social and political institutional arrangements. She argues that economic models are gender-blind even though they view women primarily as caretakers. These models explain women's disadvantaged economic positions with discrimination; thus the remedy to uplift women is to eliminate discrimination. Rubery (2014) suggests that an institutional approach would shed light on the relationship between cyclical and long-term change in national employment and the social construction of gender relations within a specific institutional and political context. Gender relations are both an input and an outcome of the national model and the associated adjustment process. Gender relations condition how austerity programmes are set up, which in turn change gender relations. During the implementation of austerity programmes, gender ideologies are used to fit new conditions. Similarly, Walby (2009) argues that the causes and consequences of financial crisis are gendered. The institutions and practices that govern the flow of finance capital also have few women in decision-making roles. Consequently, financial crisis hits women harder because of the loss and casualisation of employment, decline in real wages, and reduced food access. She also critiqued remedies to 'cure' an economy for being gender blind because they fail to see how women are affected in areas such as financial governance, taxation, and public expenditures.

Another body of literature that concerns women and financial crisis looks at gender issues in the financial industry. McDowell (1997) argued that gender segregation in the financial industry can be analysed from economic, sociological and geographical standpoints. The 'embeddedness' concept points to the sociological nature of economic activities; the 'location' concept points to the local/global sites where meanings are made. The manifestation of gender and work is often projected onto individuals' bodies. An illustration is that corporate pictures of male bankers rarely show the lower part of the body because it is associated with nature and sexuality. Roth (2006) examined the gross disparities of compensation between women and men, whites and non-whites in the financial industry. She argues that gender and racial inequalities are disguised by the myth of meritocracy. While the industry uses 'objective' performance review to determine compensation, customs and cultures also determine which workers are productive. Fisher (2010, 2012) examined women bankers campaigning for more visibility in the male-dominated industry. They self-proclaimed as feminists and fought for a more democratic decision-making process in the industry.

Despite the fact that feminist scholars have investigated how financial crises impact women as producers and reproducers, the intersection between finance, communication, and media has largely been ignored. For example, among the five communication journals (*Cultural Studies*, *International Journal of*

Communication, Journal of Communication Inquiry, Popular Communication, and triple C: Cognition, Communication, and Critique) that published special issues on the Global Financial Crisis, only one in 49 articles (Palmieri 2010) studied women in relation to a financial crisis (Lee and Raesch, 2015). In terms of book-length projects, Negra and Tasker's (2014) *Gendering the Recession: Media and Culture in an Age of Austerity* was the only one that focuses on women, gender, and sexuality in the post-Global Financial Crisis world. Yet the book does not directly interrogate financial aspects that pertain to the crisis, such as finance capital, trading instruments, and monetary policies. Given the facts that modern financial crises have devastating effects on the global economy and that finance capital is gendered, feminists in the communication field need to pay more attention to the intersection between finance capital and gender.

How Gender Bridges the Difference

The major strength of a gender perspective is its critique of dualistic thinking and patriarchal power: not only do feminist scholars question the dualism between humans and non-humans, but they also question that between masculine and feminine, humans and nature. Feminist scholars are also keen on unveiling how power works through institutions. The institutions that ought to be critiqued by feminist political economists are patriarchy and capitalism. While some materialist feminists pre-suppose power relations exist before the discourses are constructed, a feminist political economic approach believes in the dialectics between the material and discursive process. In other words, the construct of gender relations reinforces and challenges gender relations, which in turn inform how gender is being constructed. During the flow of global finance capital, gender relations dictate which women should be exploited as resources. During the process of women's exploitation, gender is moulded to justify the flow.

A feminist political economic perspective also draws attention to the materiality, temporality, and spatiality of financial information because it is particularly interested in 'how the temporality of capital accumulation transforms its spatialities through technologies' (Lee 2014a, p. 905). Drawing on Couldry's (2008) argument that ANT scholars do not take power in spatiality into account, a feminist political economic approach attends to the dialectics of the materiality of time and space. As argued, the creation of financial information simultaneously creates space and time; a specific kind of financial information circulates and is consumed in a specific spatiality and temporality. To use the example of women's economic activities in developing countries, women have always engaged in small business by rearing animals and growing vegetables. Their sense of time-space is intensely local; they know when to harvest goods for the market and for storage. Participating in a microcredit project, however, disintegrates the local sense of time-space because the production cycle is now

divorced from seasons, relating instead to the repayment period. The market regulates women's sense of time and space by dictating how soon women are expected to repay debt and where they should attend meetings with caseworkers. Finance capital reinscribes the sense of time and space for women. Accounting technologies are essential to this regulated sense of time and space; bank workers need to *record loans* in order to establish the relationship between loaners and borrowers. Rudimentary technologies such as pen, paper, and calculator are not *merely* tools, but they *make an economy real* to the women.

Gender disrupts the grand narrative of the *longue durée* of capitalism by rejecting a linear view of historical events. A conjunctural analysis (Grossberg, 2010) is effective at disrupting the grand narrative because gender and economies are constructed, understood, and created in multiple sites. A conjunctural analysis is absent from current writings that critique financial regulations—such as Joseph Stiglitz's *Free Fall* (2010)—and finance capitalism—such as David Harvey's *The Enigma of Capital* (2011)—which plot the causes and consequences of financial crises on a linear timeline. The assumption that causes and effects occur on a linear timeline ignores the many sites—most of them marginalised—in which women make sense of their relationship with finance. Temporality-wise, because gender relations are specific to each political economic system, it cannot be claimed that gender relations of today are better than those of the past. Similarly, it can also not be claimed that digital financial technologies improve upon the analogue ones. Financial technologies of the bygone days simply produced a different kind of space and time; they are not necessarily more primitive than the current ones. Similarly, space alone cannot be a factor to explain a financial crisis. While a global financial crisis may seemingly affect more countries than a localised one, a small-scale financial crisis in a medium-sized city gives as much evidence about finance capital (one good example is how bankrupted American cities such as Flint, Michigan illustrate the offshoring of manufacturing jobs). In the following, I outline the chapters of the book and main arguments advanced in each of the book chapters.

Structure of the Book

I advance two arguments—finance capital is gendered, financial markets are materially and technologically embedded—in four chapters. To emphasise a dialectic between time and space through the lens of gender, I opt not to discuss financial crises as events on a linear timeline or as global forces on local economies. Instead I discuss financial markets by examining gendered characters and technical devices in an array of discourses about financial crises. The three gendered characters are the Tulip, the Poor Women, and the Shopaholic, and the two technical devices are financial news reporting and the trading screen.

I analyse how different kinds of discourses describe, explain, and critique financial markets and crises through the three characters and the two devices.

In addition to discourses found in contemporary popular culture, I also use historical documents to trace the origins of the characters and devices. For example, the temptress in *Tulip Fever* (a contemporary novel which has been adapted for a film) is an unfaithful wife in the seventeenth-century Netherlands who ruins the lives of her husband and lover in the midst of tulipomania—commonly called the ‘First Financial Crisis’. However, to understand why the tulip bulb became a trading instrument and why the flower became a synonym of a temptress, I consulted historical documents such as the horticultural book *Rariourum Plantrum Historia*, published in 1601, and ‘pulp’ non-fiction *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*, first published in 1856. Documents from different historical periods allow for an examination of contesting discourses of the flower. Yet the discourse became more homogeneous over time in the way that the Tulip can only be a temptress.

As the work is informed by feminist political economic theories and ANT, it is worthwhile to mention the methodologies that informed the inquiries. Following the tradition of feminist media criticism, I used semiotic analysis, discourse analysis, and narrative analysis to analyse popular culture: culture that was produced primarily to make profits. Some examples are Hollywood films about financial markets, chick lit about shopaholics, and advertisements for credit cards. Popular culture texts were interpreted along with the political economic conditions in which they were produced in order to understand when and why certain populations were invited as consumers. I also used historical documents to illustrate how objects such as the tulip or the ticker were seen in the past. However, I did not adopt a historical analysis because I am more interested in viewing these objects from a contemporary standpoint than understanding how these objects informed the past. For example, when tulip illustrations from a seventeenth-century Dutch book were examined, I did not intend to understand how the illustrations gave hints of the social, economic, cultural, or political conditions of society at that time, but how the illustrations could be understood from a contemporary standpoint. The last type of documents that informed the inquiry is academic books and policy papers. From an ANT perspective, theories are devices that exert power over a reality; they are not merely viewpoints shared among scholars and practitioners. Therefore, theories that explain how an economy works are critiqued as technologies that exert power on the material world. Given this, theories adopted and advanced by this study are also technologies that ought to be critiqued by others elsewhere.

As shown in Figure 1.1, each of the chapters forms a quarter of a rotating circle that corresponds to a panel. When the quarter aligns with a specific panel, the analysis in the chapter may best illustrate that particular theme. However, if we rotate the circle and realign the quarter with another panel, the analysis in the chapter can also illustrate a different theme.

For example, Ch. 2 ‘Tulipomania’ illustrates the theme of gender ideology. The Tulip is said to create a hysteria in the market by making men mad. But if

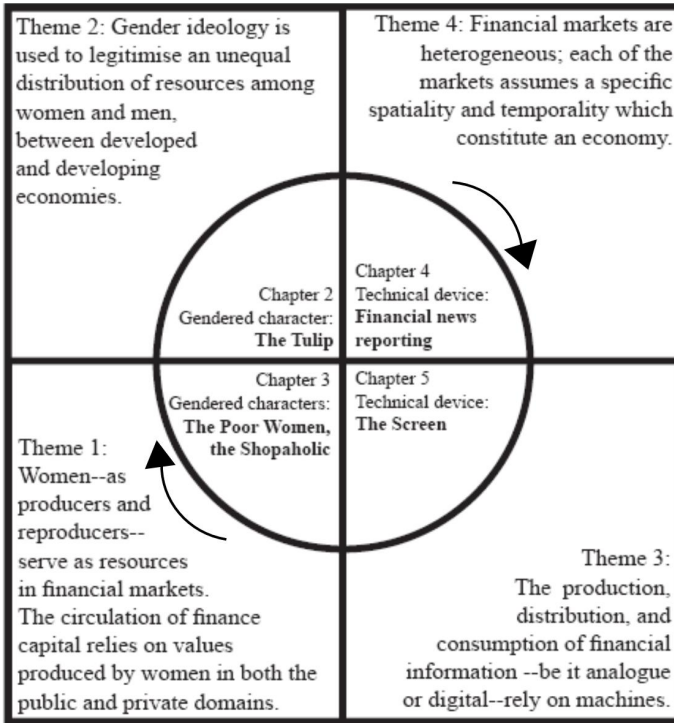


Figure 1.1: Gendered characters/technical devices and the four themes.

we slide the Ch. 2 panel to the bottom right, the analysis of tulipomania also illustrates the production, distribution, and consumption of financial information because the chapter discusses the technological means that recorded and documented the flower bulb as a trading instrument. Similarly, in Ch. 4 I analyse financial news reporting of Dow Jones at its infancy. I argue that different reporting technologies had created different temporalities and spatialities in the market. But if we slide the Ch. 4 panel to the bottom left, the analysis also illustrates how women's work was devalued by virtue of their complete absence in historical records of early Wall Street and the founding of Dow Jones!

In the following section, I lay out the goal of each chapter and explain how the analysis reflects one of the four themes.

In 'Ch. 2 Tulipomania: Unchanging Gender Relations in Financial Capitalism', I show how an assumed unchanging gender relation reinforces an ideology that capitalism is a *natural* political economic system that transcends time and space. I reach this conclusion by advancing three arguments: first, the discourse of the first financial crisis relies on two Orientalist beliefs: the West progresses while the East stays the same; and the mysterious East needs to be unveiled by understanding the feminine. Second, the tulipomania discourse is

citatory so the Orientalist beliefs are reproduced even in discourses that aim to shed light on women's lived experience. Third, technologies of documenting the flower not only changed the material reality of the tulip bulb trade, but they also exert symbolic control over the feminine.

In Ch. 3, 'The Indebted Women: Microcredit and the Credit Card', I draw attention to the spatiotemporal differentiation of a global financialised economy by looking at how credits extended to women in both developing and developed economies. I argue that the separate discursive worlds occupied by the Poor Women and the Shopaholic have to be understood in the context of stagflation since the 1970s. While capital circulation needs spatiotemporal differentiation, gender is used to bridge the gap. Being in debt is one tactic to narrow the gap so that women can catch up with men, developing economies can catch up with developed economies. An Economy and Poor Women have to be invented for microcredit programmes to succeed. By engaging in these programmes, Poor Women are asked to think and act like rational beings in the Economy. In contrast, the gendered subject the Shopaholic in advanced economies is seen as a medical patient who needs the expertise of the Expert. The discourse of shopaholism being a mental disorder strips down the political economic context of excessive consumption. Ironically, women's discourse that is critiqued as fluffy (such as 'chick lit/flick') allows women to talk back at orthodox economic thought, it also enables them to be self-reflexive. However, geographical differentiation pre-determines with what technologies the Poor Women and the Shopaholic use for self-reflexivity. Father figures could also control the technologies of self-reflexivity by belittling women's understanding of money and debt.

In Ch. 4, 'Financial Information Reporting in the Earliest Wall Street', I reconceive financial news reporting as an actor-network by looking at the inception of Dow Jones, the publisher of the *Wall Street Journal*. Communication literature has pointed out that the financial press failed to perform the Fourth Estate role during the Global Financial Crisis, it did not warn the public about a forthcoming crisis. By calling the press the Fourth Estate, it is assumed that journalists understand their roles and responsibilities in a presumed stable organisation. I show in this chapter that the earliest Dow Jones news reporting was an assemblage of communication and reproduction technologies, such as the ticker and the printer. In this assemblage, analogue technology that produced and distributed financial information in turn took up the attributes of the network. For example, a hand-operated printer could only hold 16 lines of type and impress on 5" x 9" paper. The limited space only allowed one sentence for each news item—the earlier Dow Jones financial news was not unlike tweets in the digital age! In another example, runners are seen as a neutral medium that simply delivered messages around Wall Street. Yet the runners were knowledge bearers of financial news. They learned the temporality of financial information by, literally, running in the street. The examples of the ticker, the printer, Wall Street physicality, and the runner show that the assemblage of

machines and humans created a market in which temporalities and spatialities are contingent upon the materiality of the assemblage. Because the assemblage is sociotechnical, the earliest *Wall Street Journal* should not be seen as a stable organisation, but rather, a nexus through which information was transformed from one form to another.

In the last analysis chapter, ‘The Screen, Financial Information, and Market Locale’, I examine how three Hollywood films and a documentary film position the screen in relation to the characters in order to show the locales of the financial markets. I show that in the pre-Global Financial Crisis era, the trading screen in *Wall Street* was seen to be reflective of a real market. The market crisis is said to have been caused by powerful players who traded behind the scene (or the screen?). In the post-Global Financial Crisis era, directors are ambivalent about the locales of the financial market. In the *Wall Street* sequel, the boundary between the real world and virtual world is eradicated. In this world, trading activities are constitutive of those on the trading screen, the mobile phone screen, and face-to-face conversation. In *Arbitrage*, the materiality of the real world is seen to be superior to the digital world because the former provides tangible evidence to unveil the deception enabled by digital technology. In the documentary *Floored*, the computer is seen to have taken over floor-based trading. The director explains financial crisis with the agency of this non-human technical device. I also examine the screen as an affective device on which patriarchy is maintained through father-son relationships.

In the concluding chapter, I discuss how feminist theories grounded in historical materialism would provide a productive discussion of how to apply both the political economic approach and STS to understand financial crises. By focusing on women as both material and discursive beings, I argue that ‘macrostructures’ such as the economy and financial markets are constituted in intensely local settings because concrete objects are needed for a discourse about the meaning of money. When human beings interact with material objects, they act on the discourse about money while simultaneously altering the material world by creating time and space. By acknowledging that financial crisis is produced through gendered discourses and technologically-embedded information, I argue that there exists an alternative explanation of financial crisis, other than human flaws and a natural economic cycle.

Notes

- ¹ Economic Bubble. Nasdaq.com. <http://www.nasdaq.com/investing/glossary/e/economic-bubble>. Last access: 29th April, 2015.
- ² Madoff clients’ statements. The Madoff Affairs. *Frontline*. <http://www.pbs.org/wgbh/pages/frontline/madoff/financial/> Last access: 3rd December, 2017.
- ³ Inequality. OECD. <http://www.oecd.org/social/inequality.htm>. Last access: 2nd May, 2018.

CHAPTER 2

Tulipomania: Unchanging Gender Relations in Financial Capitalism

Tulipomania is often called the ‘First Financial Crisis’. Therefore, it is appropriate to examine the popular culture discourse of the so-called ‘mother’ of all crises in the first chapter. Current writings, however, cannot agree on a number of things about tulipomania: what motivated the Dutch to trade, who participated in the trade, whether it was a financial bubble, and how the crash impacted the economy and society. In this chapter, I do not aim to find out the *truth* about tulipomania, but will show *how* the ‘truth’ of tulipomania was produced in popular culture. I argue that the ‘truth’ was produced with a gendered orientalist understanding of the economy and scientific knowledge.

Tulip bulb speculation was at a height from 1636 to 1637 in the early Republic of Holland. During the seventeenth century (aka the Dutch Golden Age), the country made significant advancements in science, technology, arts, and commerce. The Dutch keenness for exotic goods took them to the East, where they brought home previously unseen and unknown *objets de curiosité* such as animals, herbs, spices, plants, and flowers. One such ‘oriental’ object that fascinated the Dutch was the tulip from the Ottoman Empire. The flower not only attracted attention from botanists, breeders, and wealthy merchants, but it also made a number of people become traders. What were traded were not the blooming flowers, but the bulbs; not the bulbs of the present, but the bulbs of the future, the ownership of which entitled one to a piece of paper (Cook, 2007). One day in March 1637, the market for title papers cooled down, and title owners found it harder to find buyers. A few days later, trading activities further slowed down; the tulip bulb market was said to have crashed.

The pattern of over-valuation, a drop in liquidity, and eventual market crash characterised many subsequent crashes. The story of tulip speculation may be

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like many other speculations, yet it continues to fascinate readers today. It has interested not only economists (the earliest academic paper was written by Posthumus in 1929) and historians (Cook, 2007; Goldgar, 2007; Schama, 1997), but is also a subject of fictional and non-fictional work. A few examples are the novel (Moggach, 1999) and film *Tulip Fever* (dir: Justin Chadwick, 2017) and the non-fictional book (Pollan, 2001) and PBS documentary film *The Botany of Desire* (dir: Michael Schwarz, 2009). More interestingly, tulipomania is used in popular culture to explain characters' action. One reference appears in a major scene from *Wall Street: Money Never Sleeps*. After villain Gordon Gekko schemes money from a victim, the victim goes to Gekko's empty apartment and finds on a table a print of three tulips and a price chart of the bulbs during the speculation. The print silently informs the victim that he has fallen into a money scheme. It also mocks him that human nature has not changed despite the tulipomania story that Gekko told him earlier in the film. Because the film was made to respond to the 2008–9 housing crisis, the director made a commentary that the foolish men who were ruined in the crisis shared the same traits as those in seventeenth-century Republic of Holland.

In the introductory chapter, I rejected the idea that financial crises can be explained by innate human flaws and a natural economic cycle. I argued that these two reasons in fact obscure capitalist social relations while legitimising capitalism as the *only* political economic system. In other words, capitalist resource allocation is said to work fine, but individual actors—such as greedy men—are sometimes blamed for disrupting the natural economic cycle. In this chapter, I further illustrate the argument by unpacking the embedded ideology in the tulipomania discourse. In order to do so, I adopt a feminist political economic perspective to advance three arguments: first, the discourse relies on the orientalist beliefs that the East stays the same while the West progresses. This discourse is also argued to be gendered: an understanding of the feminine is believed to bring along an understanding of the East. Second, I show that because the tulipomania discourse is by nature citationary (Said, 1979), discourse written from a woman's point of view does not necessarily produce a different kind of knowledge to challenge the orientalist beliefs. Third, technologies of documenting nature not only changed the material reality of bulb trade, but they also exert symbolic control over the Orient and the Woman.

The three arguments lead to a conclusion that the staying power of the tulipomania discourse relies on the binary of *x* vs. *not-x*: the feminine vs. the masculine, the Orient vs. the West, the irrational vs. the rational. Not only does the tulipomania discourse falsely link the feminine to the Orient to the irrational, it also devalues the feminine and the Orient by showing the superiority of the masculine and the West. The binary is so ingrained in the tulipomania discourse that it closes off any possibility of re-imagining social relations. Discourses produced by writers who claimed to pay attention to women's lived experience were given no choice but to build on the seemingly static social relations. Moreover, the tulipomania discourse subjugates the 'knowers' as a unified

male subject who understands nature in a specific way. The social relations between the knowers and the unknown—like the x -non- x binary—remain unchanged in tulipomania discourse. Because capitalism is a social relation, the static social relation implies that the capitalist political economic system cannot be transformed. The spatiotemporal context in which the tulip trade occurred matters little, even though the historical context of the bulb trade gave meanings to the tulip. In other words, the discourse denies the role of history by disguising social relations in a specific spatiotemporal context as a timeless truth.

Post-Colonial Feminist Reading of Orientalism

To advance the critique of the unchanging binary pairs in the tulipomania discourse, to unpack the capitalist ideology in the discourse, and to reveal a unified male subject in knowledge production, I borrow insights from a feminist reading of Edward Said's *Orientalism* (1979) and Nancy Hartsock's feminist standpoint theory (1983a, 1983b). I assert that discourse is not only ideological, but it also has consequences in the material world. ANT will show how technologies—when they are applied to produce discourse—alter the material conditions in which the discourse is produced. The written and visual discourses that I examine range from horticultural books in the seventeenth century to contemporary fictional work.

A postcolonialist reading of the orientalist discourse shows how the West produced a material and ideological understanding of the Other through 'a mode of discourse with supporting institutions, vocabulary, scholarship, imagery, doctrines, even colonial bureaucracies and colonial styles' (Said, 1979, p. 2). Orientalism is an academic discipline, a style of thought, and an ideological control. Scholars, novelists, economists, and colonial administrators make an 'ontological and epistemological distinction' (ibid.) between the West and the East. They produce knowledge about the East and claim authority over the subject matter. In other words, orientalism dominates and restructures the East through writing, ruling, and settling. Said asserted that orientalism is such a powerful discourse that it limits the thought and actions of those who write and act on the East. The discourse is then citationary and self-referential; new writings about the Orient repeat what others have already said. The outcome of an orientalist discourse is not unlike that of a myth (Barthes, 1972/1957). The meaning of a myth is 'already complete, it postulates a kind of knowledge, a past, a memory, a comparative order of facts, ideas, decisions' (p. 117). As a myth, the meaning of a sign (such as the East) 'leaves its contingency behind; it empties itself, it becomes impoverished, history evaporates' (ibid.). As such, a myth is ahistorical and refuses to be locked into a specific space and time.

The meaning of the East is dialectic to that of the West; Orientalists learn about themselves as Western beings by learning about the East. Through studying and writing about the East, the Orient became 'an idea that has a history

and a tradition of thought, imagery, and vocabulary that have given it reality and presence in and for the West' (Said, 1979, p. 5). The idea of the Orient shows power differentiation between the East and the West because the orientalists invest time and energy to produce a system of hegemonic knowledge, thus exerting the power to make the Orient oriental. Despite the dialectical relationship between the West and the East, orientalism does not engage in dialectical thinking. It refuses to explicate the West as a subject position, to acknowledge the interdependence between the East and the West, and to engage in a struggle of inner contradictions. Aouragh (2015) suggests that European science was developed in the context of cultural exchanges between Muslim, Christian and Jew in Arab Andalusia. However, Europeans started to define themselves in secular terms in the sixteenth century, seeing themselves independent of historical past.

Gender difference manifested in binary opposition also shows a refusal to transform and reveal an assumed male subject position in discourse. Feminists (see Frye, 1996) critique the concept binary opposition for setting up a false gender difference between *me* and *not-me*, *x* and *not-x*. Subject and object sets of opposite terms (such as day and night, sun and moon, man and woman) imply that one concept (*not-x*) is the negation of the other (*x*). Consequently the concept *not-x* is only meaningful when it is the negation of the other (*x*). Moreover, the *x* concept sets the norm to which the *not-x* concept is subjugated and with which it is compared. For example, feminist psychoanalytic theories deconstruct the 'man vs. woman' binary opposition as one of 'have (*x*) vs. lack (*not-x*)'. In this binary opposition, the concept of woman is characterised by 'the lack (of a penis)'. Similarly, the West is assumed to be the norm from which the East deviates. When the West is seen as a forward-thinking modernity, the East is rendered backward and static. Technological progress has been used by the West to mediate a sense of progress and modernity (Aouragh, 2015).

An orientalist understanding of the Other is sexual because it simultaneously produces cultural and sexual differences (Yeğenoğlu, 1998). The discourse is produced by a Western masculine subject who sees the Orient and its women as feminine, seductive, and dangerous. Drawing on Bhabha's concept of 'functional overdetermination', Yeğenoğlu (1998) argues that the discourse conflates the concepts of woman and the Orient, therefore 'the nature of femininity and the nature of the Orient are figured as one and the same thing' (p. 56). The veiled woman is not merely a symbol of the Orient, but herself *is* the Orient.

Feminist standpoint theory is also effective at critiquing orientalism as a form of universal knowledge. Hartsock (1983a) examined class and gender dimensions of power relations by asking how a group constructs, legitimises, and reproduces power over other groups. Borrowing Marx's concept of praxis (i.e., human activities determine human consciousness), Hartsock contended that material life constrains and sets limits to an understanding of social relations. Men's participation in economic exchange is said to have created a false

consciousness that distorts social relations. On the other hand, women are less likely to have a distorted sense of reality because they are in continual contact with a world of qualities and change through producing more use value at home and engaging in repetitive production. Therefore, Hartsock believed that women are more capable of unmasking false consciousness because of their productive and reproductive activities.

While critics of orientalism have convincingly pointed out how the East was and is studied, they have paid less attention to how technologies and techniques changed the material reality of both the East and the West. In other words, the presence of the Orient is made real not only through discourse, but also through technologies of measurement and documentation. ANT literature thus fills in this gap by providing insights into how technologies create a reality such as an economic market (Barry and Slater, 2002).

To examine how gender and a capitalist ideology work in the tulipomania discourse, I analyse how the tulip and the speculation are talked about in a range of contemporary popular culture. I argue that different cultural texts constitute a coherent discourse about tulipomania even though they have different purposes and targeted audiences. I do not assume that non-fictional work is more accurate and objective than fictional work because my interest lies in finding out how the tulipomania discourse produces the *truth*. The examined texts are two non-fictional books (*Tulipomania: The Story of the World's Most Coveted Flower and the Extraordinary Passions it Aroused* [Dash, 1999] and *The Tulip: The Story of a Flower That Has Made Men Mad* [Pavord, 1999]), the novel *Tulip Fever* (Moggach, 1999), the Disney animation *The Black Tulip* (1996), and the PBS video and website of *The Botany of Desire* (2009). It should be noted that all three books were published in 1999, but it is unknown what incident led to a concerted interest in tulipomania and whether the three authors were aware of each other's projects (Pavord [1999] and Dash [1999] referenced each other). More interestingly, the dot-com bust took place in 2000, so the three books appeared to be prophetic of the financial collapse. As *The Guardian* wrote, Pavord and Moggach 'had accidentally found the perfect millennial metaphor [the tulip]' (Lawson, 2000, para. 10).

The Ahistorical Discourse

Tulipomania is both a reference and an explanation of subsequent financial crises. Because it is said to be the first financial crisis, the tulipomania discourse has an assumed authority to explain all crises even though the explanations—men's foolishness and their inability to learn from the past—are overly simple. For example, a book reviewer (Frankel, 2000) of Dash's *Tulipomania* explained the root of the dot-com bust with reference to human irrationality throughout history: 'long before anyone ever heard of Qualcomm, CMGI, Cisco Systems, or the other high-tech stocks that have soared during the current bull market,

there was *Semper Augustus* [the rarest and most valued tulip bulb during the speculation]' (para. 1). He continues that: 'as investors have intentionally forgotten everything they learned in Investing 101 in order to load up on unproved, unprofitable dot-com issues, tulipomania has been invoked frequently' (para. 3). Frankel writes about tulipomania with such authority that it necessitates the question: what were those sources on which contemporary writers relied to explain the causes of the trade bulb in seventeenth-century Holland? One common source was *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds* (Mackay, 1841) that was written to warn the nineteenth-century public in England about shams. Despite Mackay's biased motivation, this source has been treated like an objective account by contemporary writers.

Mackay's three-volume memoir is widely available in public and university libraries as well as online databases. Its accessibility means today's writers can easily use it as the earliest record of tulipomania written in English. Its ready online availability also reflects how technological progress is perceived to transcend truth: that past records retrieved online *must* speak the truth because they transcend history. However, it does not take much work to conclude that Mackay did not aim for an impartial account. He wrote in the preface that he wanted to:

collect the most remarkable instances of those moral epidemics which have been excited, sometimes by one cause and sometimes by another, and to show how easily the masses have been led astray, and how imitative and gregarious men are, even in their infatuations and crimes (Mackay, 1841/1989, p. ix).

Mackay also did not claim that he is writing about history, but 'a miscellany of delusions' (ibid.). Because of his moral aim, tulipomania was grouped together with two other early financial bubbles in the first volume: the Mississippi Bubble scheme and the South Sea Bubble of the eighteenth century. Also collected in this volume are the topics alchemy, prophecy, fortune-telling, medical charlatanry, admiration of great thieves as well as 'the influence of politics and religion on the hair and beard'. Mackay did not intend to write about chemistry, medicine, and economics as reflected from the grouping of financial bubbles along with topics that are now deemed unscientific (such as magnetism as a medical cure). He wanted to tell stories about schemes that have duped the masses at different time periods. As such, Mackay's eight-page account of the tulip bulb trade was a sensational story, not an economic analysis; the account was more tabloid-like, not founded on verified financial sources.

Despite Mackay's purpose, his writing on tulipomania has been seen as instructional about past financial crises. In a foreword written by Templeton (1989), he praises Mackay for 'teach[ing] us some important lessons that apply to investor behaviour today. [...] the 'crowd' may well include money managers and analysts well-schooled in investment theory' (p. i). Templeton lists a number of financial bubbles that confirm Mackay's insights. The foreword makes no mention of medical and religious schemes at all, even though Mackay spent

more pages on them than financial schemes. By singling out financial schemes from the book, contemporary writers treat *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds* as a serious study of financial crises and economic behaviours.

Because contemporary works repeat Mackay and take for granted his unattributed claims, it is worthwhile to devote some space to summarise his original words. The eight-page section on tulipomania begins with the tulip's Turkish origin and the long route through which it travelled to the Dutch Republic. Mackay then reports that the wealthy and the learned men were the first to collect the tulip before the flower infatuated 'the middle classes of society and merchants and shopkeepers, men of moderate means' (p. 98). Mackay goes on to explain that the diseased tulips were more beloved than the healthy ones because 'many persons grow *insensibly* attached to that which gives them a great deal of *trouble*, as a mother loves her sick and ever-ailing child better than her more healthy offspring' (p. 99; emphasis added). He claims that the most sought-after bulb *Semper Augustus* could cost 'a new carriage, two grey horses, a complete suit of harness' (p. 100). Mackay also recites the story of a sailor who ate a tulip bulb for breakfast because he did not realise the onion-like bulb was a precious object. Mackay describes the widespread madness in the Republic where 'nobles, citizens, farmers, mechanics, sea-men, footmen, maid-servants, even chimney-sweeps and old-clothes women' (p. 103) suspended their daily lives and sold whatever property and possessions they had in order to trade bulbs. When the market was saturated, the price fell sharply. Many lives were said to have been ruined: 'substantial merchants were reduced almost to beggary, and many a representative of noble line saw the fortunes of his house ruined beyond redemption' (p. 104). Consequently, Mackay concludes that the Dutch economy suffered and took many years to recover.

The reliability of Mackay's account is questioned by historian Goldgar (2007), who pointed out that Mackay had heavily borrowed from a German work, Johann Beckmann's *A History of Inventions, Discoveries* (1817). Similar to Mackay's book, Beckmann aimed to publicise scams such as 'magnetic cures', 'secret poison', 'speaking-trumpet', 'artichoke', and 'insurance'. In Beckmann (1817, p. 26) and Mackay (1856, p. 143), a Viceroy bulb was said to cost: '2 last of wheat; 4 ditto rye; 4 fat oxen; 3 fat swine; 12 fat sheep; 2 hogsheads of wine; 4 tons of beer; 2 ditto butter; 1000 pounds of cheese; 1 complete bed; a suit of clothes; and a silver beaker'. The same questionable list is reproduced as fact on the book jacket of Dash's *Tulipomania* (1999), the blog 'The Bubble Bubble' by *Forbes* columnist Jesse Colombo (2012), and the 'tulip mania' Wikipedia entry (even though a tiny footnote suggests that the source was dubious).¹ The unattributed quotes show that the tulipomania discourse is self-referential, even though academic sources have disputed the claims made by Mackay and Beckmann.

Historian Goldgar (2007) also questions the impartiality of Beckmann's accounts because he relied on two biased sources: words from one Abraham Munting whose father lost money on tulip speculation, and anonymous

pamphlets produced by propagandists during the mania. Goldgar found no evidence that noblemen, chimney sweepers, and farmers participated in the trade, nor did she find any evidence of large scale bankruptcy that destroyed the Dutch economy. Gebhardt (2015) also points out that trades were done with a gentleman's handshake: the lack of written documents mean the money lost could not be calculated.

Despite Mackay's unattributed and biased accounts, writers—non-fictional and fictional—use his words to fuel imagination. For example, Moggach's *Tulip Fever* has archetypal characters such as the wealthy merchant who displays social status by acquiring the tulip and other rarities; the artisan who abandons his profession to trade tulips in taverns; and the fool who mistakes a valuable bulb for an edible plant. Moggach wrote that the price of a *Semper Augustus* cost 'six fine horses, three oxheads of wine, a dozen sheep, two dozen silver goblets and a seascape by [a famous painter]' (Moggach, 1999, p. 31). When the bubble burst, 'thousands of people are made destitute. They throw themselves into the canals; they deliver themselves up to the mercy of the charitable institutions; in churches throughout the land they bitterly repent their folly' (p. 272).

In a radio interview with *Bookclub*, Moggach (2013) shared her view on tulipomania, which could as well be Mackay's. She suggested that tulipomania was a 'bizarre' event: it illustrates the 'insanity of lust and greed and stupidity' in 'an otherwise very reasonable period, really the middle-class of that period' where 'people from all income brackets saving, stealing to buy these bulbs'. The self-referential nature of the tulipomania discourse makes the story *the truth*. In turn, this truth is used to explain other financial crises. Moggach continued that tulipomania was one of those madnesses that infected every generation: 'dot-com bubbles, property bubbles, South Sea bubbles'. Responding to Moggach's comments, *Bookclub* host James Naughtie said tulipomania was 'the problem when you don't have a central bank.' This comment implies that tulipomania can be understood without a sociohistorical context, that it illustrates every financial woe in any kind of society at any historical period.

First Set Of Binary Opposition: *X* and *Not-X*

The timelessness of the ahistorical tulipomania discourse implies that social relations remain static in all kinds of society. This ahistorical discourse constructs gender and cultural differences through sets of binary opposition. In the first set, the subject (*x*) is seen as the norm to which the object (*not-x*) is subjugated. The two pairs examined here are: the West vs. the East, economic equilibrium vs. financial crisis. From a postcolonial perspective, 'the West' and 'economic equilibrium' are critiqued to be masculine while 'the East' and 'financial crisis' are feminine from a postcolonial feminist perspective. Not only are Western

thoughts the norms in the binary pairs, but the masculine subject also devalues the East as the feminine Other, who is politically and economically inferior.

The West vs. the East

The tulipomania discourse traces the Eastern origin of the flower while showing the East was (still is?) a backward society ruled by lusty and barbaric rulers. The tulip is seen as the *femme fatale* that 'bewitched' the rulers and ruined the kingdom. Gender works through 'The West vs. the East' in two ways: first, the Western masculine subject feminises the East; second, the subject explains socioeconomic mayhem with the 'spell' cast by the flower.

The tulipomania discourse describes the Ottoman Empire as a land ruled by barbaric men. The incompetent rulers are said to have spent too much time tending extravagant gardens and staying at sex harems. Pavord (1999) writes that Sultan Mohmed II (1451–81) built pleasure gardens inside the city's courtyards for tulips. Two hundred years later, Ibrahim 'the Mad' (1640–8) was said to have drowned hundreds of concubines so that replacements could be sought (Dash, 1999). His successor Sultan Ahmed III (1648–87)—according to Pavord—held staged tulip festivals where nightly entertainment took place in the garden where his five wives would make their appearances: 'at the signal from a canon, the doors of the harem were open and the Sultan's mistresses were led out into the garden by eunuchs carrying torches' (p. 50). While the sultans are said to be hypermasculine rulers who exerted power over women and flowers, they were not treated as serious rulers because the authors downplay the rulers' achievements as public men.

The East is also feminised through linking the Eastern origin of the flower to it being a woman. Dash (1999) describes the wild flower found in the Chinese mountain range as a beauty whose rugged charm needs to be refined: '[the original tulip] had neither the stature nor the easy elegance that characterised their descendants. These would come only with time. But even now they were beautiful' (p. 5); further, the beauty of the wild flowers was 'considerably enhanced by the bleak surroundings in which they were usually encountered' and that would have made attractive (p. 6). The 'slender and irresistible' (Pavord, 1999, p. 26) tulip is described as seductive enough to win the title of the most beloved flower in the Ottoman Empire. The Muslim poets are said to see the flower as a symbol of eternity and a token of undying love (Dash, 1999). The flower is also described as 'wildly sexy' (Pavord, 1999, p. 4), thus deserving some 'evocative' (p. 43) Turkish names such as 'those that burn the heart' and 'matchless pearl'. At the same time, the seductive flower was also seen by the Turks to be modest because it bows its head to its admirers (In the next section, I explore how the flower encompasses both the *x* and *not-x* concepts by being the virgin and the whore at the same time).

The East is further feminised when a feminine object is said to have clouded the rulers' judgement and ruined the kingdom. In the tulipomania discourse, the Ottoman Empire failed to progress like a Western society partly because its rulers failed to be reflective and simply followed the paths of their ancestors: the sultans in the seventeenth century would act and behave in a similar way as their ancestors in the fifteenth century. The stagnated progress was explained by Pavord (1999), referencing the sultans' passion for the flower, evidenced by the Turks' keenness for judging the tulip. The Turks are said to prefer a tulip that has a long and strong stem, smooth and firm petals, a blossom unhidden by the leaves, as well as an erect posture (Dash, 1999). Similar description can be found in Pavord (1999): 'the petals themselves had to be of good texture—stiff yet smooth—and of one colour'; 'the flower had to stand erect on its stem, thin and well balanced' (p. 43). The language used to describe the ideal tulip is also used to describe the physique of an ideal woman nowadays: long and straight legs, smooth and firm skin, and erect breasts. The ideal tulip/woman should also be chaste because the flower should not be soiled with its own pollen. Dash (1999) uses sexual language to describe how Turkish gardeners like the flower to be virginal but seductive at the same time: 'her inner leaves [should be ornamented with pleasant rays]; [...] her outer leaves a little open [...]; the white ornamental leaves are absolutely perfect' (p. 203).

Another purpose of describing the Ottoman rulers' private lives is to satisfy the fantasy and desire that the Western masculine subject has about the East (Yeğenoğlu, 1998). In particular, the harem stirs the Western imagination of a sexually deviant place that could not be found in the West. Mernissi (2001) writes that Western men always imagine the harem to be a sex haven where scantily clad slaves offer sexual services to the male captors. In both the accounts of Dash and Pavord, the tulips in the garden are said to be like the women in the harem who were kept by powerful men for private pleasure and viewing. In the tulipomania account, the flower acts as a substitute for the oriental women in the harem; its physique is described in sexualised language to satisfy erotic desire.

As Yeğenoğlu (1998) stated, colonial discourse is constructed from sexual and cultural differences, and the tulip, as both a woman and the East, was used in the tulipomania discourse to confirm the differences. By showing the peculiarity of the East, as Said (1979) explained, orientalism 'tries to show that European culture gained in strength and identity by setting itself off against the Orient as a sort of surrogate and even underground itself' (p. 3). In the tulipomania discourse, the Turks were not described as particularly scientific and entrepreneurial about the flower: little space was spent on describing the sociohistorical context of tulip cultivation in the East, such as brief mentions of how the sultans classified the tulips (Dash, 1999) and price speculation in Istanbul (Pavord, 1999). It remains unknown what the economy of the Ottoman Empire was like

in those 300 years, and what knowledge the Turks gained about nature through studying the flower for centuries before Europeans were aware of the existence of tulips. In contrast, both Dash (1999) and Pavord (1999) devoted more space to detailing the three years of bulb trade in the Dutch Republic, thus implicitly praising the West for its financial sophistication and scientific advancement. The contrast between the East and the West reinforces the notion that the Orient was unchanged whilst the West transformed in merely three years. Scientific knowledge production was implied to relate to capitalism: a non-capitalist society was assumed to be scientifically backward; scientific progress was only possible in a capitalist society.

Economic Equilibrium vs. Financial Chaos

Financial chaos is often said to be a hysteria—a feminine moment in an otherwise orderly and sound masculine market. Historically hysteria was seen as a woman's disease related to the womb, menstruation, and unfulfilled sexual desire. A hysterical woman is said to bring disorder and mayhem to an otherwise calm situation. In the tulipomania discourse, the tulip is the woman who disrupts a social equilibrium by robbing rationality from men. The man who lost his sensibility can be found in the Disney animation *The Black Tulip* (loosely adapted from Dumas *père's* book of the same title) and the PBS documentary *The Botany of Desire* (adapted from the popular science book of the same title).

The story of Disney's *The Black Tulip* takes place in 1672 in an unnamed European town. The town holds a contest for the most beautiful black tulip. Cornelius, a horticulturist, devotes his time to cultivate the impossible tulip. Cornelius' out-of-town godfather arrives asking him to keep a box in secret. Later Cornelius receives a letter from the godfather but is too preoccupied with the bulbs to read it. Meanwhile his wicked neighbour eyes the black tulip to make a potion. The state police raids Cornelius' place, finds the box, and arrests him for treason. The tulip is said to bewitch Cornelius and blind him from fulfilling a godson's duties during a political turmoil. He is like the sultans who are said to be too preoccupied with the tulip to care more about the state's political affairs.

The Black Tulip shares more similarities with other Disney animations than the tulipomania discourse. Recurring themes found in *The Black Tulip* include Disney staples such as the contrast between good and bad, sexual awakening of the young lovers, and human-animal friendship. The perfect Disney world is disrupted when vulnerable humans are tempted by worldly objects, such as the apple in *Snow White*, the glass slippers in *Cinderella*, and the tulip in *The Black Tulip*. To the young audience who probably have not heard of tulipomania, the meaning of the tulip may be established through other temptation symbols in Disney animations. Yet when *The Black Tulip* is examined as part of

the tulipomania discourse, the meaning of it being a *femme fatale* still applies. It can thus be argued that the meaning of the tulip has become independent of the historical context that has given it meaning; that is, the meaning of the tulip being a temptress remains static in a wide range of discourse.

The tulip-as-temptress is also reinforced in the NSF-funded PBS documentary *The Botany of Desire*. Popular science writer Michael Pollan states that the tulipomania was ‘completely illogical, [it] can’t [be] explain[ed] in any logical scheme. The entire society went nuts.’ He adds that it was ‘a pure, speculative financial bubble. And it is about a flower. I mean, how amazing is that?’ There is then a cut to an older Dutch man surveying his garden. He says: ‘you get the tulip fever and that becomes worse, worse, worse.’ The offscreen narrator then adds: ‘the flower bewitched one of the most powerful men in the world: the Sultans of the Ottoman Empire’. Back to the present days, Pollan says: ‘the breeders of today are sex-crazy’. The scene changes to a Dutch tulip breeder surveying beds of tulips, picking up one of them who tells the camera: ‘this one is my favourite, I give it a good future. When you see this one, your heart goes “chi chi chi” and that’s the difference.’ Even though this older Dutch man lives in a different time and place from Ottoman sultans, he is used in the documentary to represent all men who are/were infatuated with the flower. In this way, social relations between the flower and the man are already determined by the static meanings of the flower.

The East and financial chaos upset an equilibrium maintained by the West. The West needs to use a remedy to suspend feminine hysteria and resume normalcy. In the past, female hysteria was believed to be cured by pregnancy, blood drain, hypnosis, and psychoanalysis. Remedies to today’s hysterical financial market include tougher regulation and increased liquidity. I will show in the following that textual remedies are also used to resume the normalcy and equilibrium of gender relations.

Second Set of Binary Opposition: The Hidden Subject and Two Objects

The second set of binary opposition consists of two objects and a hidden subject. The woman simultaneously embodies the two objects *x* and *not-x*. She does not have a sense of agency to choose her role because the hidden male subject assigns her a meaning. In this second set of binary opposites, there is no norm to which the feminine object is compared because all the concepts are feminine: virgin vs. whore; nature vs. a cosmetic world; and woman vs. the tulip. The hidden male subject flexibly uses the *x* and *not-x* binary in order to restore the disequilibrium caused by the East and financial chaos. The problem is resolved by constructing ‘Orientalism 2.0 discourse’ (Aouragh, 2105) through ‘a politics of representation in which the spectator (or researcher) is an object that has no agency’ (p. 273).

Virgin vs. Whore

The hidden subject sees the tulip as both a virgin and a whore. She is a symbol of modesty in the Ottoman Empire, yet is said to be seductive enough to earn names such as ‘burn the heart’ and ‘matchless pearl’ (Pavord, 1999). In the Disney animation *The Black Tulip*, the black tulip and Rosa—the heroine—are unspoiled exotic objects. The tulip is a token of virginity but is also a temptress who makes the main character, Cornelius, lose his mind. While Cornelius is busy cultivating the tulip, his wicked neighbour is eyeing the flower to make a potion by acquiring ‘a maiden with a pure heart’ (i.e. virgin) and ‘a black flower without imperfection’ (i.e. whore). When Cornelius is imprisoned, he grows one tulip in his cell and gives the other to the warden’s daughter Rosa. The villain steals the Warden’s keys to Cornelius’ cell so that he can take hold of ‘a black flower without imperfection’. He also bribes the warden for his daughter’s hands for ‘a maiden with a pure heart’. When the villain sets Rosa and the black tulip on fire, a flame with an evil face creeps up to swallow both. Meanwhile, Cornelius’ animal friends help him escape so that he can save Rosa, who is tied to a pole ready to be scarified to the male rapist represented by the fire. In an expected Disney ending, Cornelius marries Rosa and his tulip is crowned the most beautiful in the town.

Rosa is drawn like a gypsy woman. She wears gold hoop earrings, has dark skin complexion, and speaks in a foreign accent. The tulip is a token of Rosa’s virginity and her name is that of a rose. Cornelius entrusts Rosa with a valuable bulb, asking her to look after the flower as well as her virginity. The villain does not directly soil the woman and the flower, but he ignites a flame—which is likened to be a rapist—to take both away. Because Cornelius is seen as the rightful owner of both the flower and the woman, Rosa appropriately tells him that ‘you have asked me to keep it safe, and I have done it’. While ‘it’ refers to the tulip, it may as well be her virginity. As mentioned earlier, the black tulip, like the glass slipper in *Cinderella* and the Prince’s kiss in *The Sleeping Beauty*, helps identify the chaste women who are associated with the tokens which aid the heroes to identify them.

Unlike the tulip in Disney animation, the tulip in both contemporary and historical account is more often a cunning and manipulative prostitute than a chaste virgin. Propagandists associated the tulip with the fallen woman in satirical work during the height of the speculation. Engraver Crispijn van de Passe jr. and painter Hendrik Gerritszoon (also known as Hendrick Gerritsz Pot) were commissioned to create work that poked fun at the speculators. In van de Passe’s *Flora’s Mallewagen* (*Flora’s Wagon of Fools*, 1637) and Gerritszoon’s painting of the same title (1637), Flora—the goddess of flowers and the protector of prostitutes (Dash, 1999)—sits in the fools’ wagon carrying nine flowers, including a *Semper Augustus* in her left hand. Accompanying the goddess are two other women named ‘Collect All’ and ‘Vain Hope’. Lying on the ground underneath the wagon are tulips of different species. Following the

wagon is a mob of men and women extending their arms hoping to sail along with the entourage who will blindly drown themselves in the sea. In written pamphlets during the height of the speculation, Flora was said to be a faithless companion who offered herself to the highest bidder (Dash, 1999). The contemporary fictional work *Tulip Fever* also likened the tulip to an expensive and unfaithful prostitute. The protagonist's lover is described as a 'virgin' (p. 160) trader. The flower is said to flirt with him and any man who could afford her: 'tulipomania has claimed him too, and what a mistress she is! She flirts with other men; she leads them on. In the end, however, just when he thinks he might lose her, she surrenders to him' (p. 160). The education documentary *The Botany of Desire* does not call out the flower as a prostitute but it describes nature as highly manipulative because it is wise enough to '[keep humans] engaged every generation'. The tulip's choice of weapon is said to be beauty. Quite appropriately, the tulip story begins with an extreme close-up of a bee busying itself on a flower, implying the sexual nature of the tulip.

Nature vs. a Cosmetic World

The hidden subject asks nature and the cosmetic world to be judged from a male subject position. *The Botany of Desire* uses an online interactive game to ask school children to judge beauty based on four criteria: symmetry, health, vibrancy, and complexity. Students are asked to compare nature with a cosmetic world by selecting the most beautiful image among three. In one set, the images are a forest scene, a parking lot scene, and a beach scene. The forest and beach scenes—both represent nature—received more votes than the parking lot scene that represents a human-made world. The nature vs. human-made world dichotomy illustrates that of female-male: while women *appear* like nature, men *act* on the nature to make it useful. More curiously, another set consists of three photoshopped images of a woman's headshot. It is impossible to tell if the original image was included but it can be assumed that the manipulated image has the most symmetrical face. Nature, as represented by the asymmetrical face, received the fewest votes. A cosmetic improvement of nature—through photoshopping—is necessary to make the woman's face easier on the eyes.

What is troubling about the supposedly educational nature of the game is that it asks students to look and judge in a particular way. It does not ask them to judge the beauty of any human, but the face of a young, pale-skinned, heavily-made up Caucasian woman who represents all humans. It also asks students to judge this woman against natural objects (such as flowers) and manipulated images of herself. The fact that the game is lost on few (as evident by the number of votes) means that students have learned to take up a particular subject position to judge women's appearance. As John Berger's (1972) famous quote illuminates:

Men act and women appear. Men look at women. Women watch themselves being looked at. This determines not only most relations between

men and women but also the relation of women to themselves. The surveyor of woman in herself is male: the surveyed female. Thus she turns herself into an object—and most particularly an object of vision: a sight (p. 47).

The above quote illustrates that the students who voted on the image had already understood the relationship between the viewers and the viewed. If the student is a girl, then she ought to know that her face is rated by others as well. Moreover, her face is never pretty enough when compared to a digital image manipulated by an invisible hand.

The above quote applies to women as much as the tulip. *The Botany of Desire* says nature has agency—the tulip *knowingly* uses its beauty to attract humans' (or men's?) attention. By asking herself to be looked at, the tulip is said to turn herself into an object of sight. To look at a tulip, a male subjective way of looking is desired.

Woman vs. the Tulip

In the fictional work *Tulip Fever*, men first see the tulip as a woman, then any woman becomes a tulip, later the woman is just a part of the tulip. This pair of binary opposites objectifies and fragments women by conflating the woman and the tulip into one concept. At the beginning of *Tulip Fever*, Sophia is likened to an expensive flower in the collection of her old, wealthy husband. Her beauty and vulnerability are immortalised by a painter, Jan. Referring to a vase of tulips that was asked to be included in the couple's portrait, the husband asks the painter: 'do they not remind us of the transitory nature of beauty, how that which is lovely must one day die?' (Moggach, 1999, p. 29). To the painter, what is lovely is not the flower, but the woman. However, 'she has perished, long ago. Only the painting remains' (p. 35). As Jan paints Sophia, he sexualises the flower as a woman. His imagination strips off her clothing piece by piece: 'a petal drops, like a shed skirt, from one of the tulips' (p. 31); 'another petal falls; it reveals the firm knob of the stigma' (p. 34).

Sophia and Jan begin an affair, Sophia becomes a tulip to Jan. Sophia sees herself as a tulip from a male perspective. Being a nude model, Sophia sees herself as an object of gaze (Berger, 1972). She narrates that, 'I disrobe myself, peeling off my clothes like an onion skin' (p. 124). Later, in Jan's dream, Sophia's 'petals fall, revealing a naked stalk' (p. 157). Not only does the painter see the woman as a tulip, but a dumbfounded grower sees women in the street as tulip bulbs as well: 'comely women are tulips; their skirts are petals, swinging around the pollen-dusted stigmas of their legs' (p. 146).

Later, when Jan is completely obsessed with bulb trading, the love between him and Sophia is displaced by a love of money. Commodities have displaced social relations and become the most valuable thing. The lovers have forgotten about lovemaking altogether. The desire for each other has been subsumed by the desire to trade the rarest bulb. Sophia becomes only a petal—a flower

part—to Jan. At the end of the story, when Jan loses the ultimate game of trading a *Semper Augustus*, he loses the bulb and the lover altogether, the woman and the tulip are one and the same.

Manifest and Latent Ideologies

The second set of binary oppositions (i.e. the virgin vs. the whore, nature vs. a cosmetic world, woman vs. tulip) works in an intriguing way because it contains both manifest and latent ideologies. On the surface, the virgin is not the whore, nature is not a cosmetic world, and the woman is not the flower. But the manifest level of ideology obscures a latent level in which the subject—a male—is positioned behind the discourse to compare and judge women. This hidden subject is like the ‘invisible hand’ in Adam Smith’s understanding of the market. Like an unobservable market force that maintains market equilibrium, the hidden male subject restores the hysterical state to an economic equilibrium *at the textual level*. To do this, gender is made flexible depends on the need of the narrative; therefore the woman can be the virgin or the whore. For example, in *Black Tulip*, Cornelius achieves a state of harmony by marrying the virgin woman and winning the competition. In *Tulip Fever*, the woman and the tulip both tempt a virgin painter to sin; his tactic to resist the temptation is to objectify the woman by seeing her as nothing but a petal. After the plan falls through, the painter finds peace by immortalising the most mundane objects such as an onion. In both narratives, the male protagonist resolves the disequilibrium (such as losing a trading commodity, being in jail) by seeing the woman as either a virgin or a whore. Making gender flexible is also a tactic to manage capitalist crises. Fraser (2016) shows that in the nineteenth century, a liberal competitive capitalist society asked women to be responsible for the private social reproductive duties. In the era of financialised capitalism, social reproductive duties have become an industry that is commodified and privatised.

I have shown in this section that the tulipomania discourse is self-referential. Despite the questionable credibility of the earliest record written in the English language, fictional and non-fictional writers have relied on it to make claims and re-imagine fictional scenes. The static discourse means that unchanged social relations are constituted by two sets of binary opposites. In this static discourse, the meaning of the tulip was not made in relation to characters and events; its meaning becomes independent of the historical context that had given it meaning. Tulipomania discourse can be considered a myth that ‘gives [the world] in return [...] a *natural* image of this reality’ (Barthes, 1972/1957, p. 142). As a myth, the tulipomania discourse neither deceives nor denies: ‘its function is to talk about [things] [...] it gives them a natural and eternal justification, it gives them a clarity which is not that of an explanation but that of a statement of fact’ (p. 143). To unveil the unnaturalness of the discourse, a marginalised voice belonging to a woman may effect the critique.

Women's Production of Knowledge

Can women produce knowledge that disrupts the apparent naturalness of the tulipomania discourse? Hartsock (1983a, 1983b) believes that they can. She proposes that feminist standpoint theory can deconstruct ideologies embedded in class and gender bias. She believes that working-class women occupy a position from which they can unveil a capitalist patriarchal ideology. She states that because women produce more use value at home and engage in more repetitive and mundane tasks, therefore they are less likely to see the world as one of exchange. Borrowing insights from Hartsock, I argue that a feminist standpoint will show the knowledge about tulip speculation was more fragmented and contradictory than the universal and coherent knowledge created by a unified male subject. However, not all discourses produced by women are necessarily written from a feminist standpoint perspective. *Tulip Fever*—a novel written by a woman for women readers—reinforces the class bias that is inherent in the male subject.

Little information exists to show how Dutch women and the working-class fared during the tulip speculation, because they produced few documents. (Schama, 1997). Existing knowledge was produced by the ruling class of wealthy merchants and learned men. They passed on their culture as the national one. Nonetheless, historical accounts (as discussed in Schama, 1997) reveal women's economic status during the Golden Age. Accounts show that young women from the province and other parts of Europe were employed as servants; some widows continued their husbands' trade; and at least one woman was known to have made a living as a painter (Cook, 2007). Historical accounts also show that Dutch women in the seventeenth century enjoyed more legal protection, economic advancement, and social freedom than their counterparts in England and France. Yet the current discourse has little to say about how women coped with the financial bubble aftermath and whether the crisis transformed gender relations in the household and society.

Women's Discourse and a Re-Imagination of the Tulip?

Historical fiction is a genre through which contemporary writers can re-imagine women's place. Wallace (n/a) believes that historical fictions allow women to reclaim their unrecorded past, and '[this past] was given renewed vigour by feminism' (para. 11). A historical fiction based on tulipomania is Deborah Moggach's previously mentioned *Tulip Fever* (1999). Moggach adopts the story from a woman's point of view by focusing on women's everyday lives rather than the macro environment that enabled tulip speculation. To Wallace (n/a), 'the historical novel has always offered a way of writing about subjects—politics, economics—which [women writers] have found it difficult to write about in other forms' (para. 48). However, a woman's discourse is not

necessarily a feminist one. I argue in the following that *Tulip Fever* (1999) reinforces the binary opposition of social relations (as discussed in the previous section) and validates the subject as a unified male. Therefore, it fails to adopt a feminist standpoint that could critique knowledge from the margin.

Tulip Fever's protagonist, Sophia, is married to a wealthy but ageing merchant, Cornelis Sandvoort. He is anxious to have an heir but she is bored to be with him. The husband commissions an artisan, Jan, to paint a portrait of the couple. Sophia and Jan fall in love and begin an affair. Meanwhile, the maid Maria is pregnant but her lover Willem is nowhere to be found. Sophia comes up with a scheme: she will pretend to be pregnant and the maid will hand over the newborn to pass as Cornelis' child. Sophia will then pretend to die during childbirth. After Jan raises money in bulb trades, the lovers would then flee to the East Indies. The plan falls through because Jan's servant thinks the bulb is an onion and eats it. At the end Sophia becomes a nun, Jan becomes a still life painter, Cornelis tries to find Sophia in the East Indies, and the maid inherits Cornelis' mansion where she lives with the baby and husband who reappears after a misunderstanding is clarified.

Tulip Fever breaks through one convention in the tulipomania discourse: that it is not a moral story about men, but women. The writer has suggested that she used a first-person perspective because Sophia has done something bad to the husband (Moggach, 2013). The writer wants the readers to be sympathetic with Sophia, whose bad deeds are rooted in presumed female vices such as lust and deception, not male sins such as pride and greed. Unlike men, Sophia only sees the bulb as a commodity for exchange in *Tulip Fever*, not a temptress who seduces men. However, the difference between the tulipomania discourse and *Tulip Fever* stops here because the fiction is yet another citationary work that builds social relations on the two sets of binary opposites: the whore vs. the virgin; the woman vs. the tulip.

Mistress and Servant: Class Relations

What did working-class women do during the speculation? Were they aware of it? How did they cope after the bubble burst? Mackay (1856) suggested that men and women of all classes participated in trading bulbs but his claim was rejected by historian Goldgar (2007), who found no evidence that the working-class participated in the trade. Lacking historical evidence, contemporary writers can only imagine what working-class women did during the bulb trade. *Tulip Fever* then offers a glimpse of the past through the maidservant character.

Maidservants were described with a misogynist attitude in Dutch Golden Age accounts (Schama, 1997). They were seen as the most dangerous household members who were capable of doing mischief because they were custodians of feminine secrets. They were said to be abusive towards their masters, insubordinate, lazy, and sensually indulgent. Maria—Sophia's maidservant—is

typecast to fit this misogynist profile. First, she is the confidante of the socially isolated mistress. The servant and the mistress know of each other's secrets: Maria knows about Sophia's affairs and Sophia knows about Maria's pregnancy. Second, the servant helps the mistress to hide secrets from the master; Sophia comes up with a scheme and Maria becomes the accomplice.

Even though Maria and Sophia are partners in crime, power and class relations differentiate them. Moggach marks the difference between the two women by using different reasons to explain their illicit sexual relations. The upper-middle-class woman is said to engage in an affair to assuage her frustration in a loveless marriage. On the other hand, the working-class woman is pregnant because she indulges in sensual pleasure. This reinforces a working-class woman stereotype: that they have less control over lust and appetite (see also Ch. 3 about why women are not trusted as credible borrowers). Consequently, when Sophia has to stuff pillows inside clothing to fake a pregnancy, the maid is described as naturally flabby so her rising belly is unnoticeable. Once again, the author reinforces the stereotype of working-class women being overweight. Lastly, Sophia has control over her fate while the maid does not. Once the mistress finds out about the maid's pregnancy, she decides to dismiss her. The maid is only kept because the foetus becomes convenient for Sophia's scheme (see also Ch. 5 for a discussion of the foetus as a commodity of exchange).

Class difference also marks the two women's relationship with the material world: Sophia sees the world as one of exchange – she privileges exchange value over use value. On the other hand, the maid is said to privilege use value. Sophia belongs to the ruling class through marriage; she knows that in order to improve the maternal family's finances, she needs to marry a rich man. She also understands that in order to earn freedom, she needs to have plenty of money for investment. To comfort a frightened Maria when Sophia plans to steal a bulb, she consoles the maid by saying: 'We will get enough money, don't worry. [...] We'll get the bulbs and then we will make a lot more' (Moggach, 1999, p. 152). A feminist standpoint critiques Sophia for adopting a male subjectivity to see the world. As such, her view of the material world is partial because she neither engages in productive work (such as household duties) nor reproductive work. Yet she is hardly equal to a man of the ruling class: she is denied access to a public life in the patriarchal world. Being secluded in a private space, her understanding of the world of exchange is filtered through men: she only hears about the bulb trade through the husband and she trades bulbs through the lover.

In contrast to Sophia, feminist standpoint theory argues that the maidservant Maria would have an impartial view of the material world. The theory states that working-class women arguably are more able to unify mind and body, thus are more capable of pointing out the false dualism in patriarchal capitalism *Tulip Fever*, however, offers little hints at what Maria *thinks* about the tulip and financial speculation. Her thoughts matter little to the mistress and the story. One of the few glimpses is Maria's observation of the flowers in the

garden: 'Maria gazes at the single flowerbed. Shoots have pushed through the soil; how hopeful they are' (p. 57). She associates the bulb with life rather than with money. Her simplicity and lack of sophisticated thinking is mocked by the mistress and the author. Maria is said to be 'sensible' and 'practical'. Sophia does not understand why Maria is not keen on stealing a bulb to raise funds. To an upper-middle class woman, the 'practical' way to think about the bulb is to treat it as a commodity. To a working-class woman, the 'practical' way to live is through reproductive duties. In Maria's case, she wants to get married and have five children. Once again the author reinforces the working-class women stereotype: marrying early, having many children, and lacking financial and professional ambitions.

The final resolution of *Tulip Fever* may appear to be a critique of false consciousness among the middle-class characters. At the end of the story, all the characters see through the untruth imposed by capitalism and opt to live a life without material temptation: Sophia becomes a nun; Jan the lover only paints mundane objects such as an onion; Cornelis gives up his business and moves to the East Indies to find Sophia. The only winner in the story is the maid. However, the final resolution cannot be mistaken as the triumph of the working-class women: instead it reinforces a gender/class ideology that a woman's place is at home. The simple-minded maid is not punished because she is the one who dutifully performs womanly and motherly roles (cooking, cleaning, giving birth, breastfeeding baby) and is consequently materially rewarded. The maid does not attempt to cross the class and gender boundaries; her happy confinement to a private sphere makes her a stabilising force in a patriarchal capitalist society. On the other hand, Sophia—the femme fatale—brings a disruptive force to the society and economy because she violates gender boundaries. She tries to cross over to the masculine side by being the dominant partner in the affair, the mastermind of a scheme that involves theft and deception and—worst of all—a participant in the public life through the bulb trade. Because of her boundary-crossing, the bad woman is punished not so much because of her sins, but because of her attempts to ignore prescribed gender relations.

I have shown in this section that a woman-written historical novel does not necessarily produce an alternative account of the tulipomania discourse. Written from the point of view of an upper-middle-class woman during the Dutch Golden Age, *Tulip Fever* privileges exchange value over use value. The voice of a working-class woman is heard through her mistress, and she is stereotyped to be simple-minded and nurturing.

Technologies of Difference

In this section, I show how technologies of describing nature—such as writing, documenting, drawing, and printing—were instrumental at creating a sociocultural context that enabled bulb trading. These technologies had both

material and symbolic consequences for the Dutch society and the tulipomania discourse. ANT would argue that technologies made real a market of commodity trading (Callon, 2007a) because they differentiated the tulip into different varieties and thus prices. A post-colonial feminist perspective would argue that technologies exert symbolic control via the tulip over two unknowns: the Orient and women. As delineated in an earlier section, the flower serves as a proxy for the unknown because the tulip symbolises and feminises the East and the tulip is sometimes seen as a woman (as illustrated in the last section). Technologies of difference then served as tools for the male subject to materially and symbolically control the East and the feminine.

The Men Who Used Technologies to Tame Nature

Cook (2007) has convincingly described the sociocultural context under which the Dutch promoted trading and commerce during the Dutch Golden Age. He suggests that the Dutch wished to search for wisdom beyond religious reasoning and settled for sensory-based knowledge. Objective knowledge could be gained through ‘the bodily senses, information from which can be exchanged’ (p. 17); to know is to see with one’s eyes and to touch with one’s hands. Therefore, knowledge about nature could be gained from acquiring *objets de curiosité* from abroad. Another way to know nature is through meticulous description that is essential to comparison, alteration, and use for ‘material betterment’ (p. 6). Yet another way to know nature is to produce and consume ‘realistic’ arts such as illustration that satisfies the insatiable Dutch appetite for knowledge.

Knowledge production was done by different groups of professional men who diffused knowledge through describing and assessing the tulip. Cook (2007) writes that: ‘tasteful objectivity began with descriptive facts, the credibility of which was guaranteed by personal credit, the sharing of information, and collective decision-making on plain and precise language’ (p. 40). Masculinity was essential to the network of professional men; it made the network appear natural (Gebhardt, 2015). One man who paid particular attention to the tulip was the botanist Carolus Clusius. In his monumental *Rariourum Plantrum Historia* (1601), Clusius spared thirteen pages to describe, catalogue, and understand tulips in the horticultural encyclopaedia. He classified the tulip first by petal shape, then by colour. After the botanist wrote about the flower, the cultivators bred new species and the connoisseurs set the trend of making the tulip a symbol of status, wealth, and good taste. Later, commercial artists were commissioned to illustrate tulips as products that were numbered and annotated with names, weights, and prices (Pavord, 1999). Lastly, the printer mass-produced the illustrations for traders to consult the commodity. Cook (2007) argues that the precise description created a political economy of natural knowledge on which commerce depended.

Describing, documenting, and illustrating the tulip effected and conditioned the bulb trade because it created differences among the tulips. The breeders created new groups and species (Dash, 1999), which were then ranked by fanciers and dealers. The most prized flowers were those that were entirely white or yellow but adorned with thin-striped flames in the centre and by the edge of the petal. Dash (1999) writes that ‘Dutch tulipophiles used the subtle variations of these flames and flares of colour to grade their flowers according to a strict set of criteria’ (p. 59). Among all the species, *Semper Augustus* was the rarest and could command a lot of money. Only twelve bulbs were known to exist in 1624 (Pavord, 1999) and it was almost never traded (Dash, 1999).

The technologies to document the tulip may explain why the Dutch created an economy of the tulip but the Turks had not. I argue that the difference was not rooted in economic backwardness, as the tulipomania discourse implies, but a difference in understanding nature. Turkish arts singled out neither one tulip species among all nor the tulip among all flowers, and emphasised sameness more than difference. Turkish ceramic arts showed the tulips together with carnations, hyacinths, and roses (Petsopoulos, 1982); the four kinds of flower existed harmoniously with each other. Moreover, Turkish vessels and tiles favoured the tulip more as a symbol than a pictorial representation. For example, the tulip on a ceramic surface was two-dimensional and painted blue. The emphasis on sameness did not give the tulip a trading value.

In contrast, Dutch arts favoured a realistic representation of individual tulips, thus the emphasis was on the differences between species which gave the tulip a trading value. The ANT concept of ‘framing’ effectively explains how economics gave a value to the tulip (Slater, 2011). The framing process separates and individualises objects into discrete transactable entities, thus allows for trading (Barry and Slater, 2002). After the framing process, the tulip no longer belonged to nature, but was a commodity for the market. The framing process also created individualisation and singularisation, which established the properties of the products, such as petal shape and colour (Callon and Muniesa, 2005).

Symbolic Control of Describing Nature

The technologies of describing nature not only altered the material world through the commodification of nature, but they also exerted symbolic power on social relations. These technologies soothe the male subject’s anxiety about the unknowns, objectify knowledge by disembedding it from the source, and create knowledge that interpolates the readers to assume a unified male position for meaning-making. Consequently, technologies created power relations between the unified male subject and the unknown objects.

The Dutch appetite for exotic objects and for knowing them can be understood as a desire to tame the unknown through scientific and technological means. I have shown how professional men have tamed the tulip—a ‘stranger

from the East' (Dash, 1999)—from an exotic unknown to a knowable object. The tulipomania discourse shows that professional men exercised objective judgement. Dash (1999) and Pavord (1999) have availed to readers the names of key Dutch botanists, horticulturists, growers, painters, illustrators, traders, and government officers. The names imply that these men were knowledgeable public figures. Consequently, contemporary writers have not pried into their private lives because those tidbits were seen to have no bearing on a *scientific* understanding of the tulip. In contrast, the private lives of Turkish sultans, as shown, have been described at length. The leaders from the East are implied to be unprofessional and unscientific because they more spent time and money indulging in luxury than in advancing scientific knowledge.

Printing technologies diffused natural knowledge from a few to many. Mass production of prints decoupled knowledge from the origin of the source. Consequently readers who did not have the opportunity to visit the private garden of Carolus Clusius were still able to learn about the tulip. The disassociation of knowledge from the source made it *appear* objective. Similarly, prints carried the assumed objective knowledge from the seventeenth century to contemporary times. Many books, pamphlets, and catalogues printed in the seventeenth century still survive (for example, I was able to consult Clusius' *Rariourum Plantrum Historia* in a private library in Boston). Surviving information about the tulip has thus created an apparent universal knowledge about the flower and tulipomania, giving an impression that the truth transcends time. It gives an impression that everyone in the Republic shared the same knowledge at the speculation. As I alluded in the previous section, local information may actually be more fragmented than surviving information suggests because it is almost impossible to know how working-class women thought about the flower.

In addition to decoupling the knowledge from the source, printing has also enabled a specific epistemological and ontological arrangement and created a new kind of power relation between a unified male knower position and the unknown object (Hartsock, 1983b). For example, one surviving document is an illustrated book, *The Florilegium*, produced by Emanuel Sweerts in 1612. On one page, Sweerts drew eight flower heads, one of which is attached to the stem, leaves, and the bulb. On the same page, there is also a cross section of a flower that reveals the pistil; next to the cross section view are three seeds.² As the knowers, the readers have to adopt a male gaze in order to understand that nature is something to be examined and closely scrutinised. This understanding of the flower is different from a religious understanding preferred by the Turks in the period between the fifteenth to seventeenth centuries, who demanded the viewers read into the symbolic meaning in order to understand the divine.

From a post-colonial feminist perspective, the universal body of knowledge positions the subject as a unified male who exerts symbolic control over the East and women. The tulip serves as the proxy for both the East and women because the Orientalist discourse conflates the Orient and the woman into one concept (Yeğenoğlu, 1998). The Dutch attempt to understand the tulip was similar to the

French attempt to understand Egypt. Said (1979) wrote that under Napoleon, the French ‘[rendered Egypt] completely open, [made] it totally accessible to European scrutiny. From being a land of obscurity and a part of the Orient hitherto known at second hand through the exploits of earlier travellers, scholars, and conquerors Egypt was to become a department of French learning’ (p. 83). By deploying a learned army of chemists, historians, biologists, archaeologists, surgeons, and antiquarians, Napoleon hoped to ‘put Egypt into modern French’ (p. 84). Drawing insights from Said, I argue that the tulip was not merely an import from the East to the West, but a tangible piece of the East that the Dutch could hold, touch, smell, and cultivate. Dissecting the flower through scientific means rendered the flower/the woman/the East open, showing all its parts. In a way, the tulip that reveals its ovary, seed, and petal in the illustrations is like an oriental woman being unveiled. Yeğenoğlu (1998) writes that colonial French men were obsessed with the Algerian women’s veil because they believed that women hide secrets behind the piece of cloth. Like the women, the Orient was believed to be more than it appears, that it bears a veil and is in disguise. The colonialists’ desire to learn about the Orient was reflected by their desire to lift the women’s veil. Similarly, Dutch drawing, documenting, and writing about the tulip was a symbolic act to know the East and the feminine. These technologies aimed to unveil the unknown by exerting power over it.

Technologies continue to exert symbolic control from a unified male subject on an unknown object. The camera has replaced the paint brush to depict the object of desire. An illustrative example is found in the education documentary *The Botany of Desire*, in which viewers are asked to identify with a male position/the camera by adopting an active role in looking at the flower from different angles. The technique of using a high-angle camera position to film still life is pervasively used on the female body—particularly one found in pornography—that renders it passive and powerless. The pornographic camera closely and slowly scrutinises the tulip by slowly panning from the stem to the petals before positioning itself above the flower to show its sexual organs—the stamen and the pistil. The close up of the flower is like those in Dutch illustrations and Sophia’s view of her naked body in *Tulip Fever*. The flower and the woman are scrutinised in the same way across different discourses in different historical periods.

Conclusion

This chapter has illustrated two themes: ‘gender ideology is used to legitimise an unequal distribution of resources among women and men, and between developed and developing economies’ and ‘the production, distribution, and consumption of financial information—be it analogue or digital—rely on machines’. The tulipomania discourse gives a foundation to explain contemporary financial crises because it obscures the political economic context in which crises took

place. Instead, the discourse explains crises with gender and cultural differences by linking the feminine to the Orient to the tulip. By conflating the feminine, the Orient, and the tulip into one single concept, the unified male point of view tries to control all things irrational by exerting symbolic control over it. One way to exercise the control is by closing off the discourse and foreclosing an alternative reading. Another way to exercise the control is to deploy technologies to manage the unknown through observation, documentation, and classification.

Tulipomania is often said to be the first financial speculation and is cited as a reference for subsequent crises. I have shown in this chapter that not only has tulipomania fascinated academics, but it is also the subject of popular culture. I argue that tulipomania is a myth, an ahistorical tale about history. This myth is timeless because it promotes unchanged social relations, implying that a capitalist political economy cannot be transformed. I critique the timeless myth of tulipomania by adopting a feminist political economic perspective to advance three arguments. First, by drawing on Yeğenoğlu's feminist reading (1998) of Said's *Orientalism* (1979), the tulipomania discourse is argued to rely on two beliefs: the East stays the same while the West progresses; the East can be understood through an understanding of the feminine. Popular culture paints the East as a place ruled by barbaric men who had no financial sense and political ambitions. In contrast, the Dutch Republic was hailed as a capitalist society that progressed through trading. The tulip is said to be a dangerous female stranger from the East who needs to be tamed in order to become a trading object for the Dutch. The second argument advanced in this chapter is that the tulipomania discourse is by nature citationary (Said, 1979); therefore discourse written from a woman's point of view does not necessarily produce a different kind of knowledge to challenge the orientalist beliefs. Drawing on Hartsock's (1983a, 1983b) feminist standpoint theory, I argue that historical fiction written from a middle-class woman's point of view reinforces a capitalist logic by privileging exchange value over use value. The third argument advanced in this chapter is that technologies that documented nature created a material reality of the bulb trade. Nature is first observed, described, and documented before it becomes a commodity. Technologies of documentation also exert symbolic control over the East and the Woman. Illustrations and photographs of the tulip employ a voyeuristic gaze at the flower, thus rendering the tulip as an object to be known.

Notes

- ¹ Tulip mania. *Wikipedia*. https://en.wikipedia.org/wiki/Tulip_mania. Last accessed: 31 August 2017.
- ² See: EmanuelSweerts:Florilegium. *VirtualExhibitions*. University of Glasgow. <http://www.gla.ac.uk/myglasgow/specialcollections/virtualexhibitions/birdsbeesandblooms/blooms/emanuelsweertsflorilegium/> Last accessed: 31 August 2017.

CHAPTER 3

The Indebted Women: Microcredit and the Credit Card

Two online searches for women's images reveal the contrast between those of 'women in poverty' and 'shopaholic'. Images of 'women in poverty' are mostly 'third-world' women in Africa and South Asia. The earth tone of the dirt, the dusty air, and the brown faces all contribute to the meaning of female poverty. The images usually show the 'women in poverty' standing on a dirt road in a rural village or surviving in an urban slum littered with industrial waste. The women are likely to appear 'non-Western' by having their heads wrapped or wearing saris. They are regularly photographed with malnourished and shabbily clothed children who do not seem to go to school. The women's wrinkled faces document human misery and perpetual suffering. To the camera, they can only force out a blank stare.

A casual search for 'shopaholics' yields starkly different images. The shopaholics are overwhelmingly white women who are carefully groomed, impeccably dressed up and carrying too many shopping bags. Their dwellings are high streets and indoor shopping malls. They often have a dazzled facial expression such as widened eyes and a wide grin. The images are bright and colourful: her clothing and shopping bags all scream for attention from the viewers. The contrast reflects that the Poor Women are mostly seen as a third-world phenomenon while shopaholism is an exclusively first-world problem.

The differences between the discourses are unsurprising because they were produced for different audiences and circulated in different markets. Popular culture discourses about the Shopaholic appeal to a mainstream audience—some of whom may self-identify as shopaholics. In contrast, academic/public discourses about the Poor Women are produced for scholars, policy makers, and a niche public (such as concerned global citizens and academics). Because

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the problems of the Poor Women and the Shopaholic are seen to differ, combating these two problematic female phenomena requires different tactics.

By drawing on the concept of spatiotemporal disjuncture, this chapter shows that the discursive differences between the Poor Women and the Shopaholic are maintained to give an illusion that women are not materially connected at the global level. Masking material relations with discursive relations discourages a critique of a global financialised economy because the political economic contexts in which the Shopaholic and the Poor Women occupy *appear* to be local even though the political economic context in which they are created is nothing but global. The masking process hides *who* made the financial decisions in the 1970s (such as ending the convertibility of US dollars to gold) (Strange, 1988) that impacted women in both the developed and developing economies.

One impact was a global division of female labour resulting from the global economy which provided a context for the creation of the Poor Women and the Shopaholic. Cheaper (female) labour in developing economies was exploited to produce cheaper commodities for the developed economies. Middle-class women in developed economies—especially those who became the second breadwinner—were encouraged to spend sensibly for their families. In this global division of female labour, women's producer, reproducer, and consumer roles are made flexible in order to absorb surplus resulting from the contradictions of capital accumulation (Fraser, 2016): who can produce for whom, who can reproduce for whom, and who can consume for whom depend on women's social class and geographical locations. To give an example, Bangladesh combated poverty by developing its garment manufacturing industry for exports (Bain and Avins, 2015). Low-waged female labour attracts foreign investment, and the country can pay off foreign debt by exploiting female labour. In other parts of the world, cheap labour drives down the global market price of garments and gives an advantage to global retailers (such as H&M and Primark) to sell 'quick fashion' at a cut-throat price. The cheap prices encourage consumers to buy more than they need. It is not unusual to see women piling up items in baskets and leaving the shops with bags of purchases. The image of women buying in excess reinforces the Shopaholic stereotype of having no self-control.

Chapter Outline

In this chapter, I look at how the two subjects, the Poor Women and the Shopaholic, need to be understood in a context of sluggish economic growth in developed countries since the 1970s. To combat stagflation, a growth in financial markets was seen to stimulate developed economies. However, a financialised global economy requires a spatiotemporal disjuncture to sustain itself because productive capital searches for geographical areas with excessive cheap labour and raw resources, while finance capital searches for those with surplus money. These areas tend not to be the same, as reflected by the different discursive worlds occupied by the Poor Women and the Shopaholic.

In the following, I first suggest why a spatiotemporal differentiation constitutes a financialised global economy. Then I argue how microcredit loans offered to poor women in Bangladesh and credit cards for women in developed economies maintain the spatiotemporal differentiation while seeking to bridge the gap. Next I examine how academic discourse, research instruments, and measurement tools create the subject of the Poor Women by giving rise to both the Poor Women and the Economy. Then I show how popular culture creates the Shopaholic subject who is publicly diagnosed by the Expert, by drawing on Foucault's analysis of discourse (1977) and Hall's analysis of female hysterical patients (1997). Similar to the tulipomania discourse (Ch. 2), the popular culture about excessive consumption is devoid of a political economic context because shopaholism is diagnosed as a psychological disorder. The root of the disorder is said to be women's desire to find love in a patriarchy and to seek recognition from a father figure. Next I examine the chick lit and flick *Confessions of a Shopaholic* and find that this women's genre is able to provide insights into the technologies of money as well as heterodoxical economic thought. However, because chick lit refuses to be taken seriously, it fails to engage readers with meaningful dialogues about their relationship with money. Lastly I examine how the Poor Women and the Shopaholic exercise self-reflexivity to exhibit the modern self through the camera. Global differentiation once again marks the difference between the Poor Women and the Shopaholic: the Poor Women's pre-modern mentality is reflected in her fear of the presence of the camera. On the other hand, the Shopaholics from the Global North control the camera so that they can self-diagnose a psychological disorder.

Spatiotemporal Differentiation

The discourses of the Poor Women and Shopaholic illustrate the first theme developed in this book: 'Women serve as resources in financial markets. The circulation of finance capital relies on values produced by women in both the public and private domains.' Spatiotemporal differentiation necessitates the circulation of capital by drawing on women's resources as discursive and material beings. Fraser (2016) suggests that globalizing financialised capitalism 'has relocated manufacturing to low-wage regions, recruited women into the paid workforce, and promoted state and corporate disinvestment from social welfare' (p. 104). As material beings, women of different classes and geographical locations are asked to enter the formal economy to create surplus value. However, different reasons are given why they should do so. In Western, developed countries, governments captured the energy of the women's movement to promote a dual-income household in order to fight wage stagnation in the 1970s and 1980s. In the media, the working women in the 1980s were shown in shoulder-padded suits in a male-dominated workplace. During the same time period, export-oriented developing countries (such as Taiwan, Singapore,

South Korea, and Hong Kong) encouraged young women to work in factories in the name of independence and modernisation (see Lee and Fung 2009 for the case in Hong Kong). When dual-income families more common in Hong Kong and Singapore and when young women had become more educated in the 1980s, transnational corporations—with the support of neo-liberal states—looked for cheaper female labour in Southeast Asian countries, such as Malaysia, Indonesia, and Vietnam (See Ross [1997] about the case in Latin America).

The invention of financial instruments is yet another example to show how gender is used to create spatiotemporal differentiation. Fraser (2016) explains that through debt, ‘capital now cannibalizes labour, disciplines states, transfers wealth from periphery to core, and sucks value from households, families, communities and nature’ (p. 113). Instruments such as the credit card and microcredit loan are material and symbolic technologies that tap unused resources (i.e. women from both developed and developing economies) for a global financialised economy. Quite appropriately, an American Express slogan ‘don’t leave home without it’ simultaneously asks world travellers to choose a universally accepted currency and asks women to leave their private domain, enter the workforce, and make money so that they can spend it. In another example, microcredit bank workers connect the presumably ‘secluded’ women in rural villages to the outside world by bringing cash from the town to the village.

On the one hand, gender is used to narrow spatiotemporal differentiation: developing economies are asked to catch up with developed economies in the name of development; women workers are asked to catch up with men in the name of empowerment and modernisation. On the other hand, spatiotemporal differentiation also marks that developing economies are different from the developed ones, and that women are not like men. Orientalist thought about an irrational, feminine financial market (see Ch. 2) continues to frame the discourse of personal credits designed for women. In a masculine, advanced economy, being a rational economic actor means being in debt. However, because women and developing economies are not always seen as rational, male authority has to monitor how women and developing countries use credits. If they do not use credits in a prescribed way, they are to be disciplined: at the macroeconomic level, the IMF and the World Bank use structural adjustment and free trade agreements to dictate how developing economies can pay off debt. At the microeconomic level—which is this chapter’s focus—public shaming, some televised, is used on the debtors. Not only does the male authority monitor women’s ability to repay debt, but he also scrutinises their psycho-physical health, private and sexual lives, and family configuration.

Women’s geographical locations also matter to how male authorities view gender and money. Developing economies are feminised as irrational. Men in these countries are critiqued for having failed to feed the family and the nation because of their lack of mastery of the economy. Therefore, the Poor Women are explained to be poor because they have not been given personal choices by male family members. It is assumed that all Poor Women are oppressed in a patriarchy (Mohanty, 1991), and are therefore poor, abused, and uneducated.

Male authorities (such as economists and philanthropists) attempt to solve the problem by giving the Poor Women loans to enter the formal economy so that they can be freed from men who oppress them. It is believed that women's self-actualisation will arrive when they become economic actors who combat a feminine national economy. By aiding women to enter the formal economy, male authorities also ask that they give up traditions and customs. In other words, the Poor Women are asked to disobey the traditional men who shackle them with history and obey the masculine, Western(ised) economic men who give them a loan that leads to freedom.

The Poor Women and Microcredit Loans

Have women in developing countries always been poor? Faraizi, Rahman, and McAllister (2011) do not think so because they believe the Poor Women is a post-Cold War construct and a venture of international development agencies since the 1990s. During the Cold War, the targeted aid recipients were men in developing countries who allied with the Free World. At the end of the Cold War, women became targeted recipients and they were asked to enter the global Free Market (Faraizi, Rahman, and McAllister, 2011) to become productive economic actors. In the mid-1980s, the United Nations began to promote a 'gender and development' (GAD) approach that highlights women's positive role in economic and social development. GAD asks that gender be mainstreamed in international policies. For example, the World Bank promoted a gender perspective to design economic policies (Kaushik and Rengarajan, 2010).

International organisations, however, did not explicate that women could be seen as raw resources that are tapped to lubricate capital circulation in the global economy. Feminists (Emadi-Coffin, 2002; Steans, 2002) argue that GAD needs to be contextualised in the sweeping changes resulting from trade liberalisation and the privatisation of state-owned sectors (most notably telecommunications, energy, and banking). International organisations asked national governments to not see women as liabilities that burden the family and the nation, but as assets in a global economy (Faraizi, Rahman, and McAllister, 2011). In other words, women's productive and reproductive duties in the private domain continue to be ignored by GAD, but their potential producer roles in the formal economy are highlighted. During the same time period, international development agencies also shifted from giving foreign aid to providing working capital for developing countries. Microcredit loans, some exclusively for women, are an example to illustrate the change.

The Grameen Bank in Bangladesh

Poor Women in Bangladesh are called the poorest of the poor, and have thus become a project for international development agencies. According to Faraizi,

Rahman, and McAllister (2011), poverty has become an industry because the country has become an object of development. Similarly to the conflated concept of the Orient as a woman (see Ch. 2), microcredit sees a developing economy as a woman who needs to be worked on. Solving the problem of poverty has made non-profit organisations a thriving industry in Bangladesh.

I argue that microcredit is seen as a means for the Poor Women to be modern. Giddens (1990) defines modernity as ‘modes of social life or organisation which emerged in Europe from about the seventeenth century onwards and which subsequently became more or less worldwide in their influence. This associates modernity with a time period and with an initial geographical location’ (p. 1). As such, modernity is both a spatiality and temporality. As a spatiotemporal order, modernity influences modes of thought, value systems, and an understanding of the natural, material, and social worlds. The Poor Women’s engagement with microcredits is more than just making extra money; they are supposed to learn to be modern.

As the name *microcredit* implies, the loan amounts are insignificant (around US\$20 per loan), but sufficient for the poor to start a small business. Bangladesh has four high-profile microcredit agencies known outside the country: the Grameen Bank, Building Resource Across Communities (BRAC), Proshika Human Development Centre, and the Association of Social Advancement. Among the four, the Grameen Bank is probably the most well-known because the founder Muhammad Yunus and the Bank won the Nobel Peace Prize in 2006 for promoting economic and social development from the bottom.¹

Advocates of microcredits argue that modern, Western-styled financial services do not cater to poor, rural women because commercial banks do not give out small loans as little as US\$20. Poor people face obstacles to obtain loans because they cannot demonstrate credibility to repay loans. Illiterate, Poor Women have the lowest chance to receive loans because they cannot process paperwork without help. They are also not seen as credible borrowers due to biological reasons, such as childbearing risks and associated health problems (Khandker, 1998). As a result, Poor Women who are in need of money turn to informal credit sources such as family and friends, moneylenders, and pawnshops. The high interest rate (150 per cent) of moneylenders locks women in a perpetual, vicious cycle of indebtedness.

The Grameen Bank founder, Muhammad Yunus, is a US-trained economist who had taught at Bangladeshi higher education institutions before founding the bank. Before his microcredit venture, he personally loaned money to the poor with the belief that social beings are *naturally* resourceful (Faraizi, Rahman, and McAllister, 2011). Microcredit loans are believed to unleash women’s entrepreneurial potential and turn them into creative entrepreneurs. The Grameen Bank adopts a group-based approach to borrowing. Women in a village sign up for the loan programme and are asked to vow for each other’s credibility. The group-based approach is said to solve the information asymmetry

problem because villagers can attest to each other's credibility (Faraizi, Rahman, and McAllister, 2011; Khandker, 1998).

Women are selected as ideal borrowers because women's empowerment attracts international donors (Karim, 2011). In addition, women are said to be more docile: they are more likely to repay loans and less likely to argue with bank workers. These assumed characteristics put women borrowers in a vulnerable position (Rahman, 1999) and subject them to male disciplinary power. As a result, micocredits are critiqued to disempower more than empower women (Karim, 2011; Rahman, 1999). First, women bear the borrower's title but the male family members control the money that the women borrow in her name. Second, women face more violence at home because male relatives threaten women to take out loans. Third, borrowers find repaying loans stressful because they are only given a week for repayment. Fourth, women who cannot pay off debt on time are shamed by group members, which has led to suicides (Islam, 2007; Khandker, 1998).

At a macro level, administrative and academic research agrees that microcredits are important to women's development because they are economically empowering, cost-effective, and sustainable (Islam, 2007; Robinson, 2001). It is also found that women's economic power positively correlates with nutrition and schooling for children (Islam, 2007; Khandker, 1998). From a financial standpoint, the Grameen Bank and other microcredit organisations have been critiqued as both 'not business-oriented' enough and 'too business-oriented'. Robinson (2001) argues that the bank's poverty lending approach is unsustainable because it has to rely on governments and donors for subsidy. In contrast, Karim (2001) argues that microcredit programmes promote the neo-liberal ideals of individualisation and entrepreneurship (Karim, 2001).

W-M-W': The Better Women or M-C-M': Poor Women as Commodities

Marx used M-C-M' to show the formula of capital wherein M is the capital that merchants use to buy commodities for sale. They sell the commodities at a higher price (M') and pocket the surplus. M-C-M' shows the process of money: how money makes more money. In the case of microcredits, is the process about women's empowerment (W-M-W'; women given money will become better women) or surplus production (M-C-M')? From a feminist political economic perspective, I argue that the W-M-W' process disguises the M-C-M' logic of capitalism. In this process, non-profit organisations take in donors' money (M) to produce the commodity (C=better women) in order to receive more funding (M').

In the M-C-M' process, the Poor Women is a commodity sold to international development agencies. The women are also raw resources in the global financial economy because they are believed to be untapped customers for the

credit market. Once they sign up for a loan, they are supposed to transform ‘unused’ labour and ‘idle’ time into labour power for the market. Before the Poor Women were in debt, their labour and time were spent on providing use value at home and in the village. Their work in the private domain is seen to have no value in the economy because it is not labour and time spent on producing exchange value for the market. Taking out a loan allows women to enter into an exchange economy by producing for and within a market.

The same M-C-M’ logic also applies to women in developed economies, which will be examined later. Women who don’t own a credit card—or rather, multiple credit cards—are asked to be in debt so that they can consume more by using the money of the future. Women’s *entitlement to debt* is then a commodity in a credit economy. The commodity here is women’s credibility. Credit agencies are not interested in the ‘real’ women per se, but *the debt borrowed against her credibility*. The title to owe money ironically is advertised as women’s empowerment because, as mentioned, to be modern is to be in debt.

The Rise of the Poor Women and the Economy

To make poor women modern, the Poor Women and the Economy had to be invented first; microcredit discourses gave rise to both. I differentiate poor women and the economy from Poor Women and the Economy. Poor women are material and discursive living beings who may or may not feel, realise, or acknowledge that they are materially deprived. They may experience situations in which they cannot feed the family or find emergency money but they may or may not accept that these are difficulties. Poor women make decisions of resource allocation and these decisions are always embedded in social ties. In short, poor women experience ‘an economy’ in a localised and contextualised situation.

In contrast, Poor Women and the Economy are concepts imposed by microcredit agencies and researchers. Both concepts are abstractions and sets of descriptions. Drawing from ANT, Poor Women and the Economy are a duo that rose together; neither of them pre-existed before they were talked about by microcredit agencies and measured by researchers. The discourse and measurement tools created the ontological existence of the Poor Women and the Economy. Yet academic and administrative researchers assumed otherwise: that the Poor Women and the Economy existed before the researchers went into the field. To them, the Economy appears to be a concrete, self-sufficient ‘thing’; women were simply invited to join it and play a part. An illustrative example is that in Bangladesh, there is no local word for ‘credit’—the closest ones are ‘loan’ and ‘due’. Once the concept of ‘credit’ was invented, poor women learned how to talk and act like Poor Women when they simultaneously learned about the Economy concept. The concepts Poor Women and the Economy may be

useful to poor women when they show microcredit agencies that they are poor enough to receive loans.

My assertion is that research instruments and measurement tools made both the Poor Women and the Economy real. The presence of the researchers and research instruments have material and discursive consequences for the women and the villages: not only has their presence changed the poor women's sense of the material world, but women have learned to talk about this world differently. In other words, technologies of microcredit programs and research have made the women economic because partaking in microcredit programs and research projects require poor women to become Poor Women. Talking and acting like economic beings means the women have to acknowledge themselves as Poor Women and be willing to partake in the Economy to make a difference.

To advance the argument that research instruments and measurement tools make both the Poor Women and the Economy real, I analysed five book-length studies published since 1998 on microcredits and women in Bangladesh. The five titles consist of one commissioned report and four academic studies. The administrative report *Fighting Poverty with Microcredit: Experience in Bangladesh* (Khandker, 1998) was funded by the World Bank, the Ford Foundation and US Aid in Development (USAID). The titles of the four academic books are: *Microcredit and Poverty Alleviation* (Islam, 2007), *Microcredit and Women's Empowerment: A Case Study of Bangladesh* (Faraizi, Rahman, and McAllister, 2011), *Microfinance and its Discontents: Women in Debt in Bangladesh* (Karim, 2011), and *Women and Microcredit in Rural Bangladesh* (Rahman, 1999). Islam (2007) received help from the Grameen Bank to approach the interviewees while Karim (2011) did not receive help from microcredit organisations. Karim (2011) suggests that microcredit organisations often select certain women for interviews, calling into question whether they have rehearsed their responses with the organisations. The four steps through which research technologies give rise to the Poor Women and the Economy are argued to be: (i) choosing a fieldwork site to show that Poor Women who are in a higher stage of development fare better; (ii) constructing the fieldwork site as a self-contained economic unit; (iii) selecting the family as the smallest economic unit; and (iv) standardising measurement tools so as to explain the concept of Poor Women.

The Four Steps to Create the Poor Women and the Economy

The first step to make the Poor Women and the Economy real is to choose a fieldwork site to study the relationship between women's well-being and different development stages. The purpose is to show that women who reach a higher development stage fare better for themselves and their families. Researchers use sampling and result generalisation to demonstrate the existence of such a relationship.

The sampling technique makes a few assumptions about the Economy. First, economic development is seen as a stage, a temporal advancement from pre-modern to modern. A village that is properly developing is assumed to eventually reach a higher stage. The ultimate endpoint of development is 'to be like' the West. For example, one criterion to determine a village's development stage is the types of the villagers' economic activities. Faraizi, Rahman, and McAllister (2011) used residents' occupations to categorise villages into high, middle, or low development stages. Predominant economic activities in the low stage are farming, those in the middle stage are trading and small-scale manufacturing, and those in the high stage professional work. This three-stage development reflects a widely accepted notion of stages of society (Castells, 1996): from agricultural to industrial to service/informational/post-industrial. These stages are hierarchical and laden with values. Because most Western nations have a robust service/informational economy/post-industrial, the third stage is seen as the ultimate one that all countries should reach. If a developing country is 'more like' the West, then it is asked to strive for the high stage of development.

Researchers believed that Poor Women can be categorised based on different development stages: the higher development stage a village has, the more advanced the women are. The Poor Women are an abstract being made real by calculation. She is a composite of 'income, employment, education, consumption, borrowing, asset ownership, savings, children's schooling, fertility behaviour, and contraceptive use for households and individuals,' as well as 'children's arm circumference, height, and weight' (Khandker, 1998, p. 181). In the research, the Poor Women are results of measurement and comparison and their subjective experiences matter little as they cannot be quantified and calculated.

By assuming the Economy and the Poor Women both existed before the researchers went into the field, the effectiveness of microcredit programs is assessed by correlating the Poor Women with the Economy. I offer another explanation of why 'effectiveness' exists: it is because the poor women play-act 'the Poor Women in the Economy' for researchers and international donors to study. They perform the Economy by acting and talking like the Poor Women so that they fit the bill of being the research subjects. For example, Karim (2011) questions how valid some data are because microcredit organisations coached villagers to provide 'correct' answers to donors.

The second step to make the Poor Women and the Economy real is to present the fieldwork site as a local, self-contained market and as a micro version of the Economy. A local, self-contained market is largely an illusion, a romantic Robinson Crusoe story in a textbook. In the microcredit story, the Poor Women have replaced the male hero by demonstrating a belief that humans are inherently resourceful; they are able to exploit nature for their own use. The illusion of the market as local and self-contained is partly constituted by maps and pictures in the microcredit research.

Researchers drew maps to show that a country has districts, a district has villages, a village has neighbourhoods, and a neighbourhood has homesteads (an

example is Rahman, 1999). Each of these areas is a well-defined economic unit. Researchers also showed on the maps how humans harness nature into sites of economic activities. Village roads, settlement areas, agricultural lands, ponds and rivers are all essential natural resources and modes of transportation. Concrete roads that connect a village to a town facilitate economic exchange (as in Rahman, 1999). Because maps in the research reports see the local economy as contained in a local site, they do not show how microcredit is connected to the global economy through international development agencies and global philanthropy. Local maps also do not show economic activities performed by migrant workers. For example, some studies (such as Rahman, 1999) note that women use microcredit loans to sponsor family members to work overseas as migrant labourers; these non-local economic activities are not shown on the maps. Pictures are other artefacts that reinforce the assumption that economic activities take place in a local site. For example, Karim (2011) displays a picture of a bamboo bridge over streams to illustrate why inaccessibility hinders actors' mobility—and hence economic activities—in a rural village. She also shows pictures of men and women engaging in economic activities (such as transporting goods and rice husking) in an intensely local setting.

ANT would reject the assumption that the local economy is confined by arguing that an economy is performative. ANT scholars believe that an economic discourse is not outside the economy that it describes, but it constructs reality as an object whilst acting on it at the same time (Callon, 2007). Drawing on this assertion, it can be argued that villagers—with the aid of microcredit organisations—perform a local economy for researchers and foreign donors to observe. Researchers (such as Karim, 2011) have critiqued microcredit organisations for setting up villages and having them *look* like a successful business enterprise. For example, NGO representatives released store-bought fish into a pond prior to donors' visit; a group of travelling loan recipients were 'transplanted' into different villages to talk to guests. While the staged activities are said to be 'fake' because the fish were props and the villagers are not natives, ANT scholars would argue that the fish and travelling villagers make the economy real because it is impossible to 'fake' an economy. The store-bought fish are an economic product as much as the travelling villagers are paid performers; both actors illustrate the microcredit discourse while play-acting at the same time.

The third step to make the Poor Women and the Economy real is to see the family as the smallest economic unit. Aggregates of productive activities in a family are believed to reflect the Economy. Techniques such as sampling and surveying enable researchers to compare households. The researchers assume that microcredit intervention is a factor to explain an increase in household economic activities. However, in order to make the Economy real, researchers have to impose an artificial economic concept on a complex kinship-based society. Using family as an economic unit for measurement ignores the complexity of a gendered microcredit economy as well as historical relations between genders and social groups.

The family as a modern economic unit is embedded in an ideology of a gender division of labour: males are supposed to be productive members who work outside the homes while the females stay at home to perform reproductive duties. It does not need much explanation that a poor household—in both developed and developing economies—rarely observes this gender division of labour. A poor household may not have one economically productive adult; it may use the home as the production site for the grey economy; and it draws on all household members—children, elderly—to bring in money and resources.

The family as an abstraction also assumes that every individual enjoys the same resources in the household. Little does the term acknowledge that there is an inequality of resource allocation because of ideologies such as girl children deserve less than boy children, or mothers should sacrifice for their family.

The fourth and last step to make the Poor Women and the Economy real is to use standardised measurement and calibrated measuring tools to explain why the Poor Women exist. In other words, the research and assessment process makes the Poor Women come into being because it quantifies the wealth of the poor women. For instance, a measurement of time use explains the Poor Women are poor because they do not devote enough time to economic activities that have an exchange value. Islam (2007) explains underemployment by using the criterion of household members' employment time. The criterion implies that only the time spent on working outside the home will create wealth; time spent working at home is 'wasted' because it is not used to produce goods of exchange value. The assumption of time use reinforces the gender division of labour in a household: women may be deemed more 'underemployed' than men because labour time spent on productive and reproductive activities at home is seen as non-productive.

Another example to show how the researchers relate the concept of the Poor Women to that of the Economy comes from a World Bank study which states that:

women's credit would be expected to increase the demand for boys' and girls' schooling if both goods are normal [...]. But credit increases women's opportunity cost, and the cost of girls' time at school (because girls' time and their mothers' time may be substitutes in home production activities), thereby reducing girls' school enrolment rates (Khandker, 1998, p. 46).

Does the above quote show that the Poor Women are capable of thinking about the Economy? On the one hand, the researcher did not think so because the women failed to enrol both girl and boy children into schools. The researcher believed that the women understood the concept of opportunity cost, thus they exploited the 'idle' time of the girl children by asking them to engage in productive activities for the market. To explain why women do not send girl children to school, it may be more useful to examine women's lived experience and a

historical gender division of labour: poor women bring up children like how they were brought up. Because girl children were given fewer resources, they will continue to be given less. Therefore, even though the Poor Women are supposed to use concepts such as economic choice and opportunity cost to make decisions, the poor women may experience the economy by drawing on traditions and customs rather than play-acting the Poor Women in the Economy all the time.

Using ANT to examine the rise of the Poor Women and the Economy illustrates how spatiotemporal differentiation necessitates the circulation of capital by drawing on women's resources as discursive and material beings. First, the Economy and the subject the Poor Women have to be invented before measurement can take place. Second, when the poor women play-act the microcredit discourse, their words and actions make the concept Poor Women real; the discursive concept in turn alters the outcome of microcredit programmes. Third, microcredit programmes obscure global differentiation by drawing attention to economic activities that are confined to local settings. By not mentioning a financialised global economy, it avoids the question why women should be developed and why developing economies should reach the next step. Fourth, local practices that are deemed primitive (such as not sending girl children to school, not using a modern lavatory) mark the Poor Women as different from the educated, Western(ised) audience. By linking the Economy with practices of difference, the Poor Women's condition can be explained with irrational behaviours. In the following, I examine how gender and irrationality are discussed in developed economies in the discourse of the Shopaholic.

The Shopaholic and Psychological Disorder

The image of a woman buying too much with a credit card is quite recent—women were not allowed to have personal credits in the US until the mid-1970s. Once women became the target of American Express in the 1980s, they were immediately associated with buying things so as to please themselves and their loved ones. In contrast, the men were advertised to use the card to buy (exotic) romance and display status. This shows how spatiotemporal differentiation works through gender: women's spending should be confined in the private domain while men's spending should be displayed in public.

In 1974, the US Congress passed the Equal Credit Opportunity Act that prohibited creditors from declining women's applications because of their gender. Prior to the passing of the act, women had a harder time to obtain credits than men. Women's income was considered to be pin money to the creditors, not the household income. Not only did single women, divorcees, and widowers find it hard secure personal loans, but even women who were the sole breadwinners of the household did not have an easy time. Women with young children and fertile women were seen as unreliable borrowers; credit card companies

required women to prove their low risk by providing medical evidence that they were indeed on birth control or infertile (Federal Deposit Insurance Corporation, 2017).

The passing of the Equal Credit Opportunity Act did not immediately expand the credit card market for women. Vintage American Express (AE) advertisements in the 1970s show the cardholder as an affluent man—often portrayed as unattached—who enjoys international travelling. The ads were like tourist guides that introduced the gentlemen globetrotters to European cities such as Amsterdam, Munich, and Paris. They implied the cardholder is someone who enjoys luxury hotels, fine restaurants, and cultural sightseeing. They are also pursuers of heterosexual romance, which could be bought abroad with a credit card. The card was sold as an international currency to make (female) friends. In one ad, the hand of a white man displays the powerful green card in exchange for exotic romance represented by a tulip on a silver bill tray (see Ch. 2 for the meaning of the tulip in a financial crisis). In another, accompanying ad copy that reads ‘meet my friends in Vancouver’ is a picture of a middle-aged, white, bald man sitting next to an Asian female travel agent whose hands are busy on the keyboard. Meanwhile, his unseen hand is presumably on her back. This ad is interesting in two ways: first, credit-worthy women were still subordinated to men culturally and economically, they were still the sexual objects serving the men; second, the invisible hand of the market is gendered: men make more money than women, so they control economic transactions behind women’s backs (see Ch. 5 about de-materialised female labour).

In the 1980s, AE ads started to promote the card as a man’s status symbol. The men in the ads are not only men with credits, but also men with known qualities and talents. A series of minimalist ads displayed successful men who are long time AE members. The ad copy did not specify what these men professed and why they were successful. The prospective (male) cardholders who looked at the ads were supposed to know why Alan King (comedian) and Quincy Jones (music producer) were depicted. This implies that once a male applicant is approved to own the card, they will join the league of successful and well-known men.

During the same time period, AE targeted women applicants in a different way. Female spokespersons were neither the globetrotters nor the successful persons whose names need not to be mentioned; they were the consumers who have the means to please themselves and their loved ones. In one ad, Broadway actress Carol Channing shows a broad smile when eyeing a diamond ring held with a gloved hand. The ad copy reads: ‘How to buy a diamond’ and the central focus of the advertisement is the diamond, not the woman or the card. The card is then advertised as a means for the woman to acquire the diamond. In another ad, a black woman in a shoulder-padded power suit walks away from a private jet holding a big plush toy—presumably a gift for a young child. The copy reads: ‘The American Express card. It’s part of a lot of interesting lives.’ The lives may refer to both the woman and the child; her life is more interesting because she

is a successful professional, the young child's life is also made more interesting because mother has the economic power to buy toys with her own money during a business trip. In both ads, women are shown what a card (presumably their own, not their partners') can buy—a diamond for herself and a toy for a loved one. The early advertisements of credit cards help create the image of women who shop too much. On the other hand, the men in the ads are not associated with consumption—they are simply in their element looking relaxed but authoritative.

Have Women in Developed Economies Gained Economically Since the 1970s?

The media image of women with a credit card has masked the feminisation of poverty in the US since the 1960s. A US Census report states that the poverty ratio of women to men has not changed between 1966 and 2011 (Mykyta and Renwick, 2013). In 2011, the ratio of poor women to poor men was 1.2: that of poor women-headed family to poor married family was 5:1.

Stagflation in developed economies may explain the feminisation of poverty since the 1970s. Neo-liberal policies implemented by Ronald Reagan and his successors eliminated social programmes for poor women. Because women are not trusted to be good with money, at a time of austerity, they are asked by politicians to lift themselves up by taking up (financial) responsibilities. Women's own responsibility is used to justify funding cuts in social programmes that are vital to the well-being of poor women and children (Karamessini, 2014; Walby, 2009). Since then, poverty has been seen as a personal failure and a lack of personal responsibility. As previously suggested, male authorities explain women's poverty with their lack of self-control. Therefore, financial institutions deny credit to women who have limited means and few assets. They are seen as unsuitable candidates because of their assumed lack of self-integrity to spend money wisely. Little has been written on how poor women use the credit cards to pay for necessities such as food so that the family can eat, gas so that they can go to work, and tuition so that she can have an education. Although it was acknowledged that it is imperative to extend credit to low-income women (Azzata, 1982), poor women's ability to pay off debts is low and they accumulate debts more easily than middle-class women (Scheuler, Diouf, Nevels and Hughes, 2014).

Media images of women who shop too much also contribute to their perceived irresponsibility with money. For example, in the *Shopaholic* series that will be analysed later in the chapter, debt is seen as a 'fun' personal problem, an addiction that is light-hearted enough to sell books and films about shopaholism. The self-help literature market also teaches women how not to consume by consuming books and services! The voluminous body of popular literature has book covers of gendered images – the most common one, unsurprisingly, is a woman with too many shopping bags.

The TV Shrink and the Shopaholic

While academic and administrative research has given rise to the Poor Women and the Economy, television discourse has given rise to the Shopaholic and the Expert. The Shopaholics are modern beings because they believe in change. What needs to be changed is self-control because shopaholism is deemed by the Expert to be a psychological disorder. This reinforces a belief that humans' vices related to money—greed, gluttony—are innate.

Giddens (1990) asserts that one characteristic of modern beings is their trust in the expert system. Unlike pre-modern beings who relied on elders to relieve malaise, modern beings seek medical help from professionals. While the elders may be blood-related to the patients, professionals do not personally know the patients. Medical treatment is done in great privacy, therefore television encourages a voyeuristic gaze into modern beings' troubling past. Television re-establishes the loss of personal ties in modernity by creating a personal relationship between the viewers and the patients. The viewers may find the psychologists on television to be appealing because they are believed to pry open the patients' brains to reveal their darkest secrets. Television uses psychologists rather than financial planners as the Experts and frames shopaholism as a medical discourse. As a medical problem, shopaholism is framed as an individual problem that can only be solved by asking the patient to be self-responsible.

The Diagnosis of the Hysterical Woman

Financial crisis is said to be a feminine moment of an otherwise rational market; both the tulip (Ch. 2) and the hysterical woman are said to create chaos in the rational market. While the tulip—as a temptress—is said to use her sexuality to make rational men mad, the Shopaholic is a hysteric who displaces her sexual frustration onto material possessions. I follow Hall (1997) who applied a Foucauldian analysis to understand how nineteenth-century medical discourse created the subject of the Hysterical Woman. Hall examined a painting in which a female patient is displayed in a room full of medical men and asserted two representations of hysteria: first, the woman performed/represented her body as a site of suffering; second, the medical man *re-presented* the woman to the audiences. Because of the two types of representation, the female patient is both the subject and the subjugated in the medical discourse, she is produced within the discourse *and* only in this discourse can meanings be made about her. Drawing on Hall's analysis of the two representations, I argue that the television discourse about shopaholism makes the Shopaholic real because the patients are asked to perform the role of the suffering on television: 'the patient is performing or 'representing' with her body the hysterical symptoms from which she is "suffering"' (Hall, 1997: 53). In turn, the Shopaholic also makes the Expert real because expertise only matters if it is used to talk about the patient.

The psychologists' medical knowledge is only affirmed when it is used to cure the Shopaholic. Power dictates who can represent whom: while the patients may perform themselves as the suffering, it is the medical men who have the power and authority to show the suffering of the patients.

The Shopaholic on television is likely to be a middle-class woman who is married or partnered. When the patients are men, they are likely to be portrayed as single, leaving their sexualities ambiguous. Married men are rarely subjects in the discourse because hysteria has been seen as a female disease and shopping a female activity. A sexually ambiguous man is seen as less masculine, thus is permitted to cope with anxiety through excessive shopping. The Shopaholic being a woman or a feminine man once again reinforces the ideology of a financial crisis being feminine. In contrast, addictions to alcohol, drugs, or gambling are seen as risk-taking behaviours, and are associated with straight men. In popular culture, masculine stock brokers (such as Jordan Belfort, played by Leonardo DiCaprio in *The Wolf of Wall Street*) are portrayed to be regular drug users and drinkers.

The Shopaholics on television also tend to be members of the middle class, rather than the working class or the upper class. Their class status is shown by their comfortable and modest homes, yet their consumption habits are criticised for stretching a middle-class budget. Purchasing luxury goods (such as designer items) or paying for personal services (such as body grooming) by using the credit card are seen as something that the middle-class should not do. The assumption is that the middle class—often said to be the economic pillar of developed economies—is likely to harm the society's well-being if their members are in debt. Politicians in developed economies appeal to the middle-class electorates by emphasising that financial well-being is vital to the overall health of the country. The class bias of television discourse implies that shopaholism is a social ill because an indebted middle class can harm the society.

Television producers create an interdependent yet unbalanced relationship between the Expert and the Shopaholic by giving more power to the Expert to control the Shopaholic. Not only are the Shopaholics said to have no control over spending, but they are also denied control over time, space, and meaning in the television discourse. 'The Confessions of a Shopaholic' (aired on 3 October 2009 on *ABC Nightline*) had an Expert tempting a Shopaholic by inviting her to enter a fashion store. Before they entered the shop, the Expert asked the shopaholic to pick out her top three favourites, try them on, and return them to the rack. The Shopaholic showed her suffering by nervously rubbing her thumbs, sighing at the suggestions, and pretending to throw up at the door. Her 'withdrawal' symptoms were displayed for the television audience. The Expert stood aloof outside the changing room and demanded the Shopaholic tell him what the goal of the trip was. The Expert wanted the patient to make a different meaning of space. The Experts also control time because they believe that addiction is rooted in the past. In an episode of the BBC reality show *Spendaholics*, the Expert forced the patient to face his childhood problems by asking

him to confess feelings to his parents ‘played’ by two mannequins. The Experts also control the meanings of consumption: they treat the Shopaholic in spacious, stylish offices with expensive-looking furniture and modern paintings. The Experts’ expensive taste is not defined as a ‘problem’ because they define what the problem is.

What adds to the irony is that seeing an Expert (even for the middle class) is a luxury to most. In the television discourse, the Shopaholic is shown to bypass a bureaucratic public health system and seek private help. The Expert also recommends the patients to try ‘experience’ instead of buying ‘stuff’. An experience such as sky-diving is not said to be about consumption because it is not about acquiring ‘stuff’. In short, the Expert decides that consumption does not include medical services or experience. Interestingly, a chick lit novel, *Shopaholic to the Stars* (Kinsella, 2014) mocks the thriving industry of new age rehab. Rehabs are supposed to be a place where guests will find peace with themselves and will not feel compelled to consume. Yet in *Shopaholic to the Stars* the fancy rehab centre frequented by Hollywood stars has a gift shop stocked with overpriced items, such as a Zen-themed notebook with the word ‘simplicity’ on the cover.

The depiction of shopaholism as a psychological disorder can be further illustrated by the development of a neurological drug that ‘corrects’ how a person feels. A *Mother Jones* article ‘Selling the cure for shopaholism’ (Berdik, 2000) reported that researchers want to target women because they are believed to be more likely to have a shopping addiction. Scientists also believe that the female brain is wired with a psychological disorder that produces an overspending tendency. Scientific ‘evidence’ that talks about the female psyche constitutes the medical discourse critiqued by Hall (1997): not only do the female patients perform their hysteria for the medical professionals and the audience on television, but the medicine men also present ‘scientific’ evidence to prove the existence of the illness. For example, the inventor of the ‘shopping pill’ gave the evidence that 90 per cent of shopaholics in the US are women (Berdik, 2000).

Popular Culture as Subversive Power

Popular culture can be a subversive power to critique the assumptions of impersonal money and orthodoxical economic thought in mainstream media. Surprisingly, the chick lit and flick *Confessions of a Shopaholic* offers insights into the materiality of money. Social beings’ relationship with money begins with objects such as banknotes, credit cards, bills, etc., not an abstract concept of money. It has also been pointed out that dominant economic thought is only but one thought; there are alternative ways to conceptualise exchange value and social relations. By doing so, it points out the multiplicity of financial economies and the conflicts between multiple temporalities and spatialities. However, chick lit—because of market considerations and genre constraints—does not

want to be taken seriously so it refuses to respond to its critics how a financial crisis can be represented. In addition, chick lit—similar to the curing of the Shopaholic in television—is not about money and consumption, but a search for love in patriarchy.

Paper or Plastic?

Money is not homogeneous and genderless (Zelizer, 1989); cultural and social factors shape monies. Our relationship with money does not begin with abstract concepts (such as numbers and figures), but concrete objects (such as coins, paper notes, cheques, and credit cards). The materiality of money demands that we interact with it in different ways. At the same time, instruments of money are political and historical; they are related to a particular set of financial institutions and practices (Leyshon and Thrift, 1997). Money is also discursive because its validity as a form of exchange relies on the discourse in which it is talked about as well as the credibility of the institutions that talk about it. As an example, bank notes—despite their apparent simplicity—illustrate the complexity of money. In societies where credit card ownership is pervasive, cash is seen as redundant, especially among young people (Copeland, 2017). In these societies, stacking away cash at home is stereotyped to be old-fashioned. In contrast, cash is seen as the most trustworthy currency in societies where credit card ownership is rare, such as modern India. However, cash—despite its simplicity—can be untrustworthy because banknotes are nothing but fancy-looking papers with no real value. They only have value *when* they are recognised as a form of exchange and *when* the public has trust in the monetary institution. During times of political unrest or economic inflation, banknotes are rendered worthless; they are less preferred to commodities that have *real* value, such as gold, precious stones, or even just a loaf of bread or a dozen eggs (as illustrated in the case of Venezuela during high inflation).

Sophie Kinsella, author of the *Shopaholic* series, has acutely described how the protagonist—a modern woman in a developed economy—understands different forms of money and how to use them accordingly. The credit card—an instrument that represents money of the future—is precious and magical. The cards are lovely objects but the statements are fearsome. Cheques represent a conditional form of money that is only valid when dated, signed, and willingly cashed. Cash is the most inconvenient form of money; it is only useful when neither the credit card nor the cheque avails any cash advance.

The magical power of the credit cards is illustrated in the opening scene of the film *Confessions of a Shopaholic*. In this scene, the grown-up Rebecca Bloomwood recalls that when she was six-year-old, she tried on unfashionable shoes and was mocked by fashionable girls. Looking at the cashier, the young girl sees a woman customer and breaks into a monologue, ‘they didn’t even need any money [because] they have a magic card.’ The camera shows a close up

of the credit card being swiped by the cashier. A magical 'ding' sound is heard during the transaction. The shopper jumps up and down joyously because her purchase is approved. The grown-up Rebecca treats the credit card as a precious object, 'a glow of goodness in my heart' (Kinsella, 2004, p. 37). Rebecca confesses in a Shopaholic Anonymous meeting that when she uses her cards, 'the rush you feel when you swipe your card. And it's approved. And it all belongs to you! All you have to do is to hand over a little card.' Furthermore, credit cards give Rebecca poise: 'I take [the VISA card] out and run fingers over the glossy surface' (Kinsella, 2001, p. 8), '[I] reach for my VISA card in one seamless, automatic action' (p. 15). Like television discourse about the Shopaholic, the film explains shopaholism with reference to traumatic events from the past. Unlike television discourse, the film and book series exaggerate the joy of using a credit card in a comical way; they are more interested in showing the Shopaholic in a humorous way than curing her.

Because credit cards are such precious objects to Rebecca, she keeps a backup card and stealthily hides it inside a compact mirror in a handbag. The backup credit card needs to be relieved by applying brute force. In the film, when Rebecca is in an urgent mood to shop, she rushes home, opens the freezer, swipes all the ice-cream cartons onto the floor, and takes out a block of ice with a credit card frozen inside. To relieve the last card, she pricks the ice block with the heel of a yellow pump then melts the ice with two hair dryers. When she finally reaches for the card, she lets out an orgasmic 'ah...' sound. In the book, Rebecca reaches for her last card by cutting open the lining of a handbag and using a hammer to crack open the powder compact. The use of such violent force may appear to be comical because it shows how desperate the Shopaholic is. However, the use of brute objects seems to highlight the material nature of a credit card; that it is after all a piece of plastic that can be hidden and buried.

The meaning of the credit card changes when it fails to approve a purchase. Rebecca sees the credit card as a machine: as long as it is not broken, it must work like a money-dispenser. When it does not perform the function, she wonders: 'what's wrong with my card? It looks all right to me' (Kinsella, 2000, p. 211); 'how can my VISA card be no good? It's my VISA card, for God's sake. Accepted all over the world' (Kinsella, 2001, p. 212). The credit card has become a part of Rebecca's self because the current financial mode invites participants to display a fundamental part of oneself (Martin, 2002). When the Shopaholics are separated from their cards, they lose part of themselves. For example, when Rebecca's husband Luke mentions her secret hidden card, she throws the card at him and exclaims: 'have it! [...] Have everything! Take the shirt off my back!' The card is not only one of the shopaholic's possessions, but also part of the person. In the film, when the Shopaholic Anonymous team leader cuts the members' credit cards, the camera shows the pain on their faces, as if the scissors were inflicting pain on their bodies.

Unlike credit cards, cheques and cash are external to selves. They are merely means of exchange that are external to the Shopaholic. Cheques and cash do

not give the Shopaholic any pleasure. Money represented on a cheque is only valid when it is signed and cashed. The money represented on a cheque vanishes once the piece of paper is destroyed. The mutilation of cheques has to be done in another person's presence so as to void the agreement. When a billionaire hands Rebecca a cheque of a large sum for a fabricated charity that she makes up on the spot, she is first relieved that the money will solve all her financial problems. But her morality stops her from taking the cheque, so the billionaire 'slowly rips the paper', then 'reaches for the box of matches on the table, sets the scraps of paper alight in the ashtray, and we both watch as they briefly flame' (Kinsella, 2001, p. 200). In another instance, Rebecca's best friend and landlady Suze tears up Rebecca's rent cheque when she learns of her dire financial situation. The money represented on a cheque is only valid when both parties honour it. In the film, Rebecca is desperate to find an extra twenty dollars to pay for a \$120 scarf; therefore she rushes to a hot dog stand asking the vendor if she could give him a \$23 cheque in exchange for a three-dollar hotdog and a \$20 dollar bill. The hotdog owner refuses to honour the cheque by telling Rebecca he is not a bank. This renders the money represented on her cheque invalid.

Cash is inconvenient money for the Shopaholic; it only provides the last resolution to untangle a sticky situation. In the book, when Rebecca needs an extra £20 to pay for a £120 scarf, she creates a scene by stopping a PR presentation midway when her future husband takes out a banknote and:

gives it to a guy in the front row of journalists. He hesitates, then passes it back to the row behind. And so it goes on, a twenty-quid note being passed from hand to hand, making its way to me like a fan being passed over the crowd. As I take hold of it, a round of applause goes around the room and I blush (Kinsella, 2001, p. 24).

In this comical scene, the presence of a banknote suspends an otherwise serious situation. The passing of it from one person to another disrupts a discourse about money (i.e. the presentation topic in the press conference) and changes the situation to one in which materiality matters.

Cash is also seen as the most honest form of payment: 'no one can argue with cash' (Kinsella, 2001, p. 22) and it is 'handy' (p. 8). Because no one can argue with it, Rebecca in the film repays her \$10,000 debt in pennies to the collector: 'I am giving you what you deserve, but in the most inconvenient way possible.' This scene illustrates that cash is the coldest form of payment because it used to be strictly exchanged between strangers (Graeber, 2011).

On the other hand, foreign money is not only seen as something external to the self, but it is also meaningless: 'Foreign money doesn't count, so you can spend as much as you like. [...] Somewhere in my head I know that dollars are proper money, with a real value. I feel as though I'm carrying around the bank of Monopoly. [...] It's like some weird form of jet lag—you move into

another currency and suddenly feel as though you're spending nothing' (Kinsella, 2002b, p. i). Similarly, during inflation banknotes become more like monopoly money because they are worth very little. Because foreign money is not like *real* money, 'it is incredible how much money I was carrying around with me without even noticing! I had loads of rupees in my bath bag, and a whole hunch of Ethiopian birrs inside a paperback book. Plus there were loads of odd notes and coins floating around at the bottom of my carry-on bag' (Kinsella, 2004, p. 31).

The *Shopaholic* series is able to shed light on the heterogeneous nature of money by pointing out one woman's relationship with credit cards, cheques, and cash. The credit card has an aura to the shopaholic because it is seen as part of the self. Shopaholics who are asked to surrender the card to curb their spending habits feel part of themselves is taken away. The credit card is like the glass to the alcoholic and the cigarette to the chain smoker—it is an essential object to self-identity; yet the object is seen to endanger their health and their relationship with others. On the other hand, cheques and cash are not objects that define the owners; they are exchange instruments external to the selves.

It's Not the Debt, it's the Letter!

While the credit card is a magical device, the piece of plastic does not show the card holder's records of debt. Modern finance has thus separated the instrument of advance from that of record. Unlike an 'IOU' that records both cash advance and debt, the credit card is not a demand for payment. Modern day finance has transformed the meaning of debt by separating debt as a record from debt as being a relation of trust (Graeber, 2011). Therefore, while Rebecca thinks the credit card is magical, the statement is described as 'nasty', 'scary', 'boring', 'stupid', 'wrong', 'crappy', 'crummy', 'unfriendly-looking', and 'stingy'. Looking at an envelop with the word SUMMONS on the front, Rebecca says that:

[I] stare at it, feeling mortified. [...] I scan the letter without saying anything, feeling a growing coldness at the base of my spine. I can't quite believe people would actually take me to court. I mean, court is for criminals. Like drug dealers and murderers (Kinsella, 2002a, p. 247).

The debtor does not internalise debt as part of the self even though she internalises the credit card as the self.

To Rebecca, credit card statements disrupt serenity in the household. She is convinced that her husband does not need to know about the bills because 'your home should be a sanctuary' (Kinsella, 2002b, p. 9). Like a good middle-class housewife, she believes that credit card bills, like dirt and worldly sins, should not be brought home. She further wonders: 'why another letter from the bank? And VISA. What do they want? Can't they just leave me alone?' (Kinsella, 2001,

p. 138). She believes that if the bills are out of sight, then she is not responsible for paying the debt. Therefore, she makes the bills 'disappear' by hiding them in a drawer, underneath a mattress, or discarding them in a public wastebasket.

At times Rebecca gets philosophical about the credit card statements. She tries to convince herself that the statements are nothing but a few numbers: 'just how scary can a few numbers be?' (Kinsella, 2001, p. 5). She tries to convince herself that because money is abstract, therefore debt cannot be real. Her words inspire her husband to cope with a mid-life crisis. He says to Rebecca: 'this is what my life has been about. Meaningless pieces of information' (Kinsella, 2002a, p. 251). He proceeds to tear up a joint bank statement and exclaims: 'So what? What does it matter? It's only a few pointless numbers, who cares' (p. 252).

If the bill intrudes on the serenity of a private home, the debt collector intrudes on the private space. The debt collectors are seen as stalkers who violate private space. When Rebecca receives the bank manager's call, she puts down the receiver, unplugs the phone, and hides it behind a cushion. When a debt collector—commonly described as a man—calls, she is outraged: 'surely people aren't just allowed to telephone you in your own home and demand money with no warning' (Kinsella, 2002b, p. 73). The debt collector is the masculine force that attempts to violate the female private space.

In the film, the director extends his sympathy for Rebecca through contrasting the bad debt collector with the good debtor. The debt collector, Derek Smeath, is portrayed as a film noir criminal. Rebecca's polished appearance and colourful clothing serve as a contrast to Smeath. The debt collector is first shown in a cramped, colourless office shot from a high angle. The setting and colour hue contrast with the scene in which Rebecca is shown attending a glamorous party in a spacious ballroom in sunny Miami. Then the film cuts to a close up of Smeath's bony hand drawing sharks in his notebook. He knocks the pen down in a threatening manner when Rebecca gives yet another excuse through the phone. During this scene, Smeath's face is obscured from the audience who can only see his back and an extreme close up of his crooked and yellow teeth. When Smeath finally shows up at Rebecca's front door in New York, the audience still cannot see his face, only a long shot of someone wearing a trench coat. The mysterious man is believed to bring disruption to Rebecca's world and distaste to the audience. His face is finally revealed when he stands in front of Rebecca inside an elevator. His unpolished appearance makes him look unkempt in the cool, metallic elevator. When Smeath finally identifies Rebecca in the office, she tells the security guards to remove Smeath by accusing him of being a stalker. His scruffy appearance convinces the security guards that he is a criminal.

The film *Shopaholic* constructs a make-believe world to draw in the audience. Rebecca's credit card belongs to this bubbly world: the glossy card enables her to purchase expensive clothing to fit into this world. The debt collector has no place in the cinematic make-believe world; he is portrayed as a criminal who

disrupts the shiny, bubbly world made possible by film financing and personal loans. In this way, the *Shopaholic* film reinforces the separation of the credit card from the bill.

Irrational Economics and Sham Marketing

Chick lit talks back at television discourse about the Shopaholic by showing alternative economic thoughts shared by Rebecca through monologues, conversations, and written correspondences. Her thoughts may first appear to be silly and irrational, but some of these thoughts have been dominant ones in some societies at some historical moments. Rebecca's questions about investment values challenge the concept of financial literacy in a credit economy. Members of the middle class in a modern society are supposed to have financial literacy (Martin, 2002), they are supposed to manage money sensibly and regularly evaluate their financial health. Even though Rebecca belongs to the middle-class and is married to an upper-middle-class spouse, her cluelessness about finance and investment creates much humour in the story. However, her cluelessness may also reflect the *unnaturalness* of modern finance. Rebecca's attempt to reconnect economic transactions with social relationships, her choice of investment instruments, and her suggestions of a barter economy all point to an alternative political economy.

Rebecca wants to re-embed social relations between debtors and creditors. Economic sociologist Brooke Harrington (2008) asserts that all economic behaviour is embedded in and inseparable from its social context, social networks, status, power, socialisation processes, identity, emotions, and symbols. Rebecca actively seeks friendships from bank managers and credit card account representatives in hope of increasing credit limits and delaying payments. Whilst modern credit institutions dis-embed social relations by classifying customers based on credit scores, Rebecca seeks to re-embed social relations into economic transactions like the old days when the relationships between creditors and debtors were built on personal trust (Graeber, 2011; Leyshon and Thrift, 1997). Rebecca in the book series refuses to accept that the bank manager Derek Smeath is an impersonal professional—she thinks 'he's rather cozy and friendly, like some nice sitcom uncle' (Kinsella, 2001, p. 176). Later, she calls him 'a real sweetie' (Kinsella, 2002a, p. 16) and 'very sympathetic to my needs' (ibid.). In response, Smeath writes in his correspondence that 'it is true that we have known each other for a long time, and I am pleased that you consider me 'more than just a bank manager.' I agree that friendship is important and was glad to hear that you would always lend me money should I need it' (Kinsella, 2002a, p. 1). Upon learning of Smeath's retirement, Rebecca is devastated and wonders: 'what am I going to do without him?' Rebecca refuses to accept a modern relationship between the lender and the borrower because she sees the bank manager as someone whom she personally knows.

Financial literacy asks the middle class to be wise in choosing investment instruments. For example, retirement experts would suggest high-risk stocks for younger employees and low-risk bonds for older employees. Ignoring the conventional advice of investment, Rebecca has a loose notion of what constitutes an investment and in which instruments she should invest. She wants to invest in 'antiques of the future' such as costume jewellery, brand name clothing, and 1930s lipstick cases. The irony is that auction houses such as Christie's deal with consumer items such as watches, jewellery, and clocks as well as popular artefacts such as memorabilia, posters, signage, and advertising. In a scene in which a billionaire mentions his family members would sell a Rembrandt to pay off debt, Rebecca exclaims that the wealthy just do not understand how being poor feels like. Nevertheless, before the arts market became internationalised and institutionalised, who would have thought that acquiring old masters' paintings could be a form of long-term investment? In the same vein, Kinsella (2001) points out the commodification of arts by implying that museum pieces have an invisible price tag. At the Victoria and Albert Museum, Rebecca looks at a Dutch bowl and wonders how much it costs. She is relieved in the Guggenheim Museum *shop* that the 'exhibits' have a price tag. By mixing a gift shop with a museum, Rebecca may sound uncultured but Kinsella could also be cynical by implying that everything can be bought and sold in neo-liberal capitalism.

Rebecca uses her unconventional wisdom to offer the British government advice to deal with its ailing national economy after the 2008 crisis. Writing to the Chancellor of the Exchequer, Rebecca suggests the government cut back, to make more money, and to 'look around and sell some things you don't need' (Kinsella, 2010, p. 107). Later she suggests to the Chancellor that he barter with France for cheese and the US for clothing by exchanging 'some old stuff in museum that we don't need' and 'a minor member of the Royal Family' (Kinsella, 2010, p. 162). Rebecca's absurd suggestions are not out of bounds given nation-states negotiate among themselves to protect domestic industries and aristocrats marry within their own clans to consolidate power.

Martin (2002) critiques the shift to life being approached like a business in a financialised economy. In rationalising her consumption choices, Rebecca explains to herself that clothes and cosmetics are an investment for her career. She may sound frivolous but many types of consumption are seen as an investment for the future. For example, students will borrow money to buy expensive computing technologies hoping they will increase their chance to succeed in education and later the job market. Davis (2009) points out that modern beings are asked to see their talents and expertise as human capital. Allan (2016) shows that even the unemployed/underemployed female immigrants are asked to see themselves as a form of investment, therefore it can be justified why they should take out loans to train themselves to be employable people.

The *Shopaholic* series mocks orthodoxical economic thoughts as much as absurd marketing language and financial self-help literature. Kinsella paraphrases marketers' slogans and financial advice to achieve irony. In the film, Rebecca

takes a hard look at her financial health: lying on a sea of bills, she says to herself: 'they say I am a valued customer. Now they send me hate mail'. In the book, a new credit card company invites a debt-ridden Rebecca to apply for a new card with a \$10,000 credit card limit. Rebecca says to herself: 'that's the real point. I mean, they wouldn't give it to me if they didn't think I could afford it' (Kinsella, 2002a, p. 212). To defend her multiple bank accounts in third-world countries, Rebecca explains to her husband: 'why is it such a big deal where I bank? Commerce has gone global [...] the old boundaries are gone' (Kinsella, 2007, p. 24). A middle-class reader with financial literacy is supposed to laugh at Rebecca's naivety at accepting what marketers tell her, yet the jokes may also be on the readers who hear those absurd marketing pitches in real life.

Kinsella also mocks the absurdity of self-help financial literature. To cope with her overspending habit, Rebecca (ironically) buys a book to solve her problem. Modern people believe that every problem needs an expert. Like television shows that cure shopaholics, self-help literature is not about forgoing consumption, but about understanding oneself from past experience. For a short while, Rebecca hangs on to the golden words of the book: 'frugality, simplicity. These are my new watchwords. A new, uncluttered, zen-like life in which I spend nothing. Spend *nothing*. [...] I've merely been succumbing to the Western drag of materialism. [...] At least, that's what it says in my new book' (Kinsella, 2001, p. 57). Rebecca heeds the advice of this life-changing book which claims to cut cash consumption by half in just one week. However, the Zen-like advice is interpreted to encourage more consumption: '[the book] says I should act as naturally as possible. So really, I *ought* to act on my natural impulses and buy [a cardigan]' (p. 60); 'but I'm allowed to get [my best friend a present], because, as [the author] says, you must treasure your friends' (p. 76). Self-help literature helps its readers to accentuate the process of individualisation by engaging in reflexive modernisation (McRobbie, 2004). Kinsella pokes fun at modern consumers' eagerness to seek changes by illustrating how readers may seek affirmation of old behaviours through reading self-help literature. In this sense, modern people may reflect on themselves but reflexivity does not necessarily lead to real action.

ANT may explain Rebecca's failure to reach financial literacy and to act upon self-reflexivity. On the surface, the humour in the *Shopaholic* book series may come from Rebecca's irrational approach to the economy, personal finance, and personal changes. However, she may only be taking up the attributes of a financialised economy in a late modern society. Latour (2005) and Callon (1999) argue that the actor and the network belong to both sides of the same coin: there is no macrostructure to which actors conform themselves, nor does group action constitute a macrostructure. To them, an actor-network is an assemblage of human and non-human actors, natural and human-made elements. As such, in an actor-network there is no distinction between a debtor, a credit card, and a debt calculation formula because they are all actors. These human and non-human actors all take up network attributes. In a financialised

economy debtors behave in a certain way not because they fall for the lies, but because credit technologies allow debtors to take up the network attributes, such as opening multiple bank accounts just to take advantage of the overdraft allowances or banking in exotic countries such as Namibia and Bangladesh. A real life example shows that some credit card applicants take up network attributes such as accumulating reward points and testing the maximum number of credit cards that they can have (Copeland, 2017). They do not see themselves as shopaholics or bad money managers, but credit card applicants and holders.

Patriarchy and Self-Reflexivity

In the last section, I focus on self-reflexivity among the Poor Women and the Shopaholics because it is one major characteristic of modern beings. Chick lit is a document of self-reflexivity, a technique for the imperfect protagonist to justify decisions and to practise self-monitoring. Despite the fact that *Confessions of a Shopaholic* effectively critiques dominant economic thought, the genre to which it belongs constrains the ultimate goal of the protagonist. Instead of reaching a nirvana state of consuming nothing (as promised by self-help literature), the protagonist finds love in patriarchy. Patriarchy also seeks to interrupt the discourse of women's self-reflexivity by controlling space and the definition of an economic being. For the Poor Women, self-reflexivity is believed to enable them to change and catch up with women in developed economies. From a postcolonial viewpoint (Protschky, 2015), the video camera—as a symbol of modernity—marks them as the difference: while the Poor Women are frightened by its presence, the Shopaholics use it to self-diagnose their hysteria.

Chick Lit and Self-Reflexivity

Giddens (1990) believes that self-reflexivity is essential to modern beings who constantly examine and reform social practices when they act upon new information. In a pre-modern society, humans explained their lives with religions and/or destinies. Hardships in life—whether they are illnesses, death, or malnutrition—were blamed on fate or bad luck. In contrast, modern beings explain their lives with scientific and medical beliefs. To those who can afford it, modern medicine is capable of prolonging lives, preventing illnesses, and nourishing bodies; psychological help is available to those who wish to change behaviours. To be modern is to believe in change and one's agency to effect changes. A person who refuses to change is often seen as traditional and old fashioned.

The pervasive availability of popular culture and media technology in developed economies allows for more means to perform self-reflexivity. The production and consumption of chick lit enable self-reflexive activities because the

writers and readers embark on a self-improvement journey with the protagonists. The chick lit genre dictates that the protagonists are highly aware of imperfection and pushed to transform themselves. Although the *Shopaholic* series is about a woman who spends too much, social relationships are the thrust of the story. At the end of the self-discovery journey, Rebecca discovers that what matter the most are her family and friends, not possessions. Even though the books occasionally mock a financialised economy and marketing language, at the end the series re-embraces a patriarchal ideal: that a stable nuclear family will help individuals—however indebted they are—to sail through storms of financial crisis (See also Ch. 5 on patriarchy in post-crisis films).

Shopaholic exemplifies the chick lit genre because it does not 'embrace an old frivolous or coquettish image of women but to take responsibility for our part in the damaging, lingering stereotyping' (Mazza, 2006, p. 18). Rebecca, like many chick lit protagonists, is single, in her 20s and 30s, trying to balance her career with personal relationships. Chick lit protagonists are usually dissatisfied with their jobs and struggle to succeed at them (Gill and Herdieckerhoff, 2006). Rebecca, also like many chick lit protagonists, partakes in pleasure-seeking activities such as shopping, eating out, and going out. Chick lit protagonists are all imperfect, unlike the antagonists who are all beautiful, successful, but unethical. Because the genre deems successful women manipulative, the antagonists are all cold and calculating (Gill and Herdieckerhoff, 2006). The antagonists do not engage in self-reflexivity because they have little self-doubt and are too confident of their power. Chick lit asks the readers to identify with the imperfect protagonists (Ferriss and Young, 2006) who are aware of their own imperfection, yet only half-heartedly committed to serious changes. For example, the chick lit protagonists are conscious of body image, but will indulge in junk food and alcohol when they are stressed. The *Shopaholic* series, like many chick lit novels, uses first-person narrative and self-deprecating humour (Ferris and Young, 2006). Kinsella—the *Shopaholic* author—believes that no one takes life seriously in chick lit: 'everybody's a lot more wry or ironic or will crack a joke rather than have their bosom heave [as in traditional women's romance]' (Sachs, 2007, para. 4). Kinsella makes a conscious choice not to Rebecca's appearance because she wants the readers to identify with Rebecca, to see the world through her eyes.² By following Rebecca's reflexivity and seeing things through her eyes, Rebecca's subjectivity becomes the readers'. The *Shopaholic* film uses a relatively unknown Australian comedienne, Isla Fisher, to play the lead. The 'unrecognised-ness' of Fisher adds to the character's 'ordinariness' because a widely-recognised actress in the US and the UK would make Rebecca more like a character than a 'real' person.

Self-monitoring and self-improvement are essential to the chick lit heroines, but they seldom follow the plan seriously. A more well-known chick lit protagonist, Bridget Jones, is often committed to changes but she soon abandons the plans once they begin (Gill and Herdieckerhoff, 2006; McRobbie, 2004). The chick lit protagonists are supposed to engage in reflexive modernisation but

not too much, otherwise they will become too serious and successful—both qualities are believed to be unappealing to the readers. In the case of Rebecca in the *Shopaholic* series, she undergoes reflexive modernisation with self-introspection and a great deal of sheer luck. In every story, Rebecca is said to follow popular social trends such as doing yoga, dieting, and parenting. She is eager to use ‘fad’ buzzwords without understanding them. In every story, the readers follow Rebecca’s journey of self-revelation: getting out of the blues by going shopping, imagining the best possible scenario, and seeking comfort from her parents and best friend. However, at the end of every story she understands that all the popular trends do not change her because what matter the most are what she always has: family and friends. The lesson learnt in *Confessions of a Shopaholic*, like that in the tulipomania discourse, embraces an unchanged social relation. In other words, despite the essence of capitalism being change, *Confessions of a Shopaholic* and the tulipomania discourse refuse to acknowledge the political economic context which has enabled the production of such discourse. Instead they promote ‘timeless’ truths that perpetuate unchanging social relations.

The author Kinsella, while engaging in the practice of self-reflexivity through media interviews, also refuses to rebut patriarchal claims that women have little idea what a financial crisis is. Kinsella willingly displays a ‘self in progress’ in media interviews. Her self-deprecating humour downplays her success and exaggerates her weaknesses. *Shopaholic* author Kinsella is more like a chick lit antagonist than protagonist: she is an Oxford-educated economist who is a highly successful writer and a wealthy individual. She has sold six million books and is rich enough to be one of the wealthiest women in Britain (Aitkenhead, 2012). However, Kinsella repeatedly emphasises in the media how she identifies with Rebecca for not being good at the job and for spending too much. She confessed that when she worked as a financial journalist, she was not good at it and found the job really boring (Sachs, 2007). She further admitted that she has had her moments of shopping sprees and wished that she had a shoe room, not just a shoe cupboard.³ Like the chick lit protagonist Rebecca, the writer does not take serious matters too seriously. The refusal to be serious irks feminists and male critics: while feminists believe chick lit embraces post-feminism by accepting pre-feminist ideals about gender, male critics dismiss chick lit for glorifying consumption in a financial collapse.

Whether chick lit authors downplay their intelligence and success in order to resonate with their readers or whether they are really like the protagonists has puzzled critics such as *The Guardian* journalist Aitkenhead (2012). She wanted to know why so many highly intelligent women write chick lit: is chick lit after all satirical? Or do the authors dumb down for the readers? Kinsella said: ‘you can be highly intelligent, and also ditzy and klutzy. You can be unable to cook, you can like lipstick’ (para. 2). Her ambiguity about women’s intellect extends to her conceptualisation of the readers. To her, the dream world is actually made up of real people who are neither stupid nor retrograde. ‘[The readers]

haven't sacrificed their *feminist* ideals. They are real people [...] with a shallow and a deep end' (para. 19; emphasis author's). The interviewer did not follow up on what Kinsella meant by a feminist ideals but judging from what Kinsella said, she does believe that her readers are feminists.

Another group of *Shopaholic's* critics are male journalists who write for the elite press. The ambivalent stance that Kinsella has on 'serious' matters such as the economy and politics has made chick lit a target. When the *Shopaholic* film was released during the financial meltdown, film critics noted the unfortunate timing of the release and proceeded to criticise the film for glorifying a debt-fuelled economy. For example, Dargis (2009) wrote in the *New York Times* that 'like the flailing American economy, 'Confessions of a Shopaholic' wants to eat its cake—or, rather, cling to its consumer-based culture and have its spiritual redemption too' (para. 1). Bradshaw (2009) of *The Guardian* wrote 'this girly [romance comedy] could in no way be considered a prescient satire on our addiction to debt' (para. 1). In the same publication, French (2009) called the comedy 'hard, loveless, calculating, materialistic' (para. 1); and Arendt (2009) added that: 'if it were a film about alcohol or any other addiction, people would find it distasteful' (para. 1). Further, the film 'does rather glamourise a credit-supported lifestyle' (*ibid.*). The ambivalent stance that Kinsella has towards serious matters extends to her attitude towards her critics. When asked how she feels about being dismissed by male critics, Kinsella replied: 'I don't feel overlooked, cos I have a lot of readers who are loyal' (Aitkenhead, 2012, para. 25). Like chick protagonists who are belittled by the successful female antagonists, their family and friends always stand by their side. Despite the acute critiques of dominant economic thought in the books, Kinsella is more reluctant to engage in debate about financial crises in press interviews.

Male critics from the elite press have missed one point about the *Shopaholic* series: the book is about social relationships, not shopaholism as the book jackets suggest. According to Kinsella, the pitch of the book series is nothing more than a girl who likes shopping and has an overdraft (Aitkenhead, 2012). However, as Hunting (2012) notes, chick lit focuses on relationships and personal growth, rather than on external- event-driven plots (Hunting, 2012). I argue that consumption does not drive the *Shopaholic* story; it is mostly a pitch. It grabs on a capitalist phenomenon and sells books. If the scenes involving consumption were eliminated from the narrative, the story would develop in more or less the same way. The emphasis on social relationships is reflected in the characters' relationships to commodities: commodities have not replaced human relationships between the characters nor are they fetishes to fill in the void of unfulfilled love desire. Rebecca does not think in the way that 'if I buy this bottle of perfume, I will find love'. She is certain of the love that her family and friends have for her. Instead, consumption helps her to *become*, such as 'I will be the [insert brand name] girl'. Commodities, like the credit card, become part of the modern selves. Similar to addicts of alcohol or drug, the substance is not something external to the selves, but part of them.

Not only is the *Shopaholic* series not about consumption, the series is indeed a dream world when it comes to money: most characters are so fantastically well-off that they spend very little time *thinking* and *talking* about money. The characters are hardly economic beings at all! Because the characters do not think and talk about money, Rebecca's spending habit has little bearing on others, nor does the wealth of her friends enable Rebecca to catch up with the Jones through conspicuous spending. Even though her husband points out Rebecca's shopping obsession and her best friend monitors her finance, they never sever the relationships because of her debt. The husband's unshaken support contrasts the fact that financial debt is one common reason for divorce in the US and the UK (Vulliamy, 2016). Money—whether having too much or too little—is inconsequential in the book series. The attitude to money in *Shopaholic* can be summed up by Rebecca's lower-middle-class parents in the film: 'if America can be billions in debt and still survives, so can you'. The solution to financial crisis is not to think about money, but to affirm parental love. Like the protagonist whose solution to debt repayment is to hide credit card statements, the author's solution to financial crisis is to neglect social relations constituting capitalism.

If money and debt play such a peripheral role in the story, then why should Kinsella write about it? The author believes that compulsive shopping is not a funny matter, but instead of criticising the shopaholic, her opposite instinct is to 'write about it as a sort of gallows humour' (Aitkenhead, 2012, para. 8). Rebecca's financial woes and incompetency are then humorous gags to a 'timeless' story about social relationships. Because the book series is not self-help literature that teaches the readers how to curb spending or reduce credit card debt, paying off debt is always very easy in the story (Van Slooten, 2006). In one book, Rebecca effortlessly pays off her mountains of debt by landing a job as—ironically—a financial advisor on a talk show. In another book, her best friend organises an auction for Rebecca so that she can raise funds by selling off old clothing. In yet another story, her husband casually mentions that he pays off her bills after finding a stack of them hidden underneath the mattress. Although Rebecca atones after becoming debt-free, she does not change her behaviour and quickly returns to her usual self at the beginning of each novel (Van Slooten, 2006). In this dream world, working extra hours and saving are not viable options. Rebecca once tries to make more money by working a waged job but is fired after a couple of hours because of a demeaning working condition that is common in chick lit (Ferriss and Young, 2006). Once again, the author acutely points out the lack of job prospects in a precarious time but refuses to engage in a discussion.

The *Shopaholics* narrative is ultimately about Rebecca's quest for love and affection in a patriarchal society. In this sense, the modern woman's goal is similar to that in a pre-feminist era. In other words, although chick lit is about the single modern woman who enjoys sexual freedom and city life, it is also a renegade of second-wave feminism. It takes for granted the gains fought for

by second-wave feminists (McRobbie, 2004), such as equal education opportunities and sexual harassment laws. At the same time, chick lit re-packages pre-feminist ideals as post-feminist freedom (Gill and Herdieckehff, 2006). For example, chick lit heroines may justify their excessively feminine appearance as their empowered individual choice, but in fact they conform to femininity in a patriarchal society.

From a political economic feminist perspective, I argue that *Shopaholic* has missed an opportunity to engage readers to think differently about finance and the economy. The playfulness of chick lit allows readers who may not read about economic thoughts to think about how money can be understood differently. However, its ambivalent attitude towards a credit economy allows the book to quickly slip back to the ‘fluffy women genre’ that is despised by cultural critics. To counter the critics, the author quickly shrugged her shoulders and walked away once a serious matter (like a financial crisis) was brought up. One piece of evidence that shows the refusal to engage the readers to think about the economy is how Kinsella pokes fun at shopaholics as much as others who have a different attitude towards money. For example, Rebecca’s half-sister, Jess is a miser. She could be a solution to Rebecca’s financial problem by reforming her, yet Jess’ extreme distaste for a market economy makes her a character to be ridiculed. Jess is said to engage in a barter economy in which she exchanges time for food. In another example, a nun who is supposed to live an unworldly life persuades Rebecca to visit the convent shop and sees shopping as a form of donation. An aristocrat, whose best friend is a Bolivian peasant, casually rediscovers a designer gown in a closet while hailing the colourful life of the poor. A wealthy aristocrat who is said to own multiple magnificent estates across Britain spends little on clothing. He prefers wearing an aged nanny-knitted sweater and a threadbare scarf. These four characters—the thrifty sister, the poor peasant, the unworldly nun, and the wealthy aristocrats—all live in a capitalist society, yet each of them has a different set of values about money and consumption. Kinsella is ambiguous at praising a particular attitude towards money; if a shopaholic’s belief about money should be mocked, then everyone’s belief should be mocked as well!

The Video Camera and the Modern Women

In addition to chick lit, the video camera affords women self-reflexivity. The camera is more than a neutral tool to record women’s actions and thoughts—its physical presence demands the women to act modern. Using a post-colonial reading of photography in colonies, Protschky (2015) traced the exclusive camera ownership among the wealthy elites before its ‘democratisation’ to the middle-class. Photography was widely used in the late nineteenth and early twentieth centuries to justify colonial policy by showing ‘racial or civilisational difference’ (p. 19) among Europeans and non-Europeans. A ‘colonial’ gaze was

often used to '[create] the categories of difference it sought to record through various processes of othering its subjects' (p. *ibid.*). For the indigenous, the camera afforded them to change from objects of gaze to agents of change. Photos taken by the locals illustrate their concern of modernity, civilisation, and civic participation.

Using ANT, I argue that the presence of the video camera requires the photographed subjects to acknowledge its presence and to reflexively engage with it. Modern people may avert their eyes if they do not want to be filmed, they may also smile at the camera if they are willing to participate. In both ways, the modern beings acknowledge themselves being a subject. Because modernity separates time from space (Giddens, 1990), the modern beings also envision how their images will be viewed in a different spatiotemporal frame. If the recording will be immediately destroyed or will never be watched, then no one would mind if their images are captured or not.

The presence of the video camera, as a symbol of modernity, differentiates women from developed and developing economies. While the Poor Women fear its foreign presence, the Shopaholics reclaim it for self-representation. However, even though the Shopaholics have the space, technologies, and an audience to undergo self-reflexivity, like chick lit protagonists, they yearn to find love in a patriarchal society. As with the author of *Confessions of a Shopaholic*, a public display of self-reflexivity attracts male critics who call the authors' work worthless, discredit their expertise, and call out their deceptive nature.

The Video Camera in the Village

In the videos produced for the Ashoka for the Social Entrepreneur series, the main subjects are the founders of the Grameen Bank and another microcredit agency, BRAC. Illustrating what the men said is b-roll showing weekly meetings between the bank workers and the Poor Women. They were both aware of the camera's presence, but the bank workers—who visit the village to collect debt—display the modern selves by staying emotionally neutral while the Poor Women are frightened to look at the video camera. Some Poor Women looked away from the camera, others turned their heads but stole a quick glance. The bank workers have accepted that being modern is desirable while the women are learning to be modern as required by the microcredit programme.

On the other hand, village men resist being modern; they hold their ground, directly stare at the camera and refuse to look away. Men are aware of the arrival of modernity as illustrated by the presence of the video camera and microcredit loans but they do not submit to them. This may explain why some microcredit programmes decided to exclude men because they are perceived as less reliable to repay loans and difficult to track down (Rahman, 1999). This assumption once again reinforces the belief that women in developing economies may effect changes and break away from traditions if

they are given the tools (in this case money, in others communication technologies).

The presence of the video camera reinforces spatiotemporal differentiation: not only are the Poor Women not modern enough to engage with the video camera, but they also need to be given tools to bridge the gap between the developing and the developed. Cash, as a commodity from the outside world, is seen to be such a tool. The most symbolic economic action captured by the video camera is the bank workers counting cash and handing it to the women. This action illustrates the rawest exchange of commodity wherein the banknotes are a form of money-commodity (Marx, 1999). Marx argued that the palpable form of banknotes gives an illusion that money represents value and can be used to measure the value of commodities. The video camera's focus on cash transaction hides the human (female) labour that creates value. In addition, the action reinforces that microcredit is a one-way aid from the male bank workers to the Poor Women, from the developed world to the developing one. In the trilogies produced by Ashoka, a common way to represent the loan is a close up of the dollar bills being counted out in the centre of the frame. A zoom out is then used to reveal the male bank workers counting out the bills to the Poor Women. Even though a loan is a two-way money transaction between the lender and the borrower, there was only one instance in which the women were shown to repay the debt.

In addition to the visible patriarchal hand that is seen to hand out cash to the Poor Women, Men can also dictate desirable changes for women. The Poor Women are forced to be self-reflexive because the male founders mandate what changes are needed and how those changes can be brought about. To receive a loan, women have to attend the weekly meetings in which they recite the codes of conduct that demand them to change their beliefs and behaviours (Karim, 2011). During the meetings, women stand in rows in an open space facing the bank worker chanting the prescribed changes. The sixteen prescriptions of the Grameen Bank ask members to vow for a smaller family and a modern lavatory and to not take or give dowries. These rules imply that Poor Women's poverty is caused by traditions. The belief is that once they are able to think rationally—through reciting the desired changes that are required to receive a loan—they will economically advance themselves. In addition, the agencies ensure changes happen by closely scrutinising the women and their families. Bank workers measure changes by collecting information about consumption patterns, use of contraceptives, children's education, and family assets.

Despite their fear of the video camera and the changes imposed on them, microcredits enabled the Poor Women to understand that self-reflexivity is situational and intersubjective. For example, peer pressure is a factor to ensure loan repayment (Faraizi, Rahman, and McAllister, 2011; Karim, 2011). Women's fear of losing face and bringing shame to the families show that they understand what is expected of them. Self-reflexivity is also brought forth by the researchers who asked the Poor Women questions about themselves and their families. These questions made them aware of the desired changes, particularly

among the Poor Women who were first vetted by the agencies for researchers' questioning. Karim (2011) has stated that some villagers in frequently visited sites are so accustomed to answering the same set of questions that they already have the answers ready for the researchers.

Hysteria and the Camera

Television discourse limits the self-representation of the Shopaholic because the Expert controls time, space, and meanings. Will communication technologies offer self-identified shopaholics the opportunity to break through the popular culture discourse of the Shopaholic? To answer this question, I look at how the online persona the Hysterical Woman establishes her modern self by using the camera to make herself a 'triple-subject' of the discourse: she is the one who controls the camera, displays hysteria, and is subjugated to a discourse about addiction. Even though she may appear to challenge the male psychoanalyst as the authority, like the protagonist in *Confessions of a Shopaholic*, her ultimate purpose is to find love in a patriarchal society.

I define DIY videos as those produced by amateurs who direct and star in them. I am more interested in amateurs who used basic technologies to make videos posted on YouTube because they worry less about production techniques but more about how to reach a wider audience. As such, they have to ensure their online persona will attract an audience who will tune in to listen to them talking about different topics. Amateurs are not hired by companies to produce the work. Some of them use basic consumer-grade technologies to produce the videos, such as a mobile phone and beginner-level video editing software; others use professional equipment and advanced software.

DIY videos of, about, and by the Hysterical Women talk back at psychoanalysis. One of the most well-known hysterical patients was Freud's 'Dora' (Freud, 1963) whose symptom was speech loss. Freud saw the throat as an erotic zone and explained Dora's illness with her repressed sexual desire. When Dora's lover was in town, she could speak; when he was away, she fell silent. Feminists have reinterpreted Dora's case but cannot agree whether she was the subject of her own voice or an object in a patriarchy. On the one hand, Hélène Cixous (Cixous and Clément, 1990) celebrates Dora as a strong woman and admires her courage to have a desire. On the other hand, Catherine Clément (ibid.) sees Dora as a victim in a patriarchal-bourgeois society where women are pawns between men (see also Ch. 5 in which women are not in the know about men exchanging their images and labour.) Feminists critique Freud for seeing Dora—who represents the feminine—as incomplete and contradictory. For feminists, Freud's account is as contradictory as that of Dora: if Freud agreed with her, then he would identify with the feminine and the castrated (Moi, 1990).

Freud's representation of the hysterical women reinforces the notion that feminine moments—such as women's loss of speech and market failure—are

temporary and inherently contradictory. Male professionals (such as psychoanalysts and economists) attempt to suspend feminine moments in the human psyche and financial markets by examining and diagnosing troubled women or women in troubling times. As I stated in the introduction, women's characters in films attest to fraudsters' morality; the bodies of women in psychoanalysis serve as sites for contesting meanings.

The video camera and online sharing platform offer the Hysterical Women an opportunity to diagnose themselves through talk and to display a suffering body in front of the camera. The first sense of the Hysterical Woman's self is the camera operator. Like the chick lit protagonists, these women are not ashamed of their flaws and job-related incompetency. Like the Shopaholic who is not good at a profession, the online Hysterical Woman is not competent at making professional-looking videos. They used a mobile phone or video camera to film themselves, but do not bother to use light kits or a microphone. For example, ||Superwoman|| Lily's self-made video 'Signs you're a shopaholic' was shot in a hotel bathroom. She tells the viewers: 'I'm in my hotel, there's not any lighting that is appropriate for the video anywhere so I am in ... the washroom.' Despite the amateur quality, the video had two million views as of November 2017.

The second sense of the Hysterical Woman self is the patient displaying symptoms in front of the camera. The Hysterical Woman exhibits the symptoms of speaking quickly and incoherently ('It's not fun to be unhealthy alone. We're friends. What's the number one rule of friendship?' 'I just beat the level of ten of Candy Crush, I deserve a new hat'), using coarse language ('crap', 'freaking', 'screwed'), showing sexual repression ('I am so easy, I am like a consumer slut. Oh my god, I'm a guy. Oh my god, and my Visa is my pee pee. I just swipe and insert and then and then, oh my god, I push people's buttons'), and displaying exaggerated hand gestures (extending arms sideways and upwards so that the hands are out of the frame; clapping hands). The online Hysterical Women do not perform their illness for the Expert and the camera crew; they perform for the camera and the imaginary audience.

The third sense of the self is a Foucauldian one: it is the subject produced within the Shopaholic discourse. Even though the women could control the camera and display hysterical symptoms to their subscribers, they have to confirm to social expectations about how a hysterical woman should look and talk like. More problematic for the subjugated self is the women's adoption of a 'bitch' persona in a patriarchal society. According to bell hooks (2002), society subscribes to a stereotypical belief that powerful women cannot be loving and life-affirming. Young women who choose to be independent, powerful, and successful buy into the stereotype and adopt a 'bitch' persona because 'it keeps them from having to confront the pain that comes when females are punished for choosing to be self-actualised and successful' (p. 147). In other words, because patriarchy has denied women the opportunity to become complete and successful, some women choose to disrupt patriarchy by performing hysterics. In other words, women are compared to men but deemed inferior to them. The

Hysterical Women are seen as dangerous because they try to unsettle patriarchy by creating chaos in a supposedly stable system.

In the video ‘Signs you’re a shopaholic’ ||Superwoman|| Lily exhibits the bitch persona by denying the need for men and heterosexual relationships (‘Are you telling me that you having a boyfriend feels better than a new pair of shoes? Don’t be ridiculous! Because shoes, let me walk all over them, and they never talk back. And they look fabulous and stylish’) yet yearning for connection and recognition (Anthropomorphising an unworn piece of clothing, she asks: ‘you said you love me. Look at us now.’ ‘What are you? A piece of clothing? Or a girl with low esteem?’). Similar to the plot in the *Shopaholic* series, the Shopaholic seems to be obsessed with shopping but the ultimate desire is to find love in a patriarchal society.

The Hysterical Women easily lose control over space and speech when compared to the Experts on television. The father figure of the Hysterical Women easily seizes the speech-making instrument (i.e., the video camera) of the Hysterical Women and claims to ‘unveil’ her lies. For example, the live-in boyfriend of a self-claimed shopaholic ‘LaToyasCrazyLove’ takes her camera and claims to document evidence of her deception. Unlike the Hysterical Women who see themselves as a subject of the video, the man who controls the camera does not stand in front of it. He chooses to be in the position of the invisible Expert who *objectively* documents the hysterical symptoms of the patient. (See Ch. 2 about the hidden male subject.) The man moves around the room accusing her of being a liar who deceives him and her online fans. The man further discredits the woman’s fashion taste for calling her clothes ‘crappy, big bird shit’, ‘some jail wear’, ‘beaver-looking shit’, and ‘wreckass pieces of clothes.’ Like Freud, the Expert behind the camera believes that he uncovers the truth of the hysteric by peeling away the first layer of meanings, revealing her lies, and denouncing her as a fraud. The live-in boyfriend is not unlike financial experts who, after a financial crisis, analyses why a crisis happens and denounces the causes. More interestingly, the live-in boyfriend films the shopaholic’s multiple closets—a feminine private space that may be seen as her genitals—pulling clothes out and calling them worthless and meaningless. To the Expert, the problem with the Hysterical Women is not her consumption habit, but her guise and deception. Similarly, economists call out a bubble as a guise of a *real* economy and a deception of economic wealth. In this video, the love object of the Hysterical Woman plays the role of the Expert who chooses to demean her. Like Freud, he wants to reveal the truth of a hysteric. Like an economist, he reinforces the assumption that a feminine moment—be it a hysteria or a financial bubble—is deceptive.

Conclusion

In this chapter I argue that a financialised global economy requires spatiotemporal differentiation for a circulation of capital. However, finance capital is also

said to bridge the gap between developing economies and developed economies, between women and men. Credits are extended to women in developed and developing economies in the respective forms of credit cards and micro-credits. In developing economies, poor women are seen as resources that can produce value in the public domain. The Poor Women and the Economy arise when researchers go to study them. The Poor Women learn to talk and act like economic beings in order to receive loans from the bank. In the developed economies, the popular culture associates women with them being the Shopaholic. Yet popular culture does not allude to the political economic context in which excessive consumption is made possible, instead it paints excessive consumption as a psychological problem.

Ironically, popular culture also serves as a site of subversive power. The chick lit and flick *Confessions of a Shopaholic* challenge the assumption that money is abstract and monolithic. They show that modern beings have different relationships with instruments of money and that heterodoxical economic thought co-exists with orthodox economic thought. They point out the materiality of money, the multiple sites of money circulation, and the situated understanding of finance. However, since chick lit is constrained by genre, it refuses to engage in a serious discussion about the economy and finance.

Lastly, I have shown how self-reflexivity, a central tenet in modernity, also reinforces spatiotemporal differentiation between developing economies and developed economies, between women and men. The Poor Women's fear of the presence of video camera marks them as the cultural difference. They are also forced to be self-reflexive by patriarchal institutions that loan them money. Self-reflexivity in chick lit and DIY videos promotes self-monitoring and self-improvement, but the narrative is limited to women yearning for love in patriarchy. Women's public display of self-reflexivity attracts attention from male authority which questions their understanding of financial crises and accuses women of deception. The criticism once again reinforces the feminine, elusive nature of financial crises.

Notes

- ¹ 'The Nobel Peace Prize 2006'. *Nobelprize.org*. http://www.nobelprize.org/nobel_prizes/peace/laureates/2006/ Last accessed: 8 February 2015.
- ² Readers Q&A. The Official Website of Sophie Kinsella (page taken down). <http://www.sophiekinsella.co.uk/sophies-world/qanda/readers-qanda/> Last accessed: 6 October 2013.
- ³ Shopaholic and Baby Q&A. The Official Website of Sophie Kinsella (page taken down). <http://www.sophiekinsella.co.uk/sophies-world/qanda/shopaholic-baby-qanda/> Last accessed: 6 October 2013.

CHAPTER 4

Financial Information Reporting in the Earliest Wall Street

Inside the Nasdaq Building in Times Square in New York is a broadcast studio whose curved wall is lined up with dozens of electronic screens, each of them displaying the 'real time' trading price of a major stock or commodity. The centre of the screen shows the most prominent information: the change in price and percentage. A price in green means upward movement and a price in red means downward. The less prominent information occupies the bottom of the screen: the trading price is on the left; the volume traded is on the right. The multiple illuminated screens in the studio confirm a belief that technology has always been at the forefront of the financial industry. The same belief was held by nineteenth-century stock brokers; at that time men in top hats gathered around a machine that made a 'tick, tick, tick' sound when it printed out stock prices on a long strip of paper unwound from a wheel inside the machine. The symbol and the price were simultaneously printed by two type wheels: one had the letters A-Z, another had the numbers 0-9 and the fractions of 1/8. An ink roller installed beneath the type wheels impressed on a narrow paper strip unwound from another roll (Prescott, 1892). A modern day trader may not find the machine useful, but she will have no problem with understanding what the letters and numbers mean. Similarly, a nineteenth-century stockbroker may not understand what the gleaming electronic boards are, but he may still be able to recognise some of the abbreviated symbols (such as WU for Western Union) and understand what the prices mean.

The format of stock price display *seems* to be too stubborn to change, even though digital technology offers many possibilities to reformat the price display. The similar format of stock price display in the analogue and the digital

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eras may imply that the quality of financial information is the same: that the ticker in the analogue era provided updated information produced in the market as much as the computer in the digital era. I argue in this chapter that this is not the case in order to illustrate the third theme of the book: ‘the production, distribution, and consumption of financial information—be it analogue or digital—rely on machines.’ The machines give financial information a property: the ticker updated financial information at a longer time interval than the computer screen because the telegram could handle much less information than optical fibre. The limited information on the ticker focused on the performance of individual stocks rather than the market as a whole. In contrast, the television screens inside the Nasdaq studio give a more ‘global’ view of the market: a rallying market is illustrated with an overwhelming quantity of green numbers, while a crisis is signalled by the number of red arrows.

The brevity of price information in both the analogue and digital eras might imply that the ‘message’—defined here as the presentation and quantity of information—is independent of the ‘medium’—defined here as the technology through which the information is transmitted. However, what exactly does a ‘medium’ of price display mean in both the analogue and digital eras? Should a medium be limited to devices that users can see, such as the ticker and paper strips in the analogue era or the screen and charged electrons in the digital era? Should a medium include embedded code such as electrical pulses in the analogue era or compressed information packets in the digital era? Lastly, should the medium include the environment in which the devices are found, such as the room and the building that house the ticker? Or even the buildings that are located in a street found in a city? Despite the objects of study for media studies scholars being media, the medium is rarely studied. Lievrouw (2014) suggests that a constructivist stance in media studies privileges ‘the technologies’ social and cultural meanings and appropriations and framing technology primarily as an outcome or expression of culture’ (p. 24) over how the social and material character of communication technology which is ‘equally definitive and co-determining’ (p. 24).

In order to understand how communication technologies give information a materiality which demands that users act on it, I argue in this chapter that a device (such as a ticker or a television screen) is better seen as an actor in a network than a medium in a communication process. As I wrote in the introduction, actors make up a network. Actors can be humans such as stock brokers or non-humans such as a ticker, electrical wires, and so on. One value of drawing on ANT in media studies is its strength in tracing the formation of the network (Couldry, 2005); therefore a case study of the *Wall Street Journal* in its infancy (1882–9) is the most appropriate to show how a network of financial news reporting was formed in early New York. The case study will point out a flawed assumption in journalism studies of the financial press during crises (see Lee, 2014c for a list of studies), which is that the press is a stable institution

in which human actors understand their roles and responsibilities, and that they use available tools to perform journalistic duties.

The case study will show that the publication of the first issue of the *Wall Street Journal* may best be seen as a technological outcome enabled by a network of actors. Human actors used technical devices to produce information whose spatial and temporal properties were constrained by the devices. I look at a network of three non-human and one human actors: the ticker, the printer, the physicality of Wall Street, and the runners. I start with the ticker and relate how Dow Jones' late adoption of it implies its view of the financial market. Then I look at the role of Wall Street runners and question if they played a more central role in the financial market than historical illustrations suggest. The third actor, the printer, gave financial information a specific quality. Lastly, I look at the physicality of Wall Street and argue that there is *no apparent* reason why it became the gathering place of the financial types in New York. However, the first three actors (the ticker, the runner, and the printer) had created the physicality in Wall Street which enabled a quick flow of financial information. The three actors had also extended financial news reporting beyond the 2.2-mile mile in lower Manhattan. Viewing financial news reporting as a network has three implications for an understanding of a financial crisis: first, the network is always temporary and in flux; second, information has different qualities; third, space and time are created when information passes through technological devices in a network.

Financial News Reporting as a Network, Not an Institution

Technological devices in a network are not a medium, but technical and discursive actors. To ANT scholars, an actor is 'whatever unit of discourse [that] is invested of a role' (Barry and Slater, 2002, 177). In other words, human and non-human actors have to be in a network to have functionality and meaning. A network is always temporary; it is formed when the actors are assembled. For example, the ticker in a nineteenth-century stock exchange and brokerage house belonged to a network called stock price reporting. In contemporary trading, a working ticker is technically obsolete and outdated; it is not used to report stock prices even though it is still capable of doing so if an operator sends Morse code through the wires. Some hackers have repurposed the ticker by connecting it to a laptop and turning it into a printer of python script and celebrities' tweets.¹ The hacking examples show that if we remove the ticker and assemble it with other actors, its function and meaning won't be the same. While hackers of the digital age are interested in connecting the ticker to a mess of wires and computer chips, I aim to lift the ticker up from its place in a nineteenth-century brokerage house and examine the tangled mess to which the ticker was connected. But this mess is important because it allows us to

know what the network and the actors were. Therefore, we ought to trace with what the ticker was connected to, where the device was housed, and with what and whom the device interacted in a nineteenth-century brokerage house.

In its infancy, Dow Jones Co. was a financial news service that distributed handbills to subscribers throughout the day. Nowadays, the *Wall Street Journal* is one of the three national newspapers in the US and is seen as a ‘must-read’ for business and financial types. The *Wall Street Journal* is classified as a quality press by critics and journalists alike. It is an, if not, *the* authority on financial news in the US. The press is seen to belong to the Fourth Estate in American society; an institution that should neither be influenced by politics nor swayed by money. The quality press is hailed as a watchdog of society. Therefore when newspaper magnate Rupert Murdoch purchased the *Journal* in 2007, there was an outcry due to Murdoch’s previous editorial interference at newspapers that he owned (Murdoch, 2017). At the same time, financial newspapers such as the *Wall Street Journal* have been criticised as unapologetic supporters of capitalism, the free market, and neo-liberalism (Tambini, 2010). For instance, scholars and political commentators questioned why the press did not foresee the coming of the Global Financial Crisis (see Schifferes and Roberts, 2015). The failure of the Fourth Estate to inform the public was explained by a shorter news cycle and journalists’ lack of knowledge of financial and economic matters (Lewis, 2010).

The view of the press as either a state watchdog or a capitalist lapdog is flawed. This assumption implies that the press is a stable entity and that employees understand their roles and responsibilities. In addition, the belief that the press is an institution assumes that only human actors have a role to play in financial news reporting; and that non-human actors such as the telephone, the computer, and the printer are mere tools that humans use to report news. An ANT theorist would ask very different questions: when a press release lands on a journalist’s desk, how does he report it? Does he mark up the press release with ink? Does she write up a news brief on a computer? Or do they ‘tweet’ it on a smart phone?

The *Wall Street Journal* as a Nexus of Information in the Nineteenth Century

Dow Jones began with the founders, Charles Dow, Edward Jones, and Charles Bergstresser, selling and distributing one-page, hand-written news bulletins to subscribers. The infancy period ended on the day when the first issue of the *Wall Street Journal* was printed on 8 July 1889. In the contemporary media landscape the *Wall Street Journal* is unarguably—though somewhat conveniently—categorised as a financial newspaper. However, in the late nineteenth century, the format of financial news reporting was experimental, unlike the broadsheet papers of today with their multiple-column layout. In many ways, the *Wall*

Street Journal can be called a late adopter of printing and ticker technologies, yet its use of hand-copying technologies produced a financial market in Wall Street.

History books on the *Wall Street Journal* commonly begin with the upbringing of the three founders. An educated man's upbringing seems to imply that his family background, education, and co-workers all shape how he sees his place in the world and how he can make a mark (or fortune) for himself. An ANT approach differs from the biographical approach because it does not privilege human actors over non-human actors (Callon and Law, 1995); human actors may invent and create technological devices, but human actors are also enabled by those devices to take up roles that they would not be able to perform otherwise. For example, news gathering requires a place for the financial types to trade, be it a street corner or a room in a building. Similarly, news printing requires a printer that can reproduce copies much faster than a human could. The ticker—the first non-human actor—may be assumed to be indispensable to stock price reporting, yet Dow Jones did not acquire one to report financial news.

The Ticker

The first stock ticker was invented in 1867, but Dow Jones Co. only leased one in 1897—thirty years after the invention of the device, eleven years after the business opened its door, and four years after the printing of the first issue of *Wall Street Journal*. Current writings explain Dow Jones' late adoption of the ticker with reference to the founders' distrust of the device's accuracy (Wendt, 1984). However, historical evidence does not suggest that the users complained about its inaccuracy; if anything, the ticker had significantly improved it ('Gold and stock reporting instruments,' 1872). Before the ticker was installed in the exchange and brokerage houses, young boys were hired as runners to deliver stock prices scribbled on slips of paper. The ticker also shortened the time for delivery; after all, telegraph signals could travel much faster than the speediest runner. Gordon (1999) states that the founders were less interested in reporting individual stock prices than summarising market performance after it closed. Dow Jones was more interested in *describing* how the market was in order to *predict* what the market would be. Hourly updates of stock performance may not be useful to define and predict the market. The invention of Dow Jones Industrial Index created the stock market by defining its boundary and quantifying it based on select stock performance.

Before the ticker, young boys were hired to transport news around Wall Street. The different speeds of the runners and human errors led to price inaccuracy and time differentiation. By the time the runners rushed back to the exchange with buy orders, the prices could have been wildly different. To resolve the problem of price differentiation, the Gold Indicator was invented to report the price from the Gold Exchange to brokerage houses. An operator stationed

at the Gold Exchange sent the price information through the telegraph to a 'central' where wires were connected to the Gold Indicator installed in brokerage houses. When compared to the ticker, the Gold Indicator would have been an even more obscure instrument to today's brokers because it was a reporting telegraph. It only showed the latest price on the device but did not print out the prices (Prescott, 1892). The Gold Indicator was not useful to report securities because it could only report the price of one commodity. To remedy this shortcoming, the stock ticker was designed to print out prices in addition to receiving signals through the wires.

Imagine the wonder of printed tapes being unwound from the machine when it made the 'tick, tick, tick' sound! Similar to how gold prices were transmitted from the exchange to brokerage houses, a ticker operator encoded Morse code at the exchange from where the coded message reached a 'central' which then relayed the message to multiple receivers (Dyer and Martin, 1910). Because only twenty-five receivers would receive the coded message at any time (Dyer and Martin, 1910; 'Gold and stock reporting instruments,' 1872), it can be assumed that some brokerage houses would still have received the updates sooner than others. The ticker had narrowed time differentiation of stock reporting, but by no means was the difference completely eliminated.

The subliminal effect of the ticker is evident in historical illustrations. In one of them, the ticker occupies the central stage in an exchange—it is surrounded by and placed above men in top hats who consulted prices printed on a long tape unwound from the ticker. The ticker was the belle of a ball whose admirers all wanted to have a closer look. In another illustration, brokers sprinkled ticker tape fragments like confetti from office windows to celebrate a presidential parade in 1888 and a hometown baseball win. The ticker gave meanings to the paper tape. The stripes symbolised good news, therefore the jovial crowd did not mind being littered on.

Even though the ticker was a new wonder on Wall Street, Dow Jones did not acquire one. There is no record showing how much a ticker cost in the late nineteenth century, but it was evident that the ticker was in demand. For example, to make the ticker more exclusive, subscribers could lease a private line made up of superior materials so that they could learn of the stock prices a few minutes ahead of others by paying more (Prescott, 1892) (This is similar to today's practice of brokerage firms: they rent private lines from financial news services such as Reuters to gain a few seconds ahead of others). Another example to show the ticker was in demand is the anecdote that Thomas Edison's ticker saved him from the brink of starvation after receiving a large order and producing 1,200 in his workshop (Dyer and Martin, 1910).

Given Dow Jones' interest in understanding market performance as a whole, rather than individual stock performance (Gordon, 1999), the ticker may not have been useful. *Wall Street Journal* invented the Dow Jones Industrial Index to define the market boundary by quantifying it with the Dow Jones Industrial Index. Dow Jones took the average of ten transportation companies (railways,

steamship, and Western Union) after the market closed and deduced the market performance from the trading prices of the ten securities. In 1897, Charles Dow invented Dow Theory to predict market movement (Gordon, 1999). He stated that the market movement was only real if both the industrial average and transportation index moved in the same direction. If the industrial average went up but the transportation index did not, then the market would not be rallying. To Dow, the market was the trading of select transportation and industrial securities. However, it was only one kind of market in Wall Street. Another kind of market was a knowledge network formed by runners—the second actor in a network of financial news reporting.

The Runner

I argue in this section that runners were not a transportation or message delivery means, but a network of market knowledge. As such, runners took up a knowledge-bearing role not performed by non-human transportations/communication technologies, such as trains, horses, or the telegraph. Runners learned about the trade when they ran around the street. They also created new markets because some runners later established businesses to serve Wall Street brokers. When the runners disappeared from rushing around Wall Street, this knowledge system ceased to exist.

It is well said that before the railroad, a message could only travel as fast as a horse could run. Before the telegraph, a message could travel as fast as a train could run. The telegraph may have eliminated the need for a runner to physically transport a message from one place to another, but runners were not eliminated altogether. Even in the 1980s, runners were still used to deliver hand-written orders from brokers to dealers inside a brokerage house and an exchange.

Runners were knowledge bearers of the market, yet they were portrayed as playing only marginal roles in historical illustrations of Wall Street. The runner did not appear in every Wall Street illustration and was rendered invisible in historical documents. When the runner appeared in an illustration, he was standing alone among hundreds of market speculators. The lone runner usually stood idly waiting for someone to offer him a job. He did not appear to eavesdrop on the ongoing conversation between the speculators. The runner was portrayed as someone ‘outside’ the market, someone who did not interfere with activities in an exchange. In contrast to the ticker that occupied the central place in an illustration, the runner was marginalised.

To recognise the significance of runners in the market, Gordon (1999) calls them the ‘glue’ that created a single market by knitting together the brokers and the exchange, the street and the banks. However, I argue that this would have been impossible because different markets co-existed in Wall Street. In addition, the runners did not validate and share the information they were

paid to deliver. Nonetheless, they were knowledge bearers of the market because they played a role that could not be fulfilled by non-human conduits such as horses or trains. While the train timetable standardised local times, the locomotive itself was not conscious of time. In contrast, runners—however uneducated—were conscious of Wall Street temporality and spatiality: they would need to know the fastest route to deliver a messages and the busiest time of the day. All this knowledge helped them learn the business of the trade. An illustrative example is that financial companies such as American Express and Wells Fargo began as couriers of money and securities. Through delivering messages, they became knowledge bearers of the market and established banks and financial institutions (Gordon, 1999). The change in business shows that courier companies gathered market information about designated locations at designated times. By establishing conduits in a network, these companies gained knowledge about the movement of money and information. In another example, the founder of a *Wall Street Journal* competitor started his first job as a Western Union runner. He learned how important news was to Wall Street firms so he started a financial news courier business to feed the market's needs (Rosenberg, 1982).

Dow Jones also employed runners to accompany reporters at brokerage houses and the exchange. Wendt (1984) vividly describes the scene of runners delivering hand-written notes to the office: 'when a runner dashed down the steps and someone shouted, "Earnings! Earnings!" and the boys took up the chant, [Edward] Jones became a different man' (p. 28). This shows runners were not a 'neutral' means in the network of financial news reporting; their presence stimulating actions from other actors in the network. In the same way, non-human actors such as the printers also called for actions from other actors.

The Printer

After the runners rushed back to the Dow Jones office with written slips, the editors then composed the news ready for printing and distribution. However, the printer was not in the network at the very beginning. Newsprint reproduction relied on manifold writers, ink, tissue papers, and two-sided carbon papers. The first financial information service Dow Jones offered was a hand-written news bulletin called a 'slip' that was copied and distributed throughout the day. Hand-copied slips could be printed quickly and were then delivered by runners. Even though the rotary cylinder printer was invented in the 1840s, Dow Jones did not invest in one at the very beginning. However, the absence of a printer did not make financial news reporting impossible, it simply created a network of financial news reporting that produced information of a specific quality. For example, the total word count produced in a day on handbills only amounted to 800. The word limit dictated that news items be short and concise for speedy composition and hand-copying (Rosenberg, 1982).

Once the runners rushed back to the office with a scribbled note, the editors summarised it in one or two sentences before dictating it to the manifold writers. The writers then reproduced the news articles by using an ivory-tipped stylus to inscribe on a stack of twenty-four sheets of tissue paper (Rosenberg, 1982). The runners picked up the freshly written slips and delivered them to the subscribers around Wall Street. The manifold writers repeated the process again before another twenty-four copies were copied and distributed. Because there were more than twenty-four subscribers, it can be assumed that not all clients received the news at the same time, once again copying narrowed time differentiation but did not eliminate it.

One year after Dow Jones went into business, it added a new afternoon service by issuing *Customers' Afternoon News Letter*. The afternoon newsletter summarised all news items on the slips and was distributed to clients at 3:15 p.m.—fifteen minutes after the Exchange closed the market. As will be discussed in the following section, the exchange dictated how time was organised in Wall Street; the publishing of the afternoon newsletter further reinforced this market temporality.²

Two years after Dow Jones opened its doors, it acquired a hand-operated cylinder press to print news bulletins. Unlike the steam-powered high-speed rotary press that was already available in the market, the Dow Jones' machine was very humble: it could only hold 16 lines of types and printed on paper not larger than 5 × 9-inch in size. The slip format was restricted by human power: printing on a large sheet of paper required more pressure than human hands could provide (Plymouth College of Art and Design, 1972). The print was therefore more like a hand bill than a broadsheet newspaper. This limitation led to a specific quality of information: the news items were extremely brief. Each news item began with the time of the event and ended with a one-sentence statement of what the event was about. The earliest slip was more like a list of news by-lines or a collection of tweets than financial news articles that are printed in today's *Wall Street Journal*!

Three years after Dow Jones opened its door for business, it divided the printing into two sites. It acquired a steam-operated printer for the exclusive printing of *Afternoon News Letter*. The new printer was housed in Broad Street, 0.2 miles south of Wall Street.³ Nevertheless, the hand-operated cylinder printer continued issuing news bulletins from the Wall Street office at no. 15. News bulletins were produced at a half an hour interval during the market opening hours, from 10:00 a.m. to 3:00 p.m. (Wendt, 1984). The co-existence of the news bulletin and the *Afternoon News Letter* created two temporalities in Wall Street: one of 'breaking news' throughout the day; the other a daily conclusion of what happened in the street.

After seven years in business, Dow Jones renamed the *Afternoon News Letter* the *Wall Street Journal*. What made the *Journal* a newspaper on 8 July 1889 may not have been the contents or the reporting style, but the printing technology. The *Wall Street Journal*, unlike its former self the *Afternoon News Letter*, was four pages long. It was printed on both sides of a 15.5 × 20.75-inch sheet; on

each page there were four columns. One can say that the *Wall Street Journal* had grown up to become a standard broadsheet.⁴

The publication of the first issue of the *Wall Street Journal* had another significance: it redefined the concept of Wall Street from a physical locale to a financial market. The address of the inaugural issue was not listed as one in Wall Street, but no. 26 Broad Street where the printer was located. The *Journal* that was originated from Wall Street had by now moved some of its operations away from the original locale. The words ‘Wall Street’ was no longer restricted to reference the 0.7-mile long street in lower Manhattan, but to include a network of people, technology, and information that was enabled by the physicality of the street.

Wall Street Physicality

The last non-human actor discussed in this chapter is the physicality of Wall Street. In Ch. 3, I showed that a rural village in Bangladesh was seen as a contained local site; its economic activities were not linked to the financialised global economy. In contrast, economic activities that take place in Wall Street—although local—are assumed to be *always* global. Wall Street is now synonymous with the US, if not the global, financial market; geographically, it is only a 0.7-mile long street in lower Manhattan. The grand scale of Wall Street, as Latour (2005) wrote, is not rooted in its size, but its connections between Wall Street offices and those others in the country and the world. In the following, I show how financial activities that took place in the earliest Wall Street defined its local character as that of a trading place.

As a place, Wall Street yet represents other places, such as a stock *market*, a financial *world*, and a *centre* of money, power, and greed. To understand how a street became a market, a world, and a centre, we have to understand how Wall Street’s physicality has enabled the flows of people, technology, and information. From a contemporary standpoint, it may seem natural for Dow Jones to open its business in Wall Street because the street was becoming a hub of brokerage firms and the home of the New York Stock Exchange. However, the assumption of Wall Street being a *natural* home for Dow Jones should be questioned. One way to do so is to investigate how Wall Street became the centre of financial activities in early New York City.

Wall Street existed before the city was named to honour the Duke of York in 1664. Existing documents about the first 150 years of New Amsterdam and New York do not suggest why stock traders chose Wall Street to be the gathering place. However, Wall Street physicality mattered to Dow Jones being a nexus of financial information. The geographical location of Wall Street in lower Manhattan mattered to a financial news service, as did the buildings erected along the street and the people who lingered there. In turn, the geography, the buildings, and the people enabled technologies of financial activities.

In the following, I examine Wall Street's physicality by looking at how the earliest traders gave the financial market a sense of temporality and spatiality.⁵

At the very beginning, Wall Street provided farmland for the earliest Dutch settlers. In 1730s, the street witnessed the trading of slaves, furs, and corn at its eastern end. Wall Street once hosted a city hall for public affairs and a tavern for maritime news exchange. It then became a residential street of the fashionable and the famous before it fell under British control. In the mid-eighteenth century, there was no private dwelling in Wall Street once it became a commercial thoroughfare.

Wall Street was called such because the Dutch erected a wall to prevent the British from invading the territory. The earliest Dutch settlers used untrimmed trees to mark the northern end (Hill, 1908) and built a palisade to mark the southern end. The sixteen-foot-tall palisade served the dual purpose of defending the Dutch against the British and of preventing cattle from wandering off (Hill, 1908). However, due to negligence and vandalism, the wall collapsed and the area behind the fallen wall became a reservation for troop movements. The new cross street where men gathered to trade was then named Wall Street (Gordon, 1999).

The New York Stock and Bond Exchange began with a few men lingering under some shady trees to broker public stocks issued by the Treasury (Hill, 1908). They gathered every morning from 11:30 a.m. to 12:30 p.m. during which hour the President read out the trading stocks from a list. The secretary dutifully recorded the quotations and sales, as well as the names of the buyers and sellers. The gatherers later signed the Butterwood Agreement outside no. 68 (Gordon, 1999). The Agreement standardised the commission rate and gave its members mutual priority in trading (Levinson, 1961). To join the exclusive club, brokers paid an initiation fee of \$25. There is no apparent reason why Wall Street should have been chosen other than it was an intersection. The first bank was not yet established when the exchange was formed.

After two decades of curbside trading, brokers organised themselves into the New York Stock and Bond Exchange by moving indoors to a building at No. 70. As the first proper exchange, the New York Stock and Bond Exchange could set the trading time from 10:00 a.m. to 3:00 p.m. By doing so, it excluded brokers who did not have enough money to buy a seat at the Exchange. However, trading was not completely closed to non-board members because they could wait till the Board closed at 3:00 p.m. to trade elsewhere. Nevertheless, the Board's sense of time and space dominated all temporalities and spatialities of trading. In the 1830s, the exchange held auctions twice a day: one at 10:30 a.m., another at 1:00 p.m. As traders had once done beneath the trees, the President read out the securities' names aloud during an auction. An indoor setting has not completely eliminated practices that originated from an outside setting. For example, an indoor space could have made trading possible in all weathers, but traders transported the sense of outdoor time indoor, restricting trading from 10:00 a.m. to 3:00 p.m.

The outdoor sense of spatiality was also transported indoors. For example, the Open Board—a less prestigious exchange that held continuous auctions throughout the day—did not have seats for brokers. Brokers instead gathered at specific areas to trade specific instruments on the floor. The areas were called posts, named after the lampposts where traders used to gather around on the street (Gordon, 1999). In another example, the New York Stock and Bond Exchange members paid dues to have a ‘seat’, literally a place where the members sat during the auction. The elimination of chairs had not changed the use of the word ‘seat’ to refer to membership. A ‘seat’ had become a right to trade inside the exchange rather than a chair to sit in.

The Exchange may have set the senses of trading time and place both inside and outside the building, but it could not ‘contain’ all trading activities because as long as there were traders, trading could take place at any time and in any place. During a Bull Market, freelance brokers took trading to hotels (such as Fifth Avenue Hotel in uptown) and the streets (Gordon, 1999) after the market closed. As a result, the volume traded outside the Exchange exceeded that traded inside the Exchange during a Bull Market (Gordon, 1999). The trading inside and outside the exchange had created different markets with different localities and temporalities.

Dow Jones’ first office was a strategic location. In 1865, the New York Stock and Bond Exchange was at no. 11 and Dow Jones was at no. 15. The Exchange not only defined when and where trading could occur, but it also defined the temporality and spatiality of financial news reporting. To capture market activities, the three Dow Jones founders worked different shifts in the office and on the street. One of them opened the office at 7:00 a.m. before heading out to the street to search for news at specific times and places (Wendt, 1984). The second owner then took over the office and searched for news at night when freelance traders met in uptown hotels. The news gathered at night was shared with the third owner who lived close to an uptown hotel. What were heard at night became ‘Morning Gossips’ of the following day (Wendt, 1984). The physicality of Wall Street enabled the 24-hour news gathering cycle which tested the journalistic determination of Dow Jones’ founders.

Implications of Seeing Financial News Reporting as a Network on Financial Crises

The case study of the earliest *Wall Street Journal* history has two implications for an understanding of contemporary financial crises: first, a newspaper is neither a stable institution nor a medium, it is a temporary assemblage of human and non-human actors; second, technologies had been invented to narrow spatiotemporal differentiation, yet they created new temporalities and spatialities instead of eliminating it.

After the Global Financial Crisis, scholars (such as Fahy et al., 2010; Tambini, 2010) and the public asked why the press, being the Fourth Estate of society, failed to forewarn the public about the collapse. Some explained this as an over-reliance on financial professionals and governments officials as news sources (Berry, 2013; Fahy, et al., 2010; Schiffrin and Fagan, 2013), others that financial journalists had neglected public interest (Schiffrin, 2011). The journalism profession worried that citizen journalists used unverified rumour and treated it as news on social media (see Mortensen, 2013). The examination of the earliest Dow Jones' operation from an ANT approach shows that the press is best not seen as a stable institution in which journalists all understand their roles and responsibilities. When the press is seen as an assemblage of human and non-human actors, financial newsmaking will be seen as an ongoing and often contested process. The availability of new digital technologies (such as Twitter, mobile phone camera) and the creation of new actors (such as public relations firms representing financial institutions, television financial analysts) reconfigured the network of financial news reporting. As mentioned in the introduction, the insights that ANT lend to media studies is its denial of the 'social' nature of the media; that is the media do not necessarily reflect or constitute the social world (Couldry, 2005). However, Couldry is less happy with ANT's indifference to how networks develop once they are formed and its neglect of unequal power between human and non-human actors. The earliest history of *Wall Street Journal* however shows that it is difficult to determine when a network will stop developing: while I ended the analysis at the printing of the first issue of *Wall Street Journal*, it is possible that other reporting and printing technologies would have enabled the founders to further experiment gathering financial information and reporting news in different ways. In addition, while humans ultimately decide what tools to use, tools enable humans to perform tasks that are *humanly* impossible. In this sense, it is hard to decide who has more power in altering the material world.

The second implication of the analysis is that technologies were believed to narrow spatiotemporal differentiation, yet the invention of technologies created new spatialities and temporalities. The co-existence of multiple technologies created markets in which different qualities of financial information circulated. The disjuncture in space and time, as I argue in this book, is the financial crisis. When the materiality of information is taken into account, a neo-classical economic assumption that perfect information will lead to a perfect market can be critiqued. ANT rejects the question whether information can be perfected, but instead asks what qualities it has. The earliest history of *Wall Street Journal* shows that technical devices had been invented to standardise financial information: from the use of human runners to the ticker tape. However, neither actor standardised information; instead they created a new sense of space and time: the runners navigated the physicality of the street while learning how to set up courier services; the ticker tape invited investors to gather in a room to

learn about the latest updates at regular intervals. Along with the analysis in Ch. 2 and Ch. 3, I have shown in this chapter that the creation of a new spatiotemporal order in turn created a market of specific information, that financial markets do not pre-exist before information flows through technical devices. To further investigate how technical devices produce a specific kind of financial information, I will examine the trading screen in the next chapter.

Notes

- ¹ See the Universal Stock Ticker (<https://www.sccs.swarthmore.edu/users/12/abiele1/ticker/>) and the Twittertape Machine (<http://www.twittertape.co.uk/>).
- ² A note of interest here is how and with what the *Afternoon News Letter* was reproduced. An archival copy of the newsletter on ‘Today on WSJ’ History (15 May 1884: Before the WSJ. <http://blogs.wsj.com/wsj125/2014/05/14/may-15-1884-before-the-wsj/>) shows that it has 48 lines on one page and the newsletter was printed on both sides. It looks like a reproduction done by a printer. Another source (Wendt, 1984), however, suggests that the reproduction technology was burnishing, adopted from bookbinding (Wendt, 1984). An agate stylus with a metal ball on top is used to inscribe on the paper. This technology could be tryptograph in which a stylus with a blunt end was impressed on a waxed sheet of paper on a coarse metal surface. In this process, a stencil is created by the displacement of wax (Batterham, 2008). It is, however, unclear how it was done and why it was superior to carbon-copied tissue paper.
- ³ Given Wall Street was a cradle of New York publications (Levinson, 1961), it may be possible that some publications shared the same printers. In November that year, the *Journal* took up commission from other publications to print newspapers on its printer.
- ⁴ The *Wall Street Journal* certainly did not invent the broadsheet layout because the first New York newspaper *The Sun* that began publication in 1833 had three columns.
- ⁵ Anecdotes of Wall Street history are drawn from three publications: *The Great Game: The Emergence of Wall Street as a World Power 1653-2000* (Gordon, 1999), *The Story Of A Street: A Narrative History Of Wall Street from 1649 to 1908* (Hill, 1908), and *Wall Street: A Pictorial History* (Levinson, 1961). Specific authors were only cited when they made unique points.

CHAPTER 5

The Screen, Financial Information and Market Locale

Two kinds of screen have played a paramount role in informing the general public about a financial crisis. The first kind of screen is the trading screen; the second kind of screen belongs to a device from which the viewers learn about the crisis. The screen device can be a computer screen, a handheld screen, a television screen, or a cinema screen. In other words, the trading screen that reflects a crisis is mediated through another screen that informs a popular understanding of the crisis. Media studies scholars have long been interested in understanding how television and films construct social relations, but they have paid little attention to how information on the trading screen constructs a relation between the screen and the viewers. This chapter aims to fill in the gap.

To illustrate how the two kinds of screen constitute meanings of a financial crisis, consider how photojournalists choose to represent a financial crisis and how the viewers understand photojournalistic representations on a device screen. Googling ‘financial crisis’ images will yield many photos that show trading screens in the background and a trader in the foreground. Photojournalists use semiotic cues to visually communicate what a crisis looks like. First, the red tiny figures on the screen mean the market is in trouble because stock prices are falling (see also Ch. 4 about prices printed on ticker tape). Second, the posture of the male trader (head lowered; back leaning against the chair) shows his resignation. Third, the position of the screen in relation to both the trader and the photo viewers directly invites the audience to make meanings of the screen and the trader. Why is this image commonly used to represent a financial crisis?

Unlike events such as natural and human-made disasters, a financial crisis is intangible: its damage can neither be seen nor touched. In addition, the causes of a crisis are too complicated to illustrate: while terrorists are blamed for

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senseless killing and nature is blamed for massive destruction (Shahin, 2016), the culprits of a financial crisis are not easy to identify. Even when wealthy white men, as a group, were blamed for the Global Financial Crisis, this group has long been so unmarked in the media that the audience have a hard time to understand the meaning embedded in their difference. In the absence of trading activities at times of crisis and a marked villain, the screens are given a sense of agency. In news photos, the size and the central position of the trading screens exert power on the lone trader. The screens boldly and continuously show stock prices, forcing those who dare to look at them to accept the reality. The assumed agency of the trading screen makes it the subject in news photos while the helpless trader who submits to the screen becomes the object.

After interpreting the meaning of the image, I then ask: how does a device screen embed meanings of the image? I argue that the interpretation of the image cannot be divorced from that of the device screen. Because a computer is associated with work, the meanings that I make of the pictures are different from those that I would make if the same image were shown on a television screen or a cinema screen. If a television show begins with a male trader in despair, I will want to know who he is, why he became a trader, and so on. As such, not only does the trading screen constitute meanings of a financial crisis, but a device screen does so as well.

Among all the screens that mediate the trading screen, this chapter focuses on the cinema screen—Hollywood films made for a mass audience—for two reasons. First, there is a long history of cinema screen practice. According to Huhtamo (2010), shadow puppetry became popular in India in 200BC. The first projector, the magic lantern, was invented in the mid-seventeenth century. As Walter Benjamin (2006/1936) wrote about the early cinema screen, watching film facilitates simultaneous collective reception, thus creating a discourse for the masses. Cinematic practices have influenced those of other screens, such as the television screen and the computer screen. Even though viewers now have many screens to watch films, the screen in the theatre still has its aura.

The second reason to focus on the cinema screen is because of Hollywood's ability to tell stories about social relations in dire times. The financial market is not a popular setting for Hollywood films to tell tales about morality, yet films are effective at dramatising a topic as abstract and complex as a financial crisis (Peltzer, 2015). The make-believe financial market is alluring to aspiring traders, as attested by *Wall Street*, drawing young people to join the profession (Lewis, 2010). This world is also appropriated by non-fictional media to explain abstract concepts. For example, Peltzer (2015) shows that news media regularly adopt 'the fictitious world of symbols and codes made in Hollywood' (p. 153) to contextualise factual coverage. Lastly, documentary filmmakers who have no first-hand experience of the trading floor may rely on fictional films to contextualise the market.

In the final chapter I continue a feminist political economic and ANT inquiries by analysing how three Hollywood films and a documentary film dramatise the

financial market. I ask three questions: (i) How does the position of the trading screen imply the sense of morality of trader characters? Does the trading screen or the trader have a sense of agency? (ii) Where is the market in relation to the screen? (iii) How do class relations and patriarchy work through the screen? The three Hollywood fictional films and one independent documentary film are *Wall Street* (dir: Oliver Stone, 1987), *Wall Street: Money Never Sleeps* (dir: Oliver Stone, 2010), *Arbitrage* (dir: Nicholas Jarecki, 2012), and *Floored* (dir: James Allen Smith, 2009). The only pre-2008 crisis film is *Wall Street*, which has long been seen as *the* film about Wall Street. Other pre-crisis films with characters working in the financial market (such as *Working Girl* [dir: Mike Nichols, 1988] and *The Pursuit of Happyness* [dir: Gabriele Muccino, 2006]) do not rely on the financial market for the story to take place. There are a number of post-crisis fictional and documentary films—the most well-known ones are probably *The Wolf of Wall Street* (dir: Martin Scorsese, 2013) and *Capitalism: A Love Story* (dir: Michael Moore, 2009). They are not chosen for the analysis because the use of the screen in both films is not obvious. In the following I first examine how the trading screen and the silver screen have been studied, then I theorise three kinds of trading screen in films: reflective, constitutive, and affective.

How Have the Trading Screen and the Cinema Screen Been Studied?

The trading screen has hardly been studied by scholars even though it plays an indispensable role in computing-based trading. Similarly, the screen has not been adequately studied as a sociotechnical object in the multiplex. However, film scholars who have written about the earliest cinema screens such as the kinoscope's keyhole viewfinder provide insights into how the silver screen could be studied.

I briefly review the history of the computer screen in the following to reinforce two points made throughout the book: first, a computing network is temporary and sociotechnical; second, the qualitative property of information changes when it passes through nodes—be they humans or machines. The brief history will show that viewing financial information on a screen is one of many ways to interact with information, yet the pervasiveness of viewing information on a screen makes it appear to be the most natural way.

The screen is now an essential output terminal of a personal computer, yet it was not always the case. For example, the output terminal of IBM SSEC (Selective Sequence Electronic Calculator) (1948–52) could be a printer or a screen. In the late 1970s, the underdog Apple Computer designed the desktop prototype Apple II with a keyboard as the input terminal, and a screen as the output. Although the Apple II looked like an electronic typewriter, contemporary users would recognise it as a personal computer. The earliest computer screens did not display too much information but only a few lines of text at once. In the

1980s, IBM enlarged the screen to accommodate 25 lines and 80 characters on each line. The larger screen allowed the computer to be seen as a word-processing machine, akin to an electronic typewriter with memory.

The computer screen was conceived to be interactive, not a passive display of information. In 1950s, the SAGE Defence System conceived the screen as an input device: the operator selected information on the screen with a light pen. In the mid-1960s, a spin-off Air Force project, AESOP (Advanced Experimental System for Online Planning) made the computer screen more 'user-friendly' to middle managers by using texts and graphics as input (Ceruzzi, 2003). In the 1980s, Xerox invented an interactive screen for Alto on which every bit could be manipulated; users could scale the letter size and mix texts with graphics.

What is the relation between the trading screen and traders when the screen is understood as a display of digital information on a flat plane? Knorr Cetina and Bruegger (2002) describe global online trading as 'face-to-screen'; the screen dominates human interactions by drawing traders' attention to the machine. Traders rarely look at each other even though they stay in the same room. Knorr Cetina (2005) introduces the 'flow architecture' concept to explain that the screen neither represents nor reflects the real material world; instead 'the content itself is processual—a "melt" of material that is continually in flux, and that exists only as it is being projected forward and calls forth participants' reactions and contribution to the flux' (p. 40). The only presupposed material reality is the computer frame. The assumption of an interface being something strictly digital is historical. An interface once referred to a mix of material objects and digital commands: punched cards, keyboards, and text-oriented commands. Now the screen translates digital code into pixels, making the icons and cursors share the same qualitative attributes (Barnes, 2002).

To Knorr Cetina (2002), the computer screen is a reflective mechanism and a 'projection plane' that orients the participants. The screen—along with the software and hardware of global currency trading—becomes a 'lifeworld' that is projected on itself! In this lifeworld, there exist 'reflexive mechanisms of projection that aggregate, contextualise, and augment the relational activities within new frameworks that are analytically relevant to understanding the continuation of activities' (p. 41). This 'lifeworld' is predominately temporal, not spatial, because change is the only absolute thing in the 'flow' architecture. Knorr Cetina emphasises, however, that this world is material because it is constituted by information. The materiality of information is always transient, always in the process of decaying.

Thompson (2004) names three types of financial information in the market: implicit, explicit, and contingent. First, implicit information refers to 'the core assumptions about the nature of economic reality' (p. 12) such as the validity of monetary networks, legal claims to titles of ownership, etc. In short, implicit information consists of written rules and regulations that ensure a proper functioning of financial institutions as well as unspoken trust in these institutions.

Second, explicit information is the monetary transaction registered on the screen and is manifested in pricing. Third, contingent information is ‘data about a variety of contingent variables which influence the expectations and perceptions of market actors’ (p. 13). Contingent information is constitutive and reflexive because traders and investors act on it to ‘move’ the market. Some examples are market rumours and informal conversations. Unlike both implicit and explicit information, contingent information is *asymmetric* because it is only available to major players in the market. To market players, symmetric information has little use because it is widely available.

Thompson has effectively explained why financial information is not qualitatively identical, but he has not taken into account the material device through which financial information is disseminated. I will argue in the analysis that the screen is *reflective* when users believe that it objectively transmits information from a ‘market’ to the terminal. A presupposed market reality is assumed in a reflective screen that displays identical information to every subscriber. In contrast, the *constitutive* screen creates information that demands users’ response. Transactions and conversations in the web of human-machines reflexively constitute the market.

The Cinema Screen and Screen Practice

Like the trading screen, the silver screen is not a neutral or passive medium on which images are projected. The earliest movie screen is of particular interest here because it promotes a ‘face-to-screen’ world. Traders’ relation to the screen is not unlike that between the earliest moviegoers and the kinoscope. Like the traders in Knorr Cetina’s (2002) study, the earliest movie-goers would glue their eyes to the peephole viewer and ignore the presence of other viewers.

Musser (1984) suggests that the screen conditions screen practice in three ways: first, the sense of space between the audience and the screen; second, the sense of time experienced by the audience; and third, the ‘psyche’ experienced by the audience. The spectator is asked to keep a distance from the screen and sit still in front of the images (Huhtamo, 2010). How the audience experiences time is also conditioned: viewers are asked to engage with the present even though the screen images are past recordings. Lastly, the cinematic experience creates an episteme built on the relationship between the mechanical and the psychic (Albera, 2012). The cinematograph—an early movie camera that also projected and printed films—was said to mediate between humans and machines, the objective world and human subjectivity. The screen that shows discontinuous images was said to reflect modern beings’ stress (Albera, 2012). Cinema screen practice influences how Hollywood represents trading screen practice: the traders look at the screen but they do not touch it; they believe that the information is of the present; and they only see fragments of the markets on conflated layers of information.

What is the Trading Screen in Hollywood Films?

Filmmakers have to establish a relationship between the audience and the characters for effective story-telling. One way to achieve this goal is to position the trading screen in relation to the characters. I argue that the trading screen attests to a character's morality because a financial crisis is explained by human greed (see Ch. 1 Introduction). Films ask the audience to not worry about the political economic relations between humans, as well as those between humans and screens. Therefore, the questions first asked in the analysis are: how does the position of the trading screen imply the characters' morality? In what ways do filmmakers use the trading screen to explain a financial crisis as one of morality?

The second set of questions concerns the market location: where is the market in relation to the screen? Filmmakers have to represent the abstract market in a material world which implies human agency: if humans are shown to act on the material world, they are held responsible for a crisis. On the other hand, if the market is not anchored in a material world but exists in a digital space, then the machine is assumed to possess agency and could be blamed for a crisis.

Market location and the screen also establish gender/class relationships between characters. The director's decision of placing characters in a physical space illustrates who owns the space, who has access to it, and in what space money changes hands. It goes without saying that the trading room is a white male space where women and non-white males are rarely seen. It is less obvious that class and gender relations work through the screen by projecting patriarchal desire. The third set of questions then asks: how do class relations and patriarchy work through the screen?

Pre-crisis and the Informative/Reflective Screen

Wall Street is probably the most memorable film about the financial market before the Global Financial Crisis. Oliver Stone made the film to reveal the dark side of the market. *Wall Street* is about human greed and bad men being punished. Bud Fox (played by Charlie Sheen) is a junior broker who idolises Gordon Gekko, a ruthless major market player. After trying different means to approach Gekko, Fox successfully invites himself to Gekko's office by presenting a box of Cuban cigars on his birthday. Knowing the extent to which Fox will go to please him, Gekko asks Fox to 'get information' by using unethical means. After Fox shares a viable insider trading tip, Gekko rewards Fox with a swanky apartment and a trophy girlfriend. The insider tip is given by Fox's father who is the union leader of an aviation company, Bluestar. Gekko acts on the tip and buys Bluestar shares. His plan is to liquidate the company and sell its assets. Fox's father is disappointed that his son would care more about money than morality. After the father has a heart attack, Fox—along with the laid off workers—comes up with a scheme to stop the company from being

sold. Meanwhile, the Securities and Exchange Commission (SEC) arrests Fox in the office, with co-workers looking on. Eventually, Fox agrees to co-operate with the SEC to testify against Gekko in exchange for a lighter sentence.

At the beginning of *Wall Street*, the audience is led to believe that Fox's mastery of the trading screen will lead him to great success. Once Fox is acquainted with Gekko, the audience learns that the objective information reflected from the screen only shows one market. Powerful players such as Gekko move the market through lo-tech means such as the telephone and face-to-face conversations. These players already know what the objective market is before stock prices are reflected on the screen. Consequently, there are at least two concurrent markets: Thompson's (2004) typology calls the information on the screen explicit; it is supposed to reflect an objective market; the information in conversation is constitutive, being shared between market players. In *Wall Street*, the screen is an honest man's tool, but this tool does not help Fox become a market player.

The film begins by showing the 'dog eats dog' world of Wall Street where finding a survival space is impossible. The audience follows Fox from the subway to the street to his office. After getting out of an overly packed elevator, he does not find peace in a cluttered and chaotic office. The audience does not know where his desk and trading screen are because he has to walk past rows of people to get to his space. When he sits down in a small space, a senior colleague intrudes this space by punching on his keyboard and giving advice about which stock to look at. Despite his disadvantaged position in the firm, one scene implies that a mastery of trading technology gives him an edge in the market. In this scene, the audience sees a close up shot of Fox tapping on a Quotron keyboard, an unfamiliar piece of technology to people outside the financial world.

Fox's trust in objective financial information and his mastery of technology are soon rendered useless by Gekko. Once he meets his idol Gordon Gekko, he learns that market players do not rely on the trading screen and data analysis to make trades. Fox is soon schooled by Gekko that financial data available to every trader is of no use to him; Gekko illustrates this by immediately throwing away Fox's analysis report. Another scene to show the irrelevance of the screen is the audience seeing Gekko the first time from Fox's point of view. By the window, Gekko is talking on the phone, while four trading screens are seen on the desk and window sill. He is not glued to his screens for information even though he has four of them. He quickly taps on the keyboard, consults the price, then continues the conversation.

More than the screen, windows play an important function in the film because they frame the end goal of market players—a city view. Once Fox steps into Gekko's office, the audience sees from Fox's point of view Gekko's back against a commanding view. The city is literally underneath his feet. The immoral man has a clear idea how the market works and does not have any moral scruples about achieving his end goal through getting rid of those who obstruct the view.

On the other hand, the window view of the honest man is blocked by clutter: he does not know how the market works and the clutter clouds his judgement in making moral decisions. Fox's lack of success is explained with his failure to see the end goal. His residence is first shown in an exterior shot of an unattractive building. The audience sees a dim light being lit inside one unit; then the camera cuts to Fox getting out of bed in a daze. The audience sees his windows are blocked by piles of books and papers that diminish the unsightly view outside. Upon getting out of bed, he immediately walks to his only window—the computer screen—to view the outside world. The audience cannot clearly see her face because of the lighting; but her face does not matter anyway because Fox does not pay attention to her. His morning thrill comes from a piece of information on the screen—that today is Gekko's birthday. An ecstatic look appears on his face and he sweetly whispers 'happy birthday, Gordon' to the screen. There is a camera zoom to the computer screen which fills the entire frame. Fox exhibits peep practice born with the peephole cinema. While he looks at images on the computer screen to excite him, the audience seeks thrills from the cinema screen wanting to know how Fox's mastery of information gains him an advantage in the market.

Gekko rewards Fox with two things: women and an apartment with a view. Both *things* interrupt his use of the trading screen. Gekko's first gift arrives when Fox is working on an analysis on his computer. In this scene, the audience first sees a black screen with colour bar charts titled '1985 market projection'. The doorbell rings and Fox finds a blonde woman by the door inviting him to go out. Later, Fox is rewarded with a spacious city view apartment that he shares with a new woman, a mistress of Gekko. Fox has not yet abandoned the trading screen but it is subsumed by the view outside the window. Against the night view of the city, the audience sees Fox and the new woman making love. This scene contrasts with an earlier one in which he finds no pleasure waking up next to a naked woman in a small space. Although he can enjoy both rewards, he is confused whether he made a correct decision to share the insider trading information with Gekko. After making love to his girlfriend, he does not rush to the computer like he did in an earlier scene. Instead he looks at the sweeping view of the city and asks his reflection, 'who am I?' Even though he now has the city at his feet, he does not enjoy it because he is burdened by his sense of conscience.

To an immoral man like Gekko, nothing should block his window view. In the scene where Fox confronts Gekko about laying off aviation workers, Gekko lectures Fox about the one per cent of the population who owns the wealth and the rest who has no net worth: 'and I create nothing, I own. We make the rules.' During this scene, two workers are seen cleaning Gekko's windows from the outside, yet he takes no notice of them. Like the aviation workers, the window cleaners obtrude Gekko's view. Yet he has no regard for the working class even though they are the ones who make his life easier. He has no regard for Fox either; he is only a runner who gathers information for Gekko.

While Gekko is the immoral character and Fox the moral one, the director's attitude towards financial capitalism is ambiguous. Peltzer (2015) has argued that Fox does not have an alternative in a capitalist society even though he tries to redeem himself at the end. When Fox's working-class father asks him to have his feet on the ground, he tells the father that a trader has no choice but to live in Manhattan. The sense of inevitability is also shown in the last encounter between Fox and Gekko: Fox is dressed in black and submits himself to Gekko's punching bag (Peltzer, 2015). Denzin (1990) writes that 'the film resolves its ethical dilemmas in a traditional capitalist fashion' (p. 32) because the morality tale is about hard work over quick money. By assuming that real value is produced by labour, Denzin critiqued the director for not understanding the capitalist structure that underlies Wall Street because he assumed that outside the fictitious market, there is a real world with real things and real values.

The trading screen in *Wall Street* can be characterised as informative/reflexive; it informs the protagonist about the state of the market. The screen is seen to transmit objective information, primarily that of pricing. The reflective screen has implications for the morality of the protagonists and the locality of the markets. *Wall Street* does not critique the financial market as immoral; it only has a grievance against the non-objective financial market masterminded by Gekko. Traders who use the screen as a tool to make a living are as honourable as the working-class folks. Right from the beginning, the film celebrates the hard-working men and women in New York. Shooting at dawn, the director first shows the humblest professions such as the fish wholesalers and the garbage truck drivers. Then the audience sees the working men and women waiting for the train. Fox, an honest trader, flows along with the crowd in the subway, the escalator, and the city street. New York City is shown to be built by men and women who have their feet on the ground even though their choices are inevitable.

Post-crisis and the Constitutive Screen

The Elusive Market

The story of *Wall Street's* sequel takes place in the post-Global Financial Crisis world. After serving an eight-year sentence, Gordon Gekko is released from prison with little money and no family support. Ironically, his estranged daughter is dating a trader, Jake Moore, who is interested in green energy investment. Moore's employer and mentor commits suicide because a competitor refuses to bail out the troubled firm. Moore introduces himself to Gekko who then trades with Moore: in exchange for an opportunity to reconcile with Winnie, Gekko will share with Moore information that could destroy the competitor's firm. Gekko also leaks to Moore that Winnie actually has a huge sum of money in a Swiss bank account that would help with green energy investment. Thinking to

help Moore, Winnie signs off the money, but it turns out to be a scheme. Gekko takes the money and flees to London where he runs a hedge fund company. To retrieve Winnie's money, Moore shows Gekko an ultrasound of Winnie's baby and promises Gekko that he'd be a grandfather if he returned the principal to Winnie. Gekko first refuses, then changes his mind upon seeing the ultrasound recording for a second time. At the end, Gekko gains back his daughter and becomes a grandfather.

In the *Wall Street* sequel the material world fuses with the digital one. The city view is not an end goal like in *Wall Street*, but a platform for information to be projected on. In other words, the boundary between the 'outside' world and the screen world is rendered irrelevant because the city is said to be a platform for information. For example, the title screen shows a panoramic view of the New York City skyline, then the outline of the buildings is traced to reveal a line chart. Shown against the morning sky is the caption 'Dow Jones Industrial Average'; against the harbour are the key dates of the financial collapse. There is a cut to a scene of a city view being zoomed out. The audience first sees a hand-written flow chart juxtaposed on the screen. When the camera zooms out further, the audience realises that they are not looking at a computer graphic edited into the scene, but a flow chart scribbled on a big window pane. On the window sill there stand three tin human-like robots, implying the youthfulness of the owners. Untidy analyst reports and data maps pile up on a desk on which six trading screens rest. The city view does not mean much to the apartment owner because he simply uses the window as a platform for information.

Not only does the trading screen play an important role in the market, but the television and mobile phone screens do so as well. Drawing on Thompson's (2004) definition of constitutive/reflexive financial information, I define a constitutive screen as one that has a sense of agency in a human-non-human network: humans act on the screen as much as the screen acts on humans. In *Wall Street: Money Never Sleeps*, the market is said to be constituted by information on various screens as well as phone conversations. While the information on the trading screen shows objective information, the phone conversations speculate about prices. While the callers respond to the information on the screen, the screen also responds to the traders' actions. The traders see the market unfold when they talk on the phone and watch television news. The market is illustrated to be a network where neither technology nor humans initiate a market crash.

Another example to show the constitutive nature of the screen is the sequence where Moore's employer's stock goes down a spiral. The sequence illustrates the frantic speed at which market information travels. In the first scene, the audience first sees a trading screen with fast moving figures in red and hears a news anchor reporting the falling stock of the company. Next the audience sees a black screen on which there are moving figures and a reflection of Moore's face. In this shot the location of the audience is unclear: either they are standing behind Moore's back looking at the screen that reflects his face or—, more plausibly, they are behind a translucent screen through which they see

the digital information and Moore's face. The action cuts to a scene in the trading room. The central focus is not the traders, whose heads are at the bottom third of the screen, but the panel of four television screens hanging high on the wall. Like other traders, Jake splits his attention between the trading screen and the television screens while talking on the phone. Then there is a cut to a split screen with Moore on the right-hand side and the caller on the left-hand side. In another split screen, a computer screen with financial information takes up the left hand side.

The market locale is unclear in the above sequence because financial information is simultaneously and reflexively produced from different screens and human interactions. In one scene traders learn about their company's fate by looking at the television screens, even though they are physically in the trading office of the failing firm! Rather than talking to each other, the television screens inform them what the market is *like* and how their firm is doing. The scene implies that television news does not report the market, but *makes* it.

The film further explores where the market is when rumour becomes information: the audience is led to a backroom with shelves of computers and cables. A beam of digital ticker tape travels along the hallway from the back to the front. The uncontrolled beam then transfers from the right-hand side of the split screen to the left-hand side on which there are multiple screens in this dark space: in some of them people talk on the phone, in others financial information blinks on a computer screen. Beams of ticker tape run amok and travel between tall buildings at night. On a closer look, the buildings are not 'real' buildings, but black towers whose windows are screens of people talking on the phone. In this sequence, the financial market is not shown as anchored in a physical place, but suspended in a digital space made up of moving prices and mini screens of simultaneous conversations. In the seamless material/digital worlds, information flows from one space to another without changing its nature. In contrast, humans stay in the material world; only their conversations take place in the digital space.

The borderless material/digital world is reinforced by the adoption of documentary styles in a fictional film. To show a meltdown, the film edited in a one-minute long montage of news articles and reports of the 2008 financial collapse. There is a cut to fictional banker characters heading to a meeting with news outlets hovering over them. The editing choice suggests that the fictional characters could be the 'real' bankers captured by news cameras during the financial collapse. The mixing of the fictional and 'real' worlds does not end here. CNBC—a financial television channel—interviews Gekko by 'real' anchor Maria Bartiromo, whose reports on the 2008 crisis are also included in the film. The cutting back and forth between the fictional world and the 'real' world documented by the media may have three implications: first, the 'real-life-ness' of the fictional world is attested by events documented in the non-fictional media; second, real events are critiqued as fictional; and third—which is the viewpoint here—there is simply no boundary between the make-believe

world of the financial market and the ‘real’ financial world. In the same way, the film assumes no boundary between the material world made up of New York City buildings and the digital world of financial information. There is also no assumed boundary between the exterior and the interior because the window is not used to confine one inside, but as a platform for information. In short, there is no hierarchy between the material world and the digital world, fictional world and non-fictional world in the *Wall Street* sequel.

I argued in the previous section that *Wall Street* characters’ morality can be inferred by their trust in the information reflected from a trading screen. An honest trader only has access to one market: the one that is already known by dishonest traders because they manipulate it through the telephone and in person. In *Wall Street: Money Never Sleeps* (2010) the characters’ morality is harder to infer because the villain does not drive the story. Moreover, the original *Wall Street* villain Gekko has become an anti-hero who critiques the markets for most parts of the film. Lastly, the main story—Gekko’s rekindling the relationship with his estranged daughter—does not require a financial market setting to take place. In the morally ambiguous post-crisis world, the market is constituted by multiple screens: the trading screen, the television screen, and the cell phone screen. The market is illustrated to be a human-non-human network of mediated communication which resides in a digital space outside the social and material human world. The assumption of information travelling without hindrance between the material world and the digital one is also reinforced by the fusing of documentary styles in some scenes in this fictional film.

The Screen Always Tells the Truth

Another Hollywood film released after the crisis is *Arbitrage*. In this film, the trading screen is not as prominently positioned in relation to the protagonist, Richard Miller, (played by Richard Gere) as other screens, such as the mobile phone screen and security camera screens. Hedge fund company owner Miller is about to sell his over-valued company. The accountant has ‘cooked’ the book and Miller’s daughter—also a business partner—begins to suspect the fraud. Meanwhile, Miller accidentally kills his mistress in a car crash. He tries to cover up his trail by summoning help from a young criminal. The police gather evidence to charge the suspect but they know Miller is behind the scheme. The detective in charge of the case fabricates evidence to lure the suspect to point out the mastermind, but Miller’s lawyer challenges the evidence and the court dismisses the case. Nevertheless, Miller cannot get away with murder because his daughter confronts him about the fraud. Meanwhile, his wife blackmails him to transfer the assets to the daughter or else she will inform the police about his injuries on the night of the accident.

Miller is an immoral man: in addition to deceiving others about the value of his company, he also lies to the three women whom he loves: his wife, his

mistress, and his daughter. Text messages on his mobile phone show Miller's habitual lying. For example, after an unsuccessful meeting to extend a loan to keep the company afloat, he receives a message from 'Julie' that says 'see you at 8!' We see Miller arriving at a restaurant close to 8:00 p.m. for a business meeting but he texts Julie and lies that he will be there as soon as the meeting is going to wrap up. At 9:40 p.m. Julie texts Miller cursing 'fuck you!' During the scenes when the texting takes place, Miller is simultaneously lying to his wife and daughter about his whereabouts and the financial health of the company.

While the cell phone screen always tells the truth, recorded information on surveillance devices does not always do so. Information captured on the security camera is said to be unreliable evidence; the information only tells the truth during the time of transmission. Two scenes illustrate this: in one scene, after Miller accidentally kills his mistress, the first thing he does upon returning home is to disconnect the security system and to burn the CD and his blood-soaked clothing. In another scene, the detective digitally modifies a picture taken from a surveillance camera. He alters the licence plate on a car passing through a toll booth, hoping the picture will lead the suspect to spill out the truth.

In both instances, material evidence is assumed to be more reliable than digital information. In the first case, Miller's wife confesses to him that she knows about the cuts and bruises when he returned home late on the night of the accident. What she witnessed is only knowledge of hers, yet no one can erase her evidence. In the second case, Miller's lawyer experiments with the toll booth camera by driving past it and requesting a photo of his car captured by the camera just minutes ago. By comparing the freshly taken licence plate picture with the digitally altered one, digital information is shown to be only reliable when it is almost in 'real time'.

Information on the mobile phone screen testifies to Miller's morality; and information on other screens tells the truth but only at the moment of transmission. Digital evidence is shown to be easily compromised after the information appears on the screen. On the other hand, material evidence such as corporeal injuries is seen as more reliable at documenting facts and truths. Unlike the *Wall Street* sequel, *Arbitrage* has faith in the ontology of a material world; it believes truth is grounded in the material world.

The unreliability of digital information relates to ambiguous morality. In *Arbitrage*, cops and thieves both blindly believe that digital information is reliable and that the means justify the end. Yet the bad person can get away with murder but the good person can't. The detective who tries to prosecute the suspect has too much trust in digital technology that he mistakenly photoshops a high-resolution image on a low-resolution one. The irony is that the capacity of the surveillance image is lower than the cop expected. His wrongdoing is discovered and he is removed from the case. In Miller's case, his unethical means and end do not lead to any punishment.

Both *Wall Street: Money Never Sleeps* and *Arbitrage* show that neither technology nor greedy men can be solely blamed for a financial crisis. In the *Wall*

Street sequel, the ambiguity is implied by the constitutive screen and the market locale. If the market is no longer reflected on the screen but is constituted by it, then where is the boundary between the digital world and the material one? Is there still a hierarchy between these two worlds? In *Arbitrage*, both the thief and cop manipulate digital information for their own gains, yet the cop is caught while the thief gets away with murder. In contrast to the *Wall Street* sequel, *Arbitrage* believes that the material world is ontologically more reliable than the digital one.

Screen-Based Trading is Cheating

To find out how independent, non-fictional films position the screen in relation to the protagonists, I discuss the trading screens in James Allen Smith's *Floored* (2009). Smith worked as a web designer for a trading site before being approached to make a documentary about the Chicago Mercantile Exchange. Because of his first-hand knowledge of the pit, it can be assumed that he does not rely on Hollywood films to contextualise the market in the documentary. The film is about the transition from floor-based trading to screen-based trading. The director follows a few traders who leave the exchange because of their incapacity or unwillingness to adopt new technology. The director frankly stated that he did not intend to present both sides of the story but wanted to show that the pit is a very romantic place (personal communication, 2014).

One main difference between the documentary and Hollywood films is that it is less interested in building up moral/immoral characters through positioning the screen to the characters. It is more interested in building up a 'machines vs. humans' story in which the machines have replaced human agency, so that computer trading could be indirectly blamed for the Global Financial Crisis. The comment about the machines controlling the human world is made at the end of the film. The director edits an audio of a computer trader and a clip of President G. W. Bush's speech after the crash. In this scene, a computer-trading firm owner explains why online trading brings 'more stability in the world'. The director disagrees with this viewpoint by bringing up Bush's statement: 'we're in the midst of a financial crisis'. If the 'most powerful man on earth' could not provide a solution to end the crisis, then regular people would not know how to deal with it. Sounds of sirens are edited towards the end of Bush's speech, before a cut to a computer trader describing how bad the crash is by saying: 'the world is on fire right now.' When the computer is said to have agency, humans cannot be blamed for a crisis.

The film does not assess the morality of traders by pointing out their good and bad deeds. However, the director is sympathetic towards the hypermasculine floor-based traders (Rasech, Lee, and Cooper, 2015) who, at the making of the film, were mostly unemployed. Smith said that he was 'shocked and gobsmacked by [them] and by what they actually do. The sort of athleticism

and the just outright sort of testosterone driven like work that they do on these trading floors just kind of blew my mind' (personal communication, 2014). The floor-based traders who are interviewed in depth are more memorable than the screen-based traders who spend most of the time looking at the screen. Floor traders are able to connect to the viewers because the audience is invited to their homes—some grand, some humble—and to listen to their stories. Moreover, they performed for the camera stereotypical masculine behaviours such as using crass language, having a sexist attitude, and loving money. Even though these stereotypically masculine behaviours may not make them likeable or moral, they resonate with the audience's expectation of male traders.

In contrast, the film does not shine a positive light on the computer traders. The audience has little opportunity to make meanings of computer traders and understand their world because the 'geeks' spent most of the interviewing time staring at the screens that are their 'lifeworlds'. Moreover, their lives are shown to be less than glamorous. Unlike some of the mansions inhabited by former floor-based traders, computer traders work in mundane looking offices.

An older trader likens computer trading to video gaming. To an audience who has little idea of what computer trading is like, the video gaming frame helps them understand computer-based traders' behaviours. For example, gamers are believed to be loners who prefer to interact with their screens than with each other; they are believed to be so completely absorbed by the 'face-to-screen' world (Knorr Cetina and Bruegger, 2002) that they have little awareness of their surrounding. In one scene, the audience looks over a computer trader's shoulder and sees him telling the prices on the screen to 'back in, back in, back in, coming down, coming down, give us a shot'. Other traders in the room ignore him and continue gluing their eyes to their own screens. When the computer traders talk to the camera, what they say is so highly technical that it may confuse rather than clarify the crisis for the audience. For example, a trader tries to explain how government actions would not rescue the financial market. Looking at the screen, he says: 'the big announcement was [...] the interest rate reduction, which is pretty unprecedented. Even with that amazing moment which would in normal times rally markets [such as] the Dow market [for] 500 points, we are looking at a negative down day still.' During the interview, the camera zooms into the trader's eye that reflects the blue and green colours on the screen, showing him being engrossed by the screen world.

In *Floored*, the market is in the pit and male traders' physicality characterises the pit. The male bodies are where the market is. At the very beginning of the film, an interviewee is quoted to say: 'the physicality in the pit was ridiculous.' To illustrate how men's bodies make the market, the visual shows an aerial shot of a mass of men forming concentric circles. When the camera zooms out, it reveals more men in wider circles. The traders are like tribal members performing a ritual that is known to few. Then there is a cut to a scene of the pit opening. Once the bell rings, the men roar and shout. As Zaloom (2006) observes of the Chicago floor, men maintained domination through 'confrontational jostling

and shouting [...], loud shouting to surmount the trading din' (Miranti, 2007, p. 821).

Open outcry does not mean that screens are absent in the pit; electronic boards are seen on the wall. Yet traders on the floor rarely look at the boards because they are occupied by other traders on the floor; traders' cries and hand gestures are where the action is. When a close up shot of the electronic board is cut into the scene, the reference point is from a trader. Unlike the traders in *Wall Street: Money Never Sleeps* who gather in front of television screens to learn what the market is like, floor-based traders do not pay much attention to the screens because the men themselves form the market.

After computer-based trading has replaced floor trading, the pit with sparse traders is said to be a sad place. A financial journalist wanders onto the floor and extends his arm asking the camera 'what do we see here?' The audience then sees dozens of traders standing motionlessly checking their handheld devices. Scattered order forms can be seen littering the floor, like confetti left after a party is long over. This scene contrasts with the opening scene in which the traders struggle to find a place to stand. The commentator describes the scene as 'the depressing part of the computer', implying that he believes a market needs men to fill the space; a market that is linked through the computer is not a normal one.

Likewise, the 'upstairs office' where computing trading takes place is implied to be an unnatural place. Unlike the boisterous floor, an upstairs office is eerily quiet—the only sounds heard are the low buzzes of the machines. Also unlike the floor where male traders jump up and down to gain attention, computer traders sit still in front of the computer all day. A trader who has successfully transitioned to screen trading says the absence of sensory stimulation is a 'learning curve'. Even though the screen is supposed to be where the market is, the audience is shown a screen with very little action. Looking over the upstairs trader's shoulder, the audience sees her ten screens. Yet she points out to the camera that she is only focusing on a six-by-eight inch area because it is not 'humanly' possible to monitor all the information. When the camera zooms into the area, the audience sees that some prices change, but they do not go up and down drastically. The interface of a trading screen is definitely unlike that of a video game: it does not have graphics that resembles the material world, but it shows a world that needs to be interpreted and explained by traders.

The 'machines vs. humans' story assumes that humans will lose to the machines with their pre-designed programmes. Former floor-based traders anthropomorphise the computer into a being with an agency; with this agency, the machines control the markets that cannot be intervened in by humans. To explain what algorithm trading is, an interviewee says 'the computer would just run, pumping in bids and offers all day against other computers'. A computer trader calls the computer 'a money machine'; another says the market is very easy to enter because all he does is to 'click the mouse'. The computer is further

said to be a machine that ‘feels’ as well, because ‘emotion is built into the programme’. Lastly, the computer is believed to be omnipresent and omnipotent: a floor-based trader calls the ‘computer god’ the worst and the most evil thing; it has been fed with ‘monkey-rhythm’ to drive traders out of the market. As such, this god is unfair for allowing programmers to cheat.

However, not all humans lose in computing trading; in fact women and non-white men are said to have earned a place in the previously white men-dominated floor. A woman trader who used to be one of four women on the floor is shown to have made a successful transition. She explains that the male traders were unable to foresee the changes in the markets; they simply repeated the daily routine without thinking about the future. Her explanation reflects a gendered assumption that women are better at planning for the future and that male traders are primal animals whose only concern is for the present. Another gendered assumption is that women are more flexible in a transitional economy, that their labour can be moulded to accommodate a neo-liberal world (Amin, 1994; also see Ch. 3 about microcredits in Bangladesh). Unsurprisingly, the other woman who has a more prominent role in the documentary is a life coach who helps men to cope with changes. Although the two women are shown as winners in computer-based trading, their acceptance is attributed only to the market being unnatural. This point will be developed later.

The machines in *Floored* are said to have cost men more than their jobs, they have also destroyed family and fraternity, thus threatening their masculinity. A floor-based trader tells the camera that when he grew up everything was about the family. He reminisces about the time when his family went on a road trip for two weeks. He blames computers and video games for making children grow up too fast and destroying the family. As a foreign being with agency, the machine is seen as a threat to masculinity. The unemployed traders are also shown to be left on their own: some spouses have left them; others refused to be on camera (personal communication, 2014). Cinematically, the absence of family members on camera implies that the traders have been left behind by their family members as well as the computer.

The loss of family is akin to that of the open outcry where ties were based on kinship. Jobs were not advertised but introduced: fathers brought sons, older brothers brought younger brothers. Traders’ ethnicities defined the cliques in the pit: the Italians, the Polish, and the Jews took care of their own groups. Once the fraternity was broken up, non-white males could find their standing more easily. South Asian men are briefly shown to be the new market players, yet none of them are allowed to talk. The camera’s treatment of these brown-skinned men is not unlike that of Bangladeshi women in videos about microcredit programmes (see Ch. 3): while computer and microcredit are said to empower those who were denied entry to the market, the camera renders them silent. Showing them working in front of computers, the film reinforces the ‘machines vs. humans’ story: men who have quantitative

skills—such as that of a briefly introduced nuclear physicist—attempt to win over the machine.

The ‘machines vs. humans’ frame in *Floored* implies floor trading is natural while computer-based trading is not. The natural market is one with aggressive, foul-mouthed men fighting for survival. These men are said to be pillars of their families, they bring in brothers and sons to the profession. In contrast, the unnatural market is one devoid of not only men, but of human beings! In this unnatural market men, women and non-whites are allowed to participate, thus reinforcing the lack of masculinity in the computer-based market. The men who choose not to participate in the unnatural market find peace with nature even though their desire is to conquer it as they used to conquer each other: one former trader is a big game hunter; another wishes to become a park ranger. The binary opposition between masculinity and femininity, between a natural and an unnatural market, reinforces the binary opposition between rationality and irrationality, between an effective market and financial chaos (also see Ch. 2 on binary opposition in the discourse of the tulipomania).

Screen and Gender Relations in Post-Crisis Films

In the previous two sections, I have considered how the position of screens—trading, mobile phone, security camera—reveals male characters’ morality and the market’s locality in three Hollywood films and an independent documentary film. Here I further explore how the screen is related to gender relations in the three post-crisis films. Lee and Raesch (2015) argue that in a pre-crisis world, women and money are seen as commodities for exchange; women played a limited number of roles; and those roles were defined in relation to men. In contrast, post-crisis films have more prominent women characters whose roles are not defined by men; some women even play the men’s roles, they lie and cheat to get ahead of the game (Fisher, 2016). In addition, post-crisis films show defective and weakened male protagonists (Lee and Raesch, 2015). However, a defeated man does not mean he is equal to a woman, he still insists on being in charge and gripping onto power. This is reflected by what Richard Miller in *Arbitrage* says to his daughter after admitting business malpractice, ‘I am the patriarch. I have a role to play. I have to plan.’ In a post-crisis world, the weakened men use patriarchy as the last resolution to solve problems. Like Miller, Hollywood has to ensure that patriarchy plays a role in films or else—so it believes—the audience will lose interest in the story. The classical essay ‘Visual pleasure and narrative cinema’ by Mulvey (1975) has pointed out that the cinema screen subjugates the viewers to a male position. The viewers need to identify with the (mostly) male camera, director, and protagonist in order to understand the narrative. Bearing in mind the cinema screen projects patriarchal desire, I first show how patriarchy works through story structure, then affective screens such as the viewfinder of a camcorder and the ultrasound screen.

Story Structure: Women Cannot Replace the Patriarch

Many journalists have asked whether the Global Financial Crisis could have been prevented if there had been more women leaders in the financial industry. The belief is that women have a stronger sense of morality and are less likely to take risks. The *Wall Street* sequel and *Arbitrage* attempt to have stronger female characters. The daughters of two market swindlers are shown to have a profession and are morally superior to their fathers. Yet the directors refused to interrogate the ‘what if’ question: what if women were in charge of financial decisions? What if women were to point out the crimes of men?

The main storyline of *Wall Street: Money Never Sleeps* is Gekko’s reconciliation with his daughter Winnie. From a feminist perspective, the story can be critiqued as Gekko reinstalling his role as a patriarch. At the beginning of the film, he is denied the patriarch role: his wife is said to have taken their children away; the son died of a drug overdose for which Winnie blames her father. On the surface, it may appear that Winnie—an owner of a left-wing magazine and the trustee of a \$100 million account—has more power over her ex-con father, who left prison with little money. However, Winnie’s function in the film—like that of women characters in a pre-crisis world—is defined by the male characters. She is the girlfriend of the main protagonist, Moore, whose action drives the story, the daughter of Gordon Gekko who helps Moore to move the story along, and the mother of a son who provides the last resolution. Winnie is not allowed to initiate any events. Things happen to her, she does not make things happen.

On the surface, replacing Gekko’s son with a girl child may sound like a ‘girl empowerment’ plot. However, ‘killing’ off the son and installing a daughter may be less complicated because the story needs a determined protagonist to reconnect Gekko with an estranged child. Usually a woman character mends family relationships. However, since the sequel is about the financial market, the protagonist ought to be equally savvy about the market and family relationships. Hollywood and the financial market—both being male-dominated—may deem a woman character unfit to achieve the dual goals. If Gekko still *had* a son, a girlfriend would have done a fine job of reconnecting father and son. However, it would be hard for Hollywood to imagine a woman being a successful trader *while* involved in family affairs because a woman is not allowed to have both a financial career and a family.

On the other hand, Winnie’s boyfriend can be a successful trader, a facilitator to reconnect father and daughter, as well as a surrogate son of Gekko. Moore’s motive to reconnect Gekko and Winnie may also be rooted in his desire to have a father because it is unclear from the story whether he has a father or not. His needy mother is more like Moore’s daughter who constantly asks for money. The man who was Moore’s father figure jumps in front of a subway train early in the film. To avenge the death of his adopted father, Moore befriends Gekko who is not an unwilling partner either: in a meeting between the two men, Gekko

tells Moore: ‘Try harder [to reconcile Winnie and me]. Then you both can have a father.’

Arbitrage also shows Hollywood’s reluctance to include a woman trader as a lead. Miller’s daughter could have saved her father and the company because she is said to be moral and she has her mother’s support to take over the father’s directorship in the company. However, the female character chooses not to humiliate the male character in public: this is quite unlike the (feminised) shopaholics who are asked to confront their problems in public. When asked about his scheme, the father confesses his crime but dismisses the daughter’s charge by telling her that she is not the business partner, only an employee who works for him. Thus her moral superiority has no bearing on him because she is paid to do what is asked of her. The film blatantly refuses to entertain the question of whether women should be in charge of the financial market. In the last scene, Miller walks up to the stage at an investor’s dinner meeting where his disappointed daughter is waiting for him. He whispers something in her ear before taking the microphone. At that moment the film abruptly ends. It is unknown what the secret message is or what he is going to announce to the room of investors. The ambiguous ending shows that morality is bankrupt in the financial world. It also reveals that Hollywood films are by nature patriarchal because they are reluctant to show a woman saving a patriarch from financial ruin.

Foetus as an Object of Financial Exchange

In the previous two sections, I have considered the reflective and constitutive screens. In this section, I demonstrate how patriarchy works through the affective screen in Hollywood films by considering how a screen can provoke emotions. Two specific screens are the camcorder’s viewfinder and the ultrasound screen. Affective screens in the film are related to family life and memory. Advertisements for camcorders commonly show the father glued to the eyepiece with a smile while recording young children having fun. Home videos made on a camcorder are supposed to be replayed later in a home setting for family members and friends. Ultrasound images are used for medical purposes, yet offer the first glimpse of the ‘baby.’ Medical technicians happily print out the scans for the parents who document the first visual evidence of the baby’s life.

Moore in the *Wall Street* sequel had two trades with Gekko: the first time, a picture of Winnie as a small girl is traded for insider information; the second time a foetus is traded for \$100 million. The first trade happens when Moore introduces himself to Gekko. At the end of the meeting, Gekko spots Winnie’s picture in Moore’s wallet and asks for it. Moore agrees to give it to Gekko if he digs out information that will indict the man who indirectly killed Moore’s father figure. At this point of the story, Winnie has no idea of the meeting so

Moore has to ensure that Winnie does not know her picture is in the possession of her father. The picture is then seen in Gekko's apartment and later his London office. The silver picture frame is prominently displayed in both places, implying Gekko cares about Winnie as a little girl very much. I ask later why lost time is so important to Gekko.

The second trade happens after Gekko has fled to London. Moore tracks Gekko down and waits for him in his office. He demands Gekko return the money to Winnie. When Gekko refuses and asks him to leave, Moore hands Gekko a CD and proposes a trade. Upon inserting the CD in his computer, one of the four trading screens shows a monochrome, grainy image of a squirming white figure in a fan-shaped frame. Gekko looks at the image in awe and takes some time to digest the news. Still he declines the deal to which Moore replies 'you are a sad man'. Gekko however keeps the CD because the audience sees him replaying the recording for a second time months later. After viewing the screen, he looks at the company's balance sheet which shows more than \$100 million of liquidity. Winnie's old picture can be seen in the background both times when Gekko views the ultrasound image. At the very end of the film Gekko shows up in the street where Winnie and Moore live and informs them about the fund transfer.

The ultimate motives of both trades are not money but a desire to maintain patriarchy. To Gekko, the picture symbolises the only family connection that he has. To Moore, insider information will help him—as a surrogate son—avenge the death of the father figure. However, it becomes clear that Gekko chooses money over Winnie, because he only wants to have a relationship with her so that he can have the capital to trade again. He prefers the market to the daughter, yet a grandson would be different because he would fill in the void of Gekko's dead son and continue the male line.

Frozen Time on an Affective Screen

Nakamura (2010) has written that that the 'ultrasounds represent images of foetuses in an electronic elsewhere' (p. 17) because they make the woman a passive viewer. When the ultrasound image is recorded, the foetus—as a material and biological being—is completely dissociated from the woman's body. In the above scene, Winnie is even absent during the replay; she is rendered irrelevant to the digital image. The only on-screen relationship she has with the foetus is the name 'W Gekko' on the screen's top left hand corner. Even so the name reminds the audience of Gordon Gekko more than the daughter because she is simply called 'Winnie'. The de-materialisation of the foetus is like the de-materialisation of commodity trading in the financial market. On the trading screen, only the bid and sell prices of commodities matter. The prices obscure the labour that goes into the production of the commodities. The ultrasound images also obscure the women's labour in carrying the baby. Therefore, it may

not be an irony that Gekko views the foetus—as a digital commodity—on one of the trading screens.

However, Gekko is awed by the image: the foetus that squirms on the screen is like a living body that grows in front of him. What he sees is unlike what he is accustomed to seeing on the trading screen. While financial information is always in decay (Knorr Cetina, 2005), the foetus recording freezes time. Nakamura (2010) writes that both ultrasound and cinematic images ‘show images in real time: ‘processual’ images. They are ‘live’ images in both senses of the world, they visualise ‘life’ in the form of the pregnant woman and the foetus, and they are also keyed to the present’ (p. 24). The setting in which Gekko watches the recording is also like that of a cinema (Mulvey, 1975): he watches the recording at night in a home-like office setting; and he watches it alone for the second time. The ultrasound image creates a desire for Gekko to find a heir as well as to redeem lost time.

Even though Gekko has stolen his daughter’s money, he repeatedly says that he does not care about money because he has realised that he is living in borrowed time. While his goal in *Wall Street* is to have a great view (i.e. expanding space), his goal in the sequel is to redeem time (i.e. extending time). He is particularly frustrated that he has lost eight years in prison. Frozen time like the foetus recording is thus very attractive to Gekko. In addition to the foetus, another instance of frozen time is the picture of Winnie as a little girl. Gekko has not seen that picture of Winnie, but judging from her age, Gekko was not in prison yet when the picture was taken. The audience can assume that the picture was taken after the ex-wife took the children away but before Winnie cut the family ties. Gekko may want to remember himself as a father of two, thus he very much wants to preserve a piece of a happier past as a memory by redeeming lost time.

Preserving memory, redeeming lost time, and having an heir are all achieved in the very last scene. The audience sees from a viewfinder screen scenes of the grandson’s first birthday, which is like Gekko’s son’s birthday in *Wall Street*. In *Wall Street*, the camcorder was controlled by his ex-wife who only chose to record their son’s best behaviour. However, the movie camera sees beyond the chosen moments; it sees the son bullying adults, it sees Gekko doing illegal trades. In the sequel, it is unclear who controls the camcorder in the very last scene. Both the parents and the grandfather are in the recording so they can’t be behind the camera. It can then be assumed that an unknown party—such as the audience—is controlling the camcorder. The audience may believe that they see an ‘unfiltered’ moment in Gekko’s life. The audience is not only invited to be in Gekko’s family, but is also given the power to preserve their moments of it. The audience may even realise that the *Wall Street* villain is after all ‘not that bad’ because like most older men, he likes being surrounded by family and friends. The viewfinder is like the reflective screen in *Wall Street*—it does not lie, it *only* tells the truth. However, what is left out by the viewfinder? Does Winnie ever find out about the two trades? Did she know why her father has returned the

money to her? The film stops short of answering these questions. It is not interested in finding out more truth because what the camera sees is exactly what the viewfinder shows – there is nothing to see beyond the viewfinder. The audience—who may be controlling the camcorder—wishes to see what they want to remember: Gekko resumes the position as the patriarch and successfully freezes time by having him and his heir being recorded.

Affective screens are used in the *Wall Street* sequel in two ways: first, the image on the screen is commodified as an object of financial exchange. The trading object (a foetus in this case) obscures the labour that the mother bears to produce the commodity. The object is also separated from the womb and appears like it has a life on its own. The foetus, as a fetish, is more than alienated labour; it represents a life that is produced without any labour! Second, the preserved image freezes time in a financialised economy where a split second is too long; the frozen images help men to redeem time and presumably money lost in the financial markets. In both ways men control at what price the images are traded and when they are replayed. More disturbingly, in both instances, the woman who is represented by the image and who bears the image is not in the know about how they are circulated and change hands. She is like the tulip during the bulb trade in the Republic of Holland in the seventeenth century; her images are in the circulation yet she is not allowed to trade. In this way, I argue that the images are alienated from the woman twice: the first time she is alienated by digital technology where the image is captured and stored; the second time she is alienated when a financial exchange takes place.

Conclusion

In this chapter, I have analysed how the trading screen and the cinema screen constitute a financial crisis. Drawing on previous studies on the trading screen and different types of financial information, I have shown how Hollywood films conceptualise the trading screen as reflective, constitutive, and affective. Different types of trading screen have implications for human morality, market locales, and gender relations. The three post-crisis films—*Wall Street: Money Never Sleeps*, *Arbitrage*, and *Floored*—illustrate filmmakers' ambiguity about two assumptions of financial crises: first, greed transcends history; second, better machines will lead to better markets. Oliver Stone's *Wall Street* sequel shows that human nature does change: Gordon Gekko—the archetype of greed—is willing to admit that money is less important than time to an ageing man; Gekko's young apprentice in the sequel is no longer someone who would do anything to please the master, but someone who wants to do the 'right' things. In *Floored*, floor-based traders who do not participate in computer trading say they chose family and tradition over a dishonest way to make money. The machines also do not make better markets. In the *Wall Street* sequel, traders and the machines constitute the market but the screens also publicly inform them

humans cannot control a financial ruin. In *Arbitrage*, a compromised company accounting book cannot escape the scrutiny of a moral daughter. *Floored* has the harshest critique of the destructive consequences of computer trading: it explains the housing crisis with the elimination of floor-based trading.

The three post-crisis films also do not provide a solution to a financial crisis. Unlike *Wall Street* that provides an unequivocal solution (that is, the market swindler should be sent to prison), the three post-crisis films punish no one because they cannot identify a human culprit. Moral ambiguity, however, makes filmmakers highlight the importance of the patriarchal family in an economically uncertain time. Patrilineality is said to be more valuable than money: in the *Wall Street* sequel, Gekko chooses a grandson over money; in *Floored*, the traders lament the loss of a male-dominated family in a computer-trading era; in *Arbitrage*, the market swindler cannot choose an heir because his son is foolish and the other offspring is a daughter. Even though women characters are more varied in post-crisis films, gender relations have not transformed; the emphasis on patriarchy reinforces the stabilising force of masculinity at a time of crisis.

CHAPTER 6

Conclusion

This book offers an alternative explanation for financial crises by advancing two arguments: first, finance capital and the ideology of crisis are gendered. Gender—as material beings and discursive constructs—is moulded to allow for capital flow in the financial markets. Femininity that takes the form of irrational thought and behaviours is blamed for financial crises. Second, financial information is materially and technologically embedded. Machines create information of different qualities. Through the production, distribution, and consumption of financial information, machines create a specific temporality and spatiality. The co-existence of different temporalities and spatialities is the financial crisis. Better machines will not prevent future financial crisis even though machines are believed to eliminate irrationality and to suppress femininity in the markets.

This book has also taken up a theoretical challenge to find a common ground between critical political economy and ANT by drawing on materialist feminist theories that assume gender is both material and discursive. As such, gender illustrates that capital does not simply flow from a local setting to a global one or vice versa because even the most intensely local settings are networked. Networking different locales requires technical devices. However, who has access to space and technologies is gendered. For example, the imageries of financial markets in films show a computer screen in a Manhattan office connecting (mostly male) traders to *the* financial market that exists in a virtual space. The traders in the same room do not interact with each other, they observe and interact with the market through the screen. In contrast, poor women from Bangladesh are connected to the global economy through their participation in microfinance programmes. Yet imageries of them wearing traditional clothing in a village discursively constrain them in a single locale. Furthermore, poor

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women in a developing economy are also seen to occupy a different spatiality and temporality from women in a developed economy, making it difficult to visualise how they are connected together through a credit economy.

Gender disrupts the assumed linear timeline on which causes and consequences of financial crises lie; this assumption is subscribed to by both mainstream economic thought and critical political economy. The processes of gender being moulded to maximise capital flow and machines creating different spatialities and temporalities disrupt the perceived linearity of financial markets. To cope with financial crises, machines are used to suppress femininity and narrow spatiotemporal differences. However, machines exacerbate the problems rather than solving them.

In the concluding chapter, I first reiterate the four themes developed throughout the book and illustrated by discourses about the gendered subjects and technical devices. Then I show how feminist political economic theories provide a fruitful dialogue between critical political economy and ANT. Lastly I suggest how political economists can further consider incorporating ANT into the analysis from the perspective of immaterial/affective labour.

The Four Themes, Gendered Subjects and Technical Devices

Throughout the book I examined the discourses of gendered subjects (namely, the Tulip, the Poor Women, and the Shopaholic) and technical devices (namely the printing press, the runner, the ticker, and the screen) to illustrate the four themes. The themes were illustrated by discourses produced in different time periods for different audiences. The first theme ‘women serve as resources in financial economy by performing producer and reproducer roles’ is shown in Chapter 3 ‘The indebted women.’ In order to combat stagflation in the 1970s, women in developed economies were allowed to have credit cards. Similarly, poor women in a developing economy were asked to be entrepreneurs in the name of empowerment. Women’s reproductive roles in the household were not seen to be productive for an economy, but they were seen to create value by being debtors in an economy: to be a masculine economic man is to be in debt. Meanwhile, different markets (labour, consumer, credit) objectify women’s labour by cutting and dicing it as different instruments for the financial markets. Women’s locales and social class, however determine, whether they are factory workers, farm labourers, consumers, or debtors. By partitioning women’s labour into financial instruments and by assigning their specific roles in a global financialised economy, the embodied labour of women is de-materialised, rendering it *outside* the women. De-materialised female labour alienates women from their own labour power and bodies. One example to show women’s hidden and de-materialised labour in a financialised economy is the foetus as an object of exchange between men. In *Wall Street: Money Never Sleeps*, the market villain is shown twice watching a living object on a trading screen. The foetus

appears to be living *outside* and *without* the mother's body. Digital technology is instrumental to the alienation: the foetus inside the womb is made independent of the mother's body on which it completely depends. The computer screen allows a space for the foetus to live digitally. Because the foetus is seen as an independent entity, it becomes a commodity that can be traded between men.

The second theme 'gender ideology is used to legitimise and stabilise an unequal distribution of resources between women and men, developed and developing economies' was first shown in Chapter 2 in which I examined how the tulipomania discourse became an ahistorical reference and explanation of all subsequent financial crises. Even though the meanings of the tulip have to be contextualised as a financial event in seventeenth-century Netherlands, the tulip appears like an ahistorical subject whose meaning remains static across discourses and transcends time. The ahistorical story was built from a binary opposition between masculinity and femininity: the tulip, women, and the Orient were collapsed into one concept. Because the Orient is seen as elusive and concealed, the women and the tulip are seen as portals to understand the unknowns. Tulipomania was critiqued in popular culture as an irrational event, the discourse thus reinforces the superiority of the masculine nature of developed economies and the inferiority of the feminine nature of developing economies. This ideology governs gender relations in a credit economy and microcredit programmes (Ch. 3). Women were invited to join a credit economy but were marked as the difference: those with a credit card are seen as compulsive consumers, those in developing economies are seen as un-modern. Because men do not trust women's financial judgement, they deploy techniques such as debt recording instruments and the video camera to scrutinise women's economic activities and private behaviours. In the case of microcredit programmes, women borrowers are forced to be flexible memorising the desired changes. In the case of the Shophalolic, the Expert controls how women make sense of space and time associated with consumption. Non-white male traders are also rendered feminine when a computer-based financial market is said to be irrational. In Ch. 5, I show that in a documentary film about the disappearance of floor-based trading, women and non-white men are only allowed to participate in the financial market when machines made it unnatural. A white male-dominated, floor-based trading market was seen to be superior to a computer-based one because male bodies embody a fair and regulated market.

Theme 3 suggests that 'financial information—whether it be analogue or digital—is produced by machines and thus materially and technologically embedded'. Neither mainstream nor political economic thoughts of information take into account the material aspect of information: the former assumes information is produced in markets and represented by prices; the latter points out information is a commodity in a market. Neither approach points out technologically embedded information exerts power on human actors. In Ch. 2, I argued tulip bulb illustrations objectified knowledge and standardised information, making localised knowledge universal that transcends space. Standardised knowledge

interpolates all knowers in a male subject position because the knowledge originates from learned men. In Ch. 3, I argued that research instruments create the subjects the Poor Women and the Economy. Researchers did not simply go to a site to measure how poor women fare in an economy; instead the presence of the researchers and the utilisation of measurement tools change the reality of women and their understanding of the economy. In order to be qualify for a loan, they have to play-act the Poor Women in the Economy. In Ch. 4, I argued that both human and non-human actors formed a network of financial news reporting. Qualities of financial information were enabled and constrained by technologies such as the ticker, the printer, and the runners. While technological devices were developed to eliminate spatiotemporal differentiation, new temporalities and spatialities were created along with information produced by new devices. In Ch. 5, I argued that the reflective and constitutive screens in Hollywood films have implications for traders' morality and market locales. In the pre-crisis era, computer screens were believed to reflect the financial markets—it was an honest man's tool to make a living. In the post-crisis era, the screens constitute the markets and merge physical locales with the digital market.

Theme 4: 'information of different qualities create economies of different spatialities and temporalities' is closely related to Theme 3. Neither mainstream nor political economic thought pay attention to the space in which information is produced; they assume that digital information is produced in a pre-determined space and that the production and distribution of information does not change spatiality. For example, Ch. 3 showed that microcredit programmes have created for Poor Women sites of production and consumption, as well as a temporality to repay loans. Even though poor women have subjective experience of time and space, participation in microcredit programmes has externalised space and time making them into 'things' that can be measured. Ch. 4 showed Wall Street is nothing but a 0.7-mile long street in lower Manhattan, yet the human-non-human network is larger than the geographical area because of the information produced and distributed in this space. Ch. 5 showed that while Hollywood films assumed the co-existence of two financial markets—one reflected from the screens, the other constituted from off-screen human interactions, directors were more ambivalent about the locality of the market after the Global Financial Crisis. In some films, financial information seamlessly flows from the digital world to the material world; in others, the computer is shown to have taken control of the financial market and human beings no longer play a part in it.

By focusing on the four themes drawn from a range of discourses produced in different time periods intended for different readers/viewers, I have shown that financial crises may not be a series of causal events on a linear timeline. Because crises are spatiotemporal differentiation, they are continuous and renewing. A focus on the materiality and technologically embedded information requires an acceptance that crises are messy and cannot be mapped on a

timeline. If we lift up one technical device in a network of financial markets, we will see tangles of connections: people, machines, buildings. Instead of asking which of these connections caused market failure and need to be fixed, it may be better to ask to where these connections lead and how the connections/disconnections change the network.

Feminist Political Economy: Finding a Common Ground Between Critical Political Economy and ANT

At the beginning of the book I posed a theoretical challenge, by asking whether feminist theories could bridge differences between critical political economy and ANT, in particular their different beliefs in agency and the existence of macrostructure. The four themes discussed above have pointed out that feminist political economists task themselves with understanding both the materialist and discursive nature of finance capital, demonstrating how gender works through different sites of financial activities, and illustrating how gender disrupts the grand narrative of capitalism.

A feminist intervention in the grand narrative of capitalism would reject that humans are the only actors that have agency. Technical devices from formulae (such as the Dow Jones Industrial Index) to techniques (such as surveys) to technological devices (such as the printing press) act upon humans when humans make use of them. In turn, these devices enable humans to create a new material reality on which they act. A gender perspective acknowledges that these changes are reflexive and small-scaled. The changes may also not be unidirectional enough to move history forward (or backward). Because economic activities always take place in a locality within a particular timeframe and because economic activities always have contesting meanings, the task is to find out how gender relations constrain meaning-making and the human capacity for value production.

Feminists who advanced social reproduction theory, as discussed in the introduction, have attempted to make new meanings of value production by examining the process in which labour is reproduced for capital accumulation (Bhattacharya, 2017). By integrating both productive and reproductive labour, they believe labour is emotional, physical, and mental. Using an inclusive definition of labour, they highlight the importance of affective labour that is associated with female labour.

Media scholars have also been paying attention to the affective nature of immaterial labour enabled by the network (Terranova, 2013). Labour produced by the network is said to be different from that in industrial production because it is like neither the abstract nor concrete labour that Marx conceived. Digital labour, along with culture and power, is circulated by the network of social, cultural, and economic relationships. Immaterial labour in the network is a form of activity performed by every productive subject in a post-industrial society.

While both social reproduction theory feminists and proponents of affective/immaterial labour have questioned the nature of labour in the digital economy, they have not suggested how technical devices enable the production of labour and how affective/immaterial labour changes those devices. Clough (2013) believes that immaterial labour needs to acquire quantitative capacity in order to resist a capitalism that relies on quantitative measurement. To this end, she asked how a body of affect can be measured: 'To imagine a body of affect as a technological assemblage or a technology of measurement, which measure without depleting/fully capturing, a computationally open technology of measure' (p. 115). If immaterial/affective labour, usually associated with female labour, is not just qualitative and unquantifiable, but also quantitative and measurable, it will have a better chance to challenge a male-dominated capitalism.

Feminist political economists should also reject the view that the flow of finance capital can only be understood at either a micro or macro level. Throughout the book, I argue that 'macrostructures' such as the economy and financial markets are constituted in intensely local settings shaped by gender relations. In any local setting, economic actors' understanding of how an economy works begins with concrete objects such as cash, credit cards, or debt papers. These instruments connect actors in a network: the banknotes in the wallet may have been circulated in other towns, cities, and even countries. Traders may interact with global financial markets but their understanding of the markets is localised by the trading screen in a particular office in a particular building in a particular street in a particular city.

To Latour (2005), money circulation in a local village is not less significant than money circulation in a large stock exchange (such as NYSE) because money transaction between human and non-human actors creates a web of information exchange through technologies. Even to the poorest women in one of the poorest countries, when they participate in a microcredit programme and receive a loan in the form of cash, they interact with the network that becomes the 'whole world'. This 'whole world' is not more or less bigger than that of a trader:

[A] Wall Street trading room does connect to the 'whole world' through the tiny but expeditious conduits of millions of bits of information per second, which, after having been digested by traders, are flashed back to the very same place by the Reuters or Bloomberg trading screens that register all of the transactions and then wired to the 'rest of the (connected) world' to determine someone's net worth (Latour, 2005, p. 198).

The multiple, heterogeneous, and fragmented spatialities and temporalities that are simultaneously created by human and non-human actors—as I argue throughout the book—are financial crises. Rather than calling financial crises human-made or inevitable, they should be recognised as gendered and technological.

Bibliography

- Aitkenhead, D. 2012. Sophie Kinsella: 'You can be highly intelligent – and also ditzy and klutzy'. *The Guardian*, 12 February. Retrieved from <http://www.theguardian.com/books/2012/feb/12/sophie-kinsella-highly-intelligent-ditzy-klutzy/print>.
- Albera, F. 2012. First Discourse on Film and the Construction of a 'Cinematic Episteme'. In A. Gaudreault, N. Dulac, and S. Hidalgo (Eds.), *A Companion to Early Cinema* (pp. 121–136). New York: Wiley.
- Allan, K. 2016. Self-Appreciation and the Value of Employability: Integrating Un(der)employed Immigrants in Post-Fordist Canada. In L. Adkins and M. Dever (Eds.), *The Post-Fordist Sexual Contract: Working and Living in Contingency* (pp. 49–69). New York: Palgrave Macmillan.
- Amin, A. 1994. *Post-Fordism: Models, Fantasies and Phantom of Transition*. In A. Amir (Ed.), *Post-Fordism: A Reader*. Oxford: Polity.
- Aouragh, M. 2015. Revolutions, the Internet and Orientalist Reminiscence. In R. Abou-El-Fadl (Ed.), *Revolutionary Egypt: Connecting Domestic and International Struggles*. London: Routledge.
- Arendt, P. 2009. Another view. [Review of the film *Confessions of a Shopaholic*]. *The Guardian*, 25 February. Retrieved from <http://www.theguardian.com/film/2009/feb/25/confessions-of-a-shopaholic>.
- Azzata, G. 1982. *Equal Credit Opportunity Act*. Boston, MA: National Consumer Law Center.

- Babe, R. E. 1995. *Communication and the Transformation of Economics: Essays in Information, Public Policy, and Political Economy*. Boulder, CO: Westview Press.
- Bain, M. and Avins, J. 2015. The thing that makes Bangladesh's garment industry such a huge success also makes it deadly. *Quartz*, 24 April. Last retrieved: <https://qz.com/389741/the-thing-that-makes-bangladeshs-garment-industry-such-a-huge-success-also-makes-it-deadly/>
- Baran, P. A. and Sweezy, P. M. 1966. *Monopoly Capital: An Essay on the American Economic and Social Order*. New York: Monthly Review Press.
- Barnes, S. B. 2002. Computer Interface. In A. Akera and F. Nebeken (Eds.), *From 0 to 1: An Authoritative History of Modern Computing* (pp. 133–147). New York: Oxford University Press.
- Barry, A. and Slater, D. 2002. Introduction: The Technological Economy. *Economy and Society*, 31(2), 175–193.
- Barthes, R. 1972. *Mythologies*. (A. Lavers trans.). New York: Hill and Wang. [Original 1957]
- Batterham, I. 2008. *The Office Copying Revolution: History, Identification and Preservation: A Manual for Conservators, Archivists, Librarians and Forensic Document Examiners*. Canberra: National Archives of Australia.
- Beckmann, J. 1817. *A History of Inventions, Discoveries*. (William Johnston trans.). London: Henry G. Bohn.
- Benjamin, W. 2006. The Work of Art in the Age of its Technological Reproducibility. In H. Eiland and M. W. Jennings (Eds.), *Walter Benjamin: Selected writings, Volume 3: 1935–1938* (pp. 101–133). Cambridge, MA: Harvard University Press.
- Berdik, C. 2000. Selling the cure for shopaholism. *Mother Jones*, 23 May. Retrieved from <http://www.motherjones.com/politics/2000/05/selling-cure-shopaholism>.
- Berger, J. 1972. *Ways of Seeing*. London: Penguin.
- Berry, M. 2013. The *Today* Programme and the Banking Crisis. *Journalism*, 14(2), 253–270.
- Bhattacharya T. 2017. Introduction: Mapping Social Reproduction Theory. In T. Bhattacharya (Ed.), *Social Reproduction Theory: Remapping Class, Recentering Oppression* (pp. 1–20). London: Pluto.
- Boczkowski, P. J. and Siles, I. (2014). Steps Toward Cosmopolitanism in the Study of Media Technologies: Integrated Scholarship on Production, Consumption, Materiality, and Content. In T. Gillespie, P. J. Boczkowski, and K. A. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 53–75). Cambridge, MA: MIT Press.
- Bradshaw, P. 2009. [Review of the film *Confessions of a Shopaholic*]. *The Guardian*, 19 February. Retrieved from: <http://www.theguardian.com/film/2009/feb/19/confessions-of-a-shopaholic-film-review>.
- Callon, M. 1999. Actor-Network Theory – The Market Test. In J. Law and J. Has-sard (Eds.), *Actor Network Theory and After* (pp. 181–195). Oxford: Blackwell.

- Callon, M. 2007a. An Essay on the Growing Contribution of Economic Markets to the Proliferation of the Social. *Theory, Culture, and Society*, 24(7/8), 139–163.
- Callon, M. 2007b. What Does It Mean to Say that Economics is Performative? In D. MacKenzie, F. Muniesa, and L. Siu (Eds.), *Do Economists Make Markets? On the Performativity of Economics* (pp. 311–357). Princeton, NJ: Princeton University Press.
- Callon, M. and Muniesa, F. 2005. Peripheral Vision: Economic Markets as Calculative Collective Devices. *Organization Studies*, 26(8): 1229–1250.
- Callon, M. and Law, J. 1995. Agency and the Hybrid Collectif. *South Atlantic Quarterly* 94, 481–507.
- Campbell, M. E. and McCreedy, A. L. 2014. Introduction: Materialist Feminism Against Neoliberalism. *Politics and Culture*. Retrieved at: <https://politicsandculture.org/2014/03/09/materialist-feminisms-against-neoliberalism/>
- Castells, M. 1996. *The Information Age: Economy, Society and Culture*. Malden, MA: Blackwell.
- Castree, N. 2002. False Antithesis? Marxism, Nature and Actor-Network. *Antipode*, 34(1): 111–146.
- Ceruzzi, P. 2003. *History of Modern Computing* (2nd ed.). Cambridge, MA: MIT Press.
- Chakravartty, P. and Schiller, D. 2010. Neoliberal Newspeak and Digital Capitalism in Crisis. *International Journal of Communication* 4: 670–692.
- Cixous, H. and Clément, C. 1990. Representation of Patriarchy: Sexuality and Epistemology in Freud's Dora (pp. 276–304). In C. Bernheimer and C. Kahane (Eds.), *In Dora's Case: Freud-Hysteria-Feminism* (2nd ed.). New York: Columbia University Press.
- Clough, P. T. 2013. In T. Scholz (Ed.), *Digital Labor: The Internet as Playground and Factory* (pp. 112–126). New York: Routledge.
- Clusius, C. 1601. *Rariourum Plantrum*. <http://www.botanicus.org/title/b12075048#>. Last retrieved: 31 August 2017.
- Colombo, J. 2012. The Dutch 'tulip mania' bubble (aka 'tulipomania'). *Bubble Bubble*, 15 June. <http://www.thebubblebubble.com/tulip-mania/>. Last retrieved: 31 August, 2017.
- Cook, H. J. 2007. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven, CT: Yale University Press.
- Copeland, R. 2017. Let me pay! I have 29 credit cards: Millennials hoard plastic to rack up rewards points. *Wall Street Journal*, 31 March, p. A1.
- Couldry, N. 2005. Actor Network Theory and Media: Do They Connect and on What Terms? In A. Hepp, S. Moores, and C. Winter (Eds), *Connectivity, Networks and Flows: Conceptualizing Contemporary Communication* (pp. 93–11). Cresskill, NJ: Hampton Press.
- Dargis, M. 2009. When retail therapy can't cure what ails you. [Review of the film *Confessions of a Shopaholic*]. *New York Times*. Retrieved from <http://www.nytimes.com/movies/movie/452622/Confessions-of-a-Shopaholic/overview>.

- Dash, M. 1999. *Tulipomania: The Story of the World's Most Coveted Flower and the Extraordinary Passions it Aroused*. New York: Crown.
- Davis, G. F. 2009. *Managed by the Markets: How Finance Reshaped America*. Oxford: Oxford University Press.
- Denzin, N. K. 1990. Reading 'Wall Street': Postmodern Contradictions in the American Social Structure. In B. Turner (Ed.), *Theories of Modernity and Postmodernity* (pp. 31–44). London: Sage.
- Dyer, F.L. and Martin, T. C. 1910. *Edison, His Life and Inventions*. New York: Harper.
- Emadi-Coffin, B. 2002. *Rethinking International Organization: Deregulation and Global Governance*. London: Routledge.
- Engels, F. 2010. *The Origins of the Family, Private Property and the State*. London: Penguin. [Original 1884].
- Fahy, D., O'Brien, M. and Poti, V. 2010. From Boom to Bust: A Post-Celtic Tiger Analysis of the Norms, Values, and Roles of Irish Financial journalists. *Irish Communication Review*, 12: 5–20.
- Faraizi, A., Rahman, T. and McAllister, J. 2011. *Microcredit and Women's Empowerment: A Case Study of Bangladesh*. Abingdon: Routledge.
- Federal Deposit Insurance Corporation. 2017. *Compliance Examination Manual*. Retrieved from: <https://www.fdic.gov/regulations/compliance/manual/5/v-7.1.pdf>.
- Ferguson, S. LeBaron, G., Dimitrakaki, A. and Farris, C. R. 2016. Introduction to Special Issue on Social Reproduction. *Historical Materialism*, 24(2): 25–37.
- Ferriss, S. and Young, M. (2006). Introduction. In S. Ferriss and M. Young (Eds.), *Chick Lit: The New Woman's Fiction* (pp. 1–13). New York: Routledge.
- Fine, B. 2005. From Actor-Network Theory to Political Economy. *Capitalism Nature Socialism*, 16(4): 91–108.
- Fisher, M. S. 2010. Wall Street Women: Engendering Global Finance in the Manhattan Landscape. *City and Society*, 22(2): 262–285.
- Fisher, M. S. 2012. *Wall Street Women*. Durham, NC: Duke University Press.
- Fisher, M. S. 2016. Wall Street Women on Film. *Public Books*, 1 September. Retrieved from: <http://publicbooks.org/artmedia/wall-street-women-on-film>.
- Foster, J. B. and Magdoff, F. 2009. *The Great Financial Crisis: Causes and Consequences*. New York: Monthly Review Press.
- Foucault, M. 1977. *Discipline and Punish: The Birth of the Prison* (A. Sheridan trans). New York: Pantheon. (Original published 1975)
- Frankel, M. 2000. When the tulip bubble burst. *Bloomberg Business Week*, 24 April. http://www.businessweek.com/2000/00_17/b3678084.htm.
- Fraser, N. 2016. Contradictions of Capital and Care. *New Left Review*, 100 (July–August): 99–117.
- French, P. 2009. [Review of the film *Confessions of a Shopaholic*]. *The Guardian*. Retrieved from <http://www.theguardian.com/film/2009/feb/22/confessions-of-a-shopaholic-review>.

- Freud, S. 1963. *Dora: An Analysis of a Case of Hysteria*. New York: Touchstone.
- Frye, M. 1996. The Necessity of Differences: Constructing a Positive Category of Women. *Signs*, 21(4): 991–1010.
- Fuchs, C., Schafranek, M., Hakken, D. and Breen, M. 2010. Capitalist Crisis, Communication, and Culture: Introduction to the Special Issue of tripleC. *tripleC: Communication, Capitalism and Critique* 8(2): 193–204.
- Garcan, B. J. 2005. We Have Never Been Human: Agential Nature, ANT, and Marxist Political Ecology. *Capitalism Nature Socialism*, 16(4): 127–140.
- Gebhardt, A. 2015. *Holland Flowering: How the Dutch Flower Industry Conquered the World*. Amsterdam: University of Amsterdam.
- Giddens, A. 1990. *The Consequences of Modernity*. Redwood City, CA: Stanford University Press.
- Gill, R. and Herdieckerhoff, E. 2006. Rewriting the Romance: New Feminisms in Chick Lit. *Feminist Media Studies*, 6(4): 487–504.
- Gillespie, T., Boczkowski, P. J. and Foot, K. A. 2014. 'Introduction.' In T. Gillespie, P. J. Boczkowski, and K. A. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 1–17). Cambridge, MA: MIT Press.
- Gold and Stock Reporting Instruments 1872. *Journal of the Telegraph*, 16 December 45(20): 1–2.
- Goldgar, A. 2007. *Tulipomania: Money, Honor, and Knowledge in the Dutch Golden Age*. Chicago, IL: University of Chicago Press.
- Gordon, J. S. 1999. *The Great Game: The Emergence of Wall Street as a World Power 1653–2000*. New York: Scribner.
- Graeber, D. 2011. *Debt: The First 5,000 Years*. Brooklyn, NY: Melville House.
- Grossberg, L. 2010. Modernity and Commensuration: A Reading of a Contemporary (Economic) Crisis. *Cultural Studies*, 24(3), 295–332.
- Haiven, M. 2014. Occupations and the Struggle Over Reproduction: An Interview with Silvia Federici. *Politics and Culture*. <https://politicsandculture.org/2014/03/09/occupations-and-the-struggle-over-reproduction-an-interview-with-silvia-federici/>
- Hall, S. 1997. *Representation: Cultural Representations and Signifying Practices*. Milton Keynes: The Open University Press.
- Hardt, M., and Negri, A. 2017. *Assembly*. New York: Oxford University Press.
- Harrington, B. 2008. *Pop Finance: Investment Clubs and the New Investor Populism*. Princeton, NJ: Princeton University Press.
- Hartsock, N. C. M. 1983a. The Feminist Standpoint: Developing the Ground for a Specifically Feminist Historical Materialism. In S. Harding and M. B. Hintikka (Eds.), *Discovering Reality* (pp. 283–310). New York: D. Reidel Publishing.
- Hartsock, N. C. M. 1983b *Money, Sex, and Power: Toward a Feminist Historical Materialism*. New York: Longman.
- Harvey, D. 1982. *The Limits to Capital*. Chicago, IL: University of Chicago Press.

- Harvey, D. 1996. *Justice, Nature and the Geography of Difference*. Oxford: Blackwell.
- Harvey, D. 2010. *A Companion to Marx's Capital*. New York: Verso.
- Harvey, D. 2011. *The Enigma of Capital*. New York: Oxford University Press.
- Harvey, D. 2018. *Marx, Capital and the Madness of Economic Reason*. New York: Oxford University Press.
- Hay, J. 2010. Too Good to Fail: Managing Financial Crisis through the Moral Economy of Realty TV. *Journal of Communication Inquiry*, 34(4): 382–402.
- Hennessy, R. 1993. *Materialist Feminism and the Politics of Discourse*. New York: Routledge.
- Hennessy, R. and Ingraham, C. 1997. *Materialism Feminism: A Reader in Class, Difference, and Women's Lives*. New York: Routledge.
- Hill, F. T. 1908. *The Story of a Street: A Narrative History of Wall Street from 1649 to 1908*. New York: Harper.
- Ho, K. 2009. *Liquidated: An Ethnography of Wall Street*. Durham, NC: Duke University Press.
- hooks, b. 2002. *Communion: The Female Quest for Love*. New York: HarperCollins.
- Huhtamo, E. 2010. National Magic: A Short History of Moving Images. In W. Guynn (Ed.), *Routledge Companion to Film History* (pp. 3–16). Florence, NY: Routledge.
- Hunting, K. 2012. Women Talk: Chick lit and the Dialogue of Feminism. *The Communication Review*, 15(3): 187–203.
- Islam, T. 2007. *Microcredit and Poverty Alleviation*. Aldershot: Ashgate.
- Jarrett, K. 2016. *Feminism: Labour and Digital Media: The Digital Housewife*. New York: Routledge.
- Karamessini, M. 2014. Introduction – Women's Vulnerability in Recession and Austerity: A Different Crisis, a Different Context. In M. Karamessini and J. Rubery (Eds.), *Women and Austerity: The Economic Crisis and the Future for Equality* (pp. 3–16). London: Routledge.
- Karim, L. 2011. *Microfinance and its Discontents: Women in Debt in Bangladesh*. Minneapolis, MN: University of Minnesota Press.
- Kaushik, S. K. and Rengaragjan, V. 2010. (Eds.). *Microfinance and Women's Empowerment*. New Delhi: Serials.
- Khandker, S. 1998. *Fighting Poverty with Microcredit: Experience in Bangladesh*. Washington, DC: The World Bank.
- Kinsella, S. 2001. *Confessions of a Shopaholic*. New York: Dial Press.
- Kinsella, S. 2002a. *Shopaholic Takes Manhattan*. New York: Dell.
- Kinsella, S. 2002b. *Shopaholic Ties the Knot*. New York: Delta.
- Kinsella, S. 2004. *Shopaholic and Sister*. New York: Dial Press.
- Kinsella, S. 2007. *Shopaholic and Baby*. New York: Dell.
- Kinsella, S. 2010. *Mini Shopaholic: A Novel*. New York: Dial Press.
- Knorr Cetina, K. 2005. How are Global Markets Global? The Architecture of a Flow World. In K. Knorr Cetina and A. Preda (Eds.), *The Sociology of Financial Markets* (pp. 38–61). Oxford: Oxford University Press.

- Knorr Cetina, K. and Bruegger, U. 2002. Global Microstructure: The Virtual Societies of Financial Markets. *American Journal of Sociology*, 107(4): 905–950.
- Lapavistas, C. 2009. Financialised Capitalism: Crisis and Financial Expropriation. *Historical Materialism*, 17(2), 114–148.
- Lapavistas, C. 2011. Theorizing Financialisation. *Work, Employment and Society*, 25(4): 611–625.
- Lapavistas, C. 2014. *Profiting Without Producing: How Finance Exploits Us All*. London: Verso.
- Latour, B. 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Lawson, M. 2000. You can bank on X-factor. *The Guardian*, 4 March. <http://www.theguardian.com/world/2000/mar/04/millennium.uk>.
- Lee, M. 2011. A Feminist Political Economy of Communication. *Feminist Media Studies* Tenth Anniversary issue, 11(1): 83–87.
- Lee, M. 2013. Information and Finance Capital. *Information, Communication and Society*, 16(7): 1139–1156.
- Lee, M. 2014a. On Becoming an Exchange: Translating Michel Callon into a Political Economy of Communication. *triple C: Communication, Capitalism, and Critique*, 12(2): 891–908.
- Lee, M. 2014b. A Feminist Political Economic Critique of Women and Investment in the Popular Media. *Feminist Media Studies*, 14(4): 270–285.
- Lee, M. 2014c. A Review of Communication Scholarship on the Financial Markets and the Financial Media. *International Journal of Communication*, 8: 715–736.
- Lee, M. and Fung, A. 2009. Media Ideologies of Gender in Hong Kong. In F. Cheung and E. Holroyd (Eds.), *Mainstreaming Gender in Hong Kong Society* (pp. 291–309). Hong Kong: Chinese University of Hong Kong Press.
- Lee, M. and Raesch, M. 2015. Women, Gender, and the Financial Markets in Hollywood Films. In K. Silva and K. Mendes (Eds.), *Feminist Erasures: Challenging Backlash Culture* (pp. 129–149). New York: Palgrave MacMillan.
- Levinson, L. L. 1961. *Wall Street: A Pictorial History*. New York: Ziff-Davis.
- Lewis, J. 2010. Normal Viewing Will Be Resumed Shortly: News, Recession and the Politics of Growth. *Popular Communication*, 8(3): 161–165.
- Lewis, M. 2010. Greed never left. *Vanity Fair*, 1 April. Retrieved from: <https://www.vanityfair.com/hollywood/2010/04/wall-street-201004>.
- Leyshon, A. and Thrift, N. 1997. *Money/Space: Geographies of Monetary Transformation*. New York: Routledge.
- Lievrouw, L. A. 2014. Materiality and Media in Communication and Technology Studies: An Unfinished Project. In T. Gillespie, P. J. Boczkowski, and K. A. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 23–51). Cambridge, MA: MIT Press.
- Mackay, C. 1841. *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*. London: Richard Bentley.
- Mackay, C. 1856. *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*. Vol. I (3rd ed.). London: Routledge.

- Mackay, C. 1989. *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*. London: Templeton Press.
- MacKinnon, C. A. 1982. Feminism, Marxism, Method, and the State: An Agenda for Theory. *Signs: Journal of Women in Culture and Society*, 7(3): 515–544.
- Magdoff, H. and Sweezy, P. M. 1977. *The End of Prosperity: The American Economy in the 1970s*. New York: Monthly Review Press.
- Martin, R. 2002. *Financialization of Daily Life*. Philadelphia, PA: Temple University Press.
- Marx, K. 1999 [1894]. *Capital Vol I*. Retrieved from: <https://www.marxists.org/archive/marx/works/1867-c1/ch03.htm>.
- Marx, K. 1999 [1894]. *Capital Vol III*, [Online] Retrieved from at: <http://www.marxists.org/archive/marx/works/1894-c3/>
- Mazza, C. 2006. Who's Laughing Now? A Short History of Chick Lit and the Perversion of a Genre. In S. Ferriss and M. Young (Eds.), *Chick Lit: The New Woman's Fiction* (pp. 17–28). New York: Routledge.
- McChesney, R. W., Wood, E. M., Foster, J. B. 1998. *Capitalism and the Information Age: The Political Economy of the Global Communication Revolution*. New York: Monthly Review Press.
- McDowell, L. 1997. *Capital Culture: Gender at Work in the City*. Oxford: Blackwell.
- McRobbie, A. 2004. Post-Feminism and Popular Culture. *Feminist Media Studies*, 4(3): 255–264.
- Mernissi, F. 2001. *Scheherazade Goes West: Different Cultures, Different Harems*. New York: Washington Square Press.
- Miranti, P. J. 2007. [Review of the book *Out of the Pits: Traders and Technology from Chicago to London*, by Caitlin Zaloom]. *The Business History Review*, 81(4): 820–822.
- Moggach, D. 1999. *Tulip Fever*. New York: Delacorte.
- Moggach, D. 2013. BBC Radio 4 with James Naughtie. 4 August [Radio interview]. Retrieved from: <http://www.bbc.co.uk/programmes/b037s8mt>.
- Mohanty, C. T. 1991. Under Western Eyes: Feminist Scholarship and Colonial Discourses. In C. T. Mohanty, A. Russe, and L. Torres (Eds.), *Third World Women and the Politics of Feminism*. Bloomington, IN: Indiana University Press.
- Moi, T. 1990. Representation of Patriarchy: Sexuality and Epistemology in Freud's Dora. In C. Bernheimer and C. Kahane (Eds.), In *Dora's Case: Freud-Hysteria-Feminism* (2nd ed.) (pp. 181–199). New York: Columbia University Press.
- Mortensen, M. 2015. Conflictual Media Events, Eyewitness Images, and the Boston Marathon Bombing (2013). *Journalism Practice*, 9(4): 536–551.
- Mosco, V. 1988. Introduction: Information in the Pay-Per-View Society. In V. Mosco and J. Wasko (Eds.), *The Political Economy of Information* (pp. 3–26). Madison, WI: University of Wisconsin Press.

- Mosco, V. 2004. *The Digital Sublime: Myth, Power, and Cyberspace*. Cambridge, MA: MIT Press.
- Mosco, V. 2014. *To the Cloud: Big Data in a Turbulent World*. Boulder, CO, Paradigms.
- Mosco, V and Wasko, J. 1988. *The Political Economy of Information*. Madison, WI: University of Wisconsin Press.
- Mulvey, L. 1975. Visual Pleasure and Narrative Cinema. *Screen*, 16(3): 6–18.
- Murdock, G. 2017. News Corporation. In B. J. Birkinbine, R. Gómez, R., J. and Wasko (Eds), *Global Media Giants* (pp. 92–108). New York: Routledge.
- Musser, C. 1984. Toward a History of Screen Practice. *Quarterly Review of Film Studies*, 9(1): 59–69.
- Mykyta, L. and Renwick, T. J. 2013 Changes in Poverty Measurement: An Examination of the Research SPM and its Effects by Gender. SEHSD Working Paper #2013-05, January. Washington, DC: USA Census Bureau.
- Nakamura, L. 2010. Avatars and the Visual Culture of Reproduction on the Web. In C. Berry, S. Kim, and L. Spigel (Eds.), *Electronic Elsewheres: Media, Technology and the Experience of Social Space*. Minneapolis, MN: University of Minnesota Press.
- Negra, D. and Tasker, Y. 2014. (Eds.). *Gendering the Recession: Media and Culture in an Age of Austerity*. Durham, NC: Duke University Press.
- Palmieri, J. 2010. Crise, Genre et TIC: Recette pour une Dés-Union Prononcée. L'Exemple de l'Afrique du Sud [Crisis, Gender, and ITC: Recipe for a Pronounced Union. The Example of South Africa]. *triple C: Cognition, Communication and Capitalism*, 8(2): 285–309.
- Pardo-Guerra, J. P. 2010. Creating Flows of Interpersonal Bits: The Automation of the London Stock Exchange c. 1955–90. *Economy and Society*, 39(1): 84–109.
- Pavord, A. 1999. *The Tulip: The Story of a Flower That Has Made Men Mad*. New York: Bloomsbury.
- Peltzer, A. 2015. No Guns, No Rules, Just Pure Capitalism! Hollywood's Portraits of Wall Street. In G. Murdock and J. Gripsrud (Eds.), *Money Talks: Money, Markets, Crisis* (pp. 153–168). Bristol: Intellect.
- Petsopoulos, Y. 1982. *Tulips, Arabesques, and Turbans: Decorative Arts from the Ottoman Empire*. New York: Abbeville.
- Plymouth College of Art and Design. 1972. *Victorian Printing Machines*. Plymouth, England: Department of Printing, Plymouth College of Art and Design.
- Pollan, M. 2001. *The Botany of Desire: A Plant's-Eye View of the World*. New York: Random House.
- Posthumus, N. W. 1929) The Tulip Mania in Holland in the Years 1636 and 1637. *Journal of Economic and Business History*, 1: 434–466
- Preda, A. 2009. *Information, Knowledge, and Economic Life: An Introduction to the Sociology of Markets*. Oxford: Oxford University Press.
- Prescott, G. B. 1892. *Electricity and Electric Telegraph* Vol. II (8th ed., rev.). New York: D. Appleton.

- Protschky, S. 2015. Camera Ethica: Photography, Modernity and the Governed in Late-Colonial Indonesia In S. Protschky (Ed.), *Photography, Modernity and the Governed in Late-Colonial Indonesia* (pp. 11–40). Amsterdam: Amsterdam University Press.
- Pyle, J. L. and Ward, K. B. 2003. Recasting our Understanding of Gender and Work During Global Restructuring. *International Sociology*, 18(3): 461–489.
- Raesch, M., Lee, M. and Cooper, F. R. 2015. From Lonesome Cowboys to Geek Masculinities: A Study of Documentary Films on the Financial Crisis. *Interactions: Studies in Communication and Culture*, 6(3): 287–301.
- Rahman, A. 1999. *Women and Microcredit in Rural Bangladesh: Anthropological Studies of the Rhetoric and Realities of Grameen Banking Lending*. Boulder, CO: Westview.
- Riordan, E. 2002 Intersections and New Directions: On Feminism and Political Economy. In E. R. Meehan and E. Riordan (Eds), *Sex and Money: Feminism and Political Economy in the Media* (pp. 3–15). Minneapolis, MN: University of Minnesota Press.
- Robinson, M. S. 2001. *The Microfinance Revolution: Sustainable Finance for the Poor: Lessons from Indonesia*. Washington, DC: World Bank.
- Rosenberg, J. M. 1982. *Inside the Wall Street Journal: The History of the Power of Dow Jones and Company and America's Most Influential Newspaper*. New York: Macmillan.
- Ross, A. 1997 (Ed.) *No Sweat: Fashion, Free Trade and the Rights of Garment Workers*. New York: Verso.
- Roth, L. M. 2006. *Selling Women Short: Gender, Inequality on Wall Street*. Princeton, NJ: Princeton University Press.
- Rubery, J. 2014. From 'Women and Recession' to 'Women and Austerity': A Framework for Analysis. In M. Karamessini and J. Rubery (Eds.), *Women and Austerity: The Economic Crisis and the Future for Equality* (pp. 17–36). London: Routledge.
- Sachs, A. 2007. A Shopaholic speaks. *Time Entertainment*, 23 April. Retrieved from: <http://content.time.com/time/arts/article/0,8599,1613545,00.html>.
- Said, E. 1979. *Orientalism*. New York: Vintage.
- Sayes, E. 2014. Actor-Network Theory and Methodology: Just What Does it Mean to Say That Nonhumans Have Agency? *Social Studies of Science*, 44(1): 134–149.
- Schama, S. 1997. *The Embarrassment of Riches: An Interpretation of Dutch in the Golden Age*. New York: Vintage.
- Scheuler, L. et al. 2014. Empowering Families in Difficult Times: The Women's Economic Stability Initiative. *Affilia: Journal of Women and Social Work*, 29(3): 353–367.
- Schiffrin, A. 2011. Introduction. In A. Schiffrin (Eds.), *Bad News: How America's Business Press Missed the Story of the Century* (pp. 1–21). New York: New Press.

- Schiffers, S. and Roberts, R. 2015 (Eds.). *The Media and Financial Crises: Comparative and Historical Perspectives*. Abingdon: Routledge.
- Schiffman, A. and Fagan, R. 2013. Are We All Keynesians Now? The US Press and the American Recovery Act of 2009. *Journalism*, 14(2): 151–172.
- Schiller, D. 2007. *How to Think About Information*. Urbana, IL: University of Illinois Press.
- Shahin, S. 2016. Framing ‘Bad News’: Culpability and Innocence in News Coverage of Tragedies. *Journalism Practice*, 10(5): 645–662.
- Shiller, R. 2000. *Irrational Exuberance*. Princeton, NJ: Princeton University Press.
- Singh, A. and Zammit, A. 2000. International Capital Flows: Identifying the Gender Dimension. *World Development*, 28(7): 1249–1268.
- Slater, D. 2011. From Calculation to Alternation: Disentangling Economic Abstractions. *Economy and Society*, 31(2): 234–249.
- Smith, J. A. 2014. Phone interview, 15 May.
- Söderberg, J. and Netznén, A. 2010. When All That Is Theory Melts Into (Hot) Air: Contrasts and Parallels Between Actor Network Theory, Autonomist Marxism and Open Marxism. *Ephemera: Theory and Politics in Organization*, 10(2): 95–118.
- Steans, J. 2002. Global Governance: A Feminist Perspective, in D. Held and A. McGrew (Eds.), *Governing Globalization: Power, Authority and Global Governance* (pp. 87–108). Cambridge: Polity.
- Sterne, J. 2014. ‘What do we want?’ ‘Materiality?’ ‘When do we want it?’ ‘Now!’ In T. Gillespie, P. J. Boczkowski, and K. A. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 119–128). Cambridge, MA: MIT Press.
- Stiglitz, J. 2010. *Freefall: America, Free Markets, and the Sinking of the World Economy*. New York: W. W. Norton.
- Strange, S. 1988. *States and Markets: An Introduction to International Political Economy*. New York: Basil Blackwell.
- Suchman, L. 2014. Mediation and Their Others. In T. Gillespie, P. J. Boczkowski, and K. A. Foot (Eds.), *Media Technologies: Essays on Communication, Materiality, and Society* (pp. 129–137). Cambridge, MA: MIT Press.
- Sullivan, R. 1999. Book review of *Materialist Feminism: A Reader in Class, Difference, and Women’s Lives*. *Canadian Journal of Communication*, 24(3). <https://www.cjc-online.ca/index.php/journal/issue/view/89/showToc>
- ||Superwoman|| 2013, 2 August. Signs you’re a shopaholic. <https://www.youtube.com/watch?v=p3JGqRejaO4>. Retrieved: 10 November 2017.
- Tambini, D. 2010. What are Financial Journalists for? *Journalism Studies*, 11(2): 158–174.
- Templeton, J. M. 1989. Foreword. In *Memoirs Of Extraordinary Popular Delusions and the Madness Of Crowds* (pp. i–iii). London: Templeton Foundation Press.
- Terranova, T. 2013. In T. Scholz (Ed.), *Digital Labor: The Internet As Playground and Factory* (pp. 33–57). New York: Routledge.

- Thompson, P. 2004. The political economy of information in the global financial markets and their insulation from democratic accountability, presented at IAMCR, Porto Alegre, Brazil, 2004.
- Van Slooten, J. L. 2006. Fashionably Indebted: Conspicuous Consumption, Fashion, and Romance in Sophie Kinsella's *Shopaholic* Trilogy. In S. Ferriss and M. Young (Eds.), *Chick Lit: The New Woman's Fiction* (pp. 219–238). New York: Routledge.
- Vulliamy, E. 2016. The nine most common reasons couples get divorced. *The Independent*, 16 February. Last retrieved: 8 December 2017. <http://www.independent.co.uk/life-style/love-sex/the-nine-most-common-reasons-couples-get-divorce-a6875356.html>.
- Walby, S. 2009. *Gender and Financial Crisis*. 9 April. Paris: UNESCO.
- Wallace, D. (n/a). Why Tulips? A Case-study in Historicising the Historical Novel. Retrieved from: <http://extra.shu.ac.uk/wpw/historicising/Wallace.htm>.
- Wendt, L. 1984. *The Wall Street Journal: The Story of Dow Jones and the Nation's Business Newspaper*. Chicago, IL: Rand McNally.
- Yeğenoğlu, M. 1998. *Colonial Fantasies: Towards a Feminist Reading of Orientalism*. Cambridge: Cambridge University Press.
- Zaloom, C. 2006. *Out of the Pits: Traders and Technology from Chicago to London*. Chicago, IL: University of Chicago Press.
- Zelizer, V. 1989. The Social Meaning of Money: 'Special Monies'. *American Journal of Sociology*, 95(2): 342–377.

Filmography and Television

- Arbitrage*. 2012. Bickford, L., Nappi, J., Salerno, R. and Turen, K. (Producers), and Jarecki, N. (Director). USA: Lionsgate.
- The Black Tulip*. 1988. Phillips, R. (Producer). USA: Disney.
- Blue Jasmine*. 2013. Aronson, L., Tenenbaum, S. and Walson, E. (Producer), and Allen, W. (Director). USA: Gravier and Perdido.
- The Botany of Desire*. 2009. Gray, E. (Producer), and Schwarz, M. and Gray, E. (Directors). [television show]. USA: KiKim Media.
- Capitalism: A Love Story*. 2009. [Moore, A. and Moore, M. (Producers), and Moore, M. (Director) US: Overture.
- Chasing Madoff*. 2011. Prosserman, J. (Producer and Director). New York: HBO.
- Confessions of a Shopaholic*. 2009. J. Bruckheimer (Producer), and Hogan, P. J. (Director). US: Touchstone Pictures.
- Floored*. 2009. Gibbons, J., Prosniewski, S. and Smith, J. A. (Producers), and Smith, J. A. (Director). USA: TraderFilm.
- The Pursuit of Happyness*. 2006. Black, T., Blumenthal, J., Lassiter, J., Smith, W. and Tisch, S. (Producers), and Muccino, G. (Director). US: Columbia.
- Tulip Fever*. 2017. Chadwick, J. (Director). US: Weinstein.
- Wall Street*. 1987. Pressman, E. (Producer), Stone, O. (Director). USA: 20th Century Fox.
- Wall Street: Money Never Sleeps*. 2010. Kopeloff, E. and Pressman, E. (Producers), and Stone, O. (Director). USA: 20th Century Fox.

The Wolf of Wall Street. 2013 Aziz, R., DiCaprio, L., McFarland, J., Scorsese, M. and Koskoff, E. T. (Producers), and Scorsese, M. (Director). USA: Red Granite.

Working Girl. 1988. Wick, D. (Producer), Nichols, M. (Director). USA: 20th Century Fox.

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BUBBLES AND MACHINES

Are financial crises embedded in IT? Can gender studies offer insights into financial reporting? Feminist theories and Science and Technology Studies (STS) can enrich a critique of financial crises in capitalism as the author argues their critical, political economic approaches to communication can help in understanding them because they historicize technology and economy and how these are materially embedded. Current literature has neglected finance and capital's gendered aspect and – even – the ideology of a 'crisis'. This book develops four themes: women as resources in financial markets and as producers of values; gender ideology and unequal distribution; machine production and distribution of financial information and the varied actuality of markets. Working with case histories of tulipmania, microcredit, Wall Street reporting and the role of 'screens', *Bubbles and Machines* argues that rather than calling financial crises human-made or inevitable they should be recognized as technological.

POLITICAL ECONOMY | GENDER STUDIES | MEDIA STUDIES

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CRITICAL DIGITAL AND
SOCIAL MEDIA STUDIES

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