Arbitrage, Uncertainty and the New Ethos of Capitalism

Abstract

This paper examines the arbitrageur as a figure who both embodies the new ethos of uncertainty central to 'financialised' capitalism, and exemplifies the issues of ethics and innovation raised by those who now personify what Weber called the 'devotion to the calling of making money'. We begin by providing a brief background to financial 'abstraction' in the economy, and the issues of dissimulation with which this has been associated, before suggesting that engaging creatively with Weber's writings can help us identify uncertainty as key to the character of contemporary financial decision-making. It is against this background that we analyse the arbitrageur as an ideal-type personality who embodies a newly abstract approach to capitalism. This approach is frequently portrayed as unethical, but we suggest it can be associated with an ethics of managing the unknown through an innovative commitment to overcoming limits that has consequences for human life in general.

Keywords: arbitrage, capitalism, uncertainty, Weber, bio-politics

Introduction

The financial crisis of 2007-08 plunged the world's major economies into a prolonged recession that is generally considered to have been the worst economic downturn since the Great Depression of the 1930s. Assessments of the contributory factors that led to it identify various phenomena, but a common focus across many studies is the central role played by the development of increasingly complex trading instruments such as 'derivatives', 'futures' and 'collateralised-debt obligations' within a broader ‘financialisation’ of mature capitalist economies (Prechel and Morris, 2010; Deutschmann, 2011; Czarniawska, 2012; Dawling and Harvie, 2014). From this perspective, it was the explosion of financial trading, facilitated by a multiplicity of innovative instruments, that led to market distortions, irrational and irresponsible speculation, and the destabilisation of productive economies (Knorr Cetina and Preda, 2005: 3; Epstein, 2005: 4; Stiglitz, 2009: 353). Despite the implication of such developments in the financial crisis, however, it is now widely accepted that their growth and significance continues, necessitating further analyses of their nature and implications rather than simply adding to post-hoc rationalisations of ‘what went wrong’ in 2007-8 (Bryan and Rafferty, 2014).

Existing accounts of ‘financialisation’ display considerable diversity in their analytical orientations and focus, but tend to agree on the central features of this phenomenon. The term ‘financial’ signals activities relating to the provision or transfer of liquid capital for profit, while ‘financialisation’ refers to the accrual of profits through such activities rather than through the production and trade of goods and commodities (Krippner, 2005: 174-5). Furthermore, while processes akin to financialisation have a much longer, and more uneven, history than is often acknowledged (Braudel, 1992), there is now a common view that financialisation represents a systemic transformation of mature capitalist economies. This transformation is portrayed as a ‘regime of accumulation’ centred on the creative exploitation of opportunities for profit generated by financial instruments themselves, rather than investments in ‘tangible assets’ (van der Zwan, 2014: 99, 103; Engelen, 2008: 118).

While diverse forms of trading are facilitated by these developments they are prototypically embodied in *arbitrage.* Arbitrage is commonly defined in finance textbooks as ‘locking in a profit by simultaneously entering into transactions in two or more markets’ (Hull, 1997: 14). In its considerably more complex contemporary form, however, this practice draws on the information-generating power of trading rooms to create potential profits by creating associations between *similar* or *related* dimensions of *diverse* securities across a number of markets (Beunza and Stark, 2002: 6; Miyazaki, 2007: 397). Since this involves deconstructing and reconstructing economic phenomena into forms that can be bought and sold, and, as such, is arguably unconcerned with the specifics of material production, arbitrage is often held to represent a potent demonstration of the ‘footloose and flexible’ exploitation of global financial flows for profit (Bryan and Rafferty, 2014; Tosacano, 2014).

Indeed, the significance of arbitrage is such that contemporary financialised capitalism is often referred to as ‘arbitrage capitalism’ (Alvater, 1998: 593; 2005: 6; Merino, Mayper and Tolleson, 2010: 774; Tabb, 2012: 10), and many of the ills of financialisation attributed to it. It is judged to have been central to the institutionalisation of deceit and fraud in the types of trade implicated in the 2007-08 crisis, for example, and to represent a broader pattern of financial obfuscation, tax evasion and deception masquerading as innovation (Stiglitz, 2009: 346-7, 353; Archer, 2012: 35; see Widen, 2012; Farlow, 2013). Even in popular culture, through films such as *Margin Call* (2011) and *Arbitrage* (2012), this type of trading has been associated with the deceitful (if not always illegal) trade of financial products known to be worthless by those selling them.

While there may be a broad consensus on financialised capitalism’s central features and its embodiment in arbitrage, however, contemporary studies frequently exhibit a one-sided focus on its *structural* dimensions. This is evident in explorations of issues such as the macro-level shift in the sector structure of the economy and its effect on the distribution of national income, meso-level shifts in corporate governance, and micro-level developments in credit-financed consumerism and middle-class investment practices (Deutschmann, 2011: 352; see Krippner, 2005; Epstein, 2005; Lapavitsas, 2011; Walby, 2013). A similarly structural focus is evident in neo-Keynesian critiques of financialisation centred on the 'regulatory failure' of states to manage the 'efficient' operation of capitalism in the interests of broader social and economic order (Toscano, 2014; Granter and Tischer, 2014; Bechert, 1996; Minsky, 2008; see Keynes, 1965), and neo-Marxist critiques of financialisation as an intensification of the class-based structural operation of the capitalist mode of production (Arrighi, 2010; Henry, 2012; Monaghan and O'Flynn, 2012).

As valuable as these structurally focused analyses are, they frequently gloss over transformations in *culture,* or reduce these to a neo-liberal facilitation of individual and corporate greed, predation and deceit (Partnoy, 2003). In so doing, they occlude reflection on the degree to which cultural and structural changes may impact upon each other, adding complexity and uncertainty to agents' negotiation of economic challenges and opportunities (Archer, 2012). Within accounts of regulatory failure, for example, the reduction of issues of culture to the dogmatic 'market fundamentalism' of neo-liberalism displaces reflection on how states, confined to territorial borders in contrast to the increasingly global mobility of financial market actors, resemble 'vendors to' rather than 'governors of' a corporate and financial clientele (Ehrenreich, 2009:191; Stiglitz, 2009: 346-7, 353; see Davis, 2009: 171; Deutschmann, 2011: 361). Similarly, neo-Marxist approaches that assume a hegemonic culture of 'mass deception' emergent from inequalities in the ownership of the means of production seem ill-equipped to comprehend either the development of phenomena such as derivatives, which tend to involve 'ownership of exposure to the performance of means of production, not necessarily ownership of the means of production themselves', or the motives and mentalities of those who trade them for a living (Monaghan and O'Flynn, 2012: 370; Bryan and Rafferty, 2014: 890-2).

In contrast, we suggest that reflection on the structural features of contemporary capitalism needs to be supplemented by analysis of its cultural *ethos*, or character, in comparison to that dominant in its earlier forms. This directs attention to the ideas and types of action central to economic activity, and to the value of re-engaging with those classical theorists for whom the essential character of capitalism was a recurring theme. Marx himself was concerned with the ideational dynamism of capitalism, for example, in contrast to some of his neo-Marxist successors who focused exclusively on its structure (Harvey, 2010: 13). Schumpeter's (1975: 82-3) emphasis on 'creative destruction' as 'the essential' character of capitalism also focuses on the ethos of this economic system in terms of its impulse towards innovation; an impulse that 'revolutionises the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one'.

The advantage of focusing on financialisation through this cultural lens is that it enables us to assess what the current era has in common with, and how it differs from, earlier patterns of economic decision-making within capitalism. Yet Marx and Schumpeter are not the only classical theorists of relevance to this approach. Several contemporary analyses have illuminated current transformations in the economic ethos by reassessing what Weber (1992) called the 'spirit of capitalism' (Castells, 1996; Boltanski and Chiapello, 2005; Sennett, 2006; Rose, 2007a; Appadurai, 2012; Lee, 2013). It is this literature that we seek to develop by engaging creatively with Weber's analysis of the role of *uncertainty* for the motivation of action in capitalism, and his suggestion that the character of an economy can require people to develop a worldly calling and a particular personality type if they are to survive and flourish within its parameters.

This approach can, we suggest, cast fresh light on the ethical substratum underpinning financialised capitalism today – a substratum we explore by viewing the arbitrageur as the ideal typical personality characteristic of it. We will argue that, while arbitrage can be seen as a single-minded means of pursuing profit that raises important issues of trust and ethics, it can also be understood to contain an exemplary approach towards managing the unknown via a creative commitment to overcoming economic *and* human limits. It is this characteristic that illuminates the radical differences separating contemporary financial decision-making from earlier economic practices.

The Capitalist Ethos of Uncertainty

How can Weber's analyses, written over a century ago, possibly help us understand the current global 'explosion' in financial leveraging, speculation, tools of 'opaque complexity', and forms of trading 'almost completely removed from other forms of property, capital, and assets' (Appadurai, 2012: 4)? In answering this question, it is first worth pointing out that various theorists have found Weber useful in analogous ways. Castells (1996: 163-6, 193, 199), for example, argues that a clear ethos remains evident in capitalism even if its contemporary spirit no longer reflects the hierarchical and bureaucratic models of earlier periods. For Castells, exploring Weber's spirit of capitalism enables us to see how this ethos has morphed into a new 'spirit of informationalism' that has as its organisational expression de-centralised, self-directed units of entrepreneurial flexibility. Co-ordinated across a multiplicity of financialised contexts, these units develop multiple rational strategies in order to gather the information necessary to minimise the risks of working within volatile global markets (for related analyses, see Sennett, 2006: 3, 16; Boltanski and Chiapello, 2005: 107).

Developing this engagement with Weberian themes, Knight's (2006: 19-20) analysis has important implications for examining the capacity of these flexible, information-collecting responses to cope not only with increased *risk* but also with the growing, and in our view crucial, problem of *uncertainty* in the contemporary era. For Knight, risk pertains to phenomena 'susceptible of measurement', suggesting the calculable environments of Weber's account of early modern rational capitalism. Uncertainty, in contrast, refers to matters *immeasurable* and is dealt with by Weber's writings on why Calvinist entrepreneurs immersed themselves in worldly activity.

Knight's argument develops by addressing the changing nature of capitalism in the early 20th century, and suggests that, while the strategies of corporations identified by Castells and others are well placed to respond to economic *risks*, the problems and opportunities associated with *uncertainty* can never be managed by plans addressed purely towards calculable probabilities (Lee, 2013: 64). Uncertainty had already become so central to financial capital, even a century ago, that it demanded a qualitatively new approach from those seeking to flourish within this changed economic ethos.

Exploring further how contemporary corporations and enterprises do now seek to cope with the unknown, Appadurai (2012) suggests there has been a reversal of the relationship between rational risk and uncertainty mapped out in the Protestant Ethic thesis. For Weber, the past Calvinist confrontation with uncertainty was confined to the issue of *other-worldly* salvation evident in the doctrine of pre-destination (a doctrine that held individuals could not know whether they were saved or damned).

Believers sought to cope with this uncertainty by immersing themselves in the knowable realm of rational, albeit risky, worldly activity; activity that helped give rise to rational capitalism. In this context, while uncertainty about salvation remained, diversion could be had through immersing the self within the calculable sphere of commercial activities. Prices, margins, exchanges and profits could all be recorded, assessed and evaluated, providing the conscientious entrepreneur with a sense of control that came from deploying rational strategies in dealing with market-based risks.

In the present era of financialised capitalism, however, Appadurai (2012: 9) suggests that instead of this-worldly rationality compensating for other-worldly (salvation) uncertainty, the huge growth of uncertainty *within* the economy has prompted individuals to adopt what is essentially a religious belief in capitalism manifest via a ‘general, absolute, and apparently transcendent faith in the market’ (Appadurai, 2012: 9). Weber’s rational secularising spirit of capitalism has for Appadurai (2012: 5-6) – as well as for several other analysts - given way ‘to an entirely different spirit in which finance has become a magical space’, characterised by an irrational ‘market fundamentalism’ (Ehrenreich, 2009:191; Stiglitz, 2009: 346-7, 353; Comaroff and Comaroff, 2001: 25).

The idea that there has been a ‘religious reversal’ of the relationship between capitalism and secularisation is a provocative way of developing Weber’s writings, but overlooks one of their key features. Appadurai’s (2012: 8) claim that financialised capitalism is associated with renewed faith rests on similarities between today’s Wall Street traders and the ‘charismatic confidence of Calvin himself (in his certainty of grace and thus in his endorsement of the organisation of all of life to the glory of God)’. What this ignores is Weber’s observation that *on-going uncertainty,* caused by the doctrine of predestination and manifest via salvation anxiety, motivated Calvin's followers to persist in a sustained engagement with rational work. Uncertainty was not banished by immersion in economic action, but provided a deep backdrop to *all* their activities. Downplaying the significance of uncertainty, as Appadurai does, also crucially ignores its growing role in the contemporary generation of profit.

In contrast, Knight (2006: lxii, 18) holds that rational engagements with risk can only go so far in the pursuit of profit, since increasingly effective calculative decision-making within competitive markets leads eventually to the elimination of profit as money costs equate ever more closely to selling prices. For him, it is increasingly in the sphere of the *unknowns* and *unforeseeables* that financial surpluses are generated. This point is crucial, and we build on it by suggesting that while rational decision-making still has an important role in generating profits, and in the work involved in arbitrage, it is nevertheless the case that arbitrageurs operate in a situation of Knightian uncertainty. What we mean by this is that they seek to secure profits through an *interpretive*, *reflexive* and *theory-driven* process expressive of the speculative, future-oriented engagement with uncertainty that is the defining movement of financial capital today (Rose, 2007a: 31, 48). As Lee (2013: 63) suggests, the uncertainty Weber indicated motivated Calvinist involvement in enterprise should be now seen as a 'a fundamental premise and structuring principle' of capitalism, evident in new forms of 'decision-making under uncertainty'. These forms move beyond the instrumental rationalisation of early modern capitalism in their pursuit of profit (requiring theoretically innovative and creative rather than merely rational and calculative approaches), *without* returning to religion or magic.

Our analysis has thus far focused on the relationship between risk and uncertainty, and a potential shift towards the importance of the latter, as an initial step in identifying the ethos of contemporary capitalism. This approach can now be developed by exploring how a certain type of personality, the arbitrageur, may embody a creative approach to exploiting uncertainty in a particular orientation to what Weber (1992: 71-2), with reference to an earlier type of capitalist entrepreneur, called the singular ‘devotion to the calling of making money’.

Arbitrage, the ‘Worldly Calling of Money’ and Personality

The worldly calling to make money in early modern capitalism was for Weber exemplified by the personality of the (Puritan) entrepreneur. Rational action as well as worldly asceticism was central to this figure, but Weber also recognised that the intensive profit-driven individualism and commitment to innovation exhibited by early modern entrepreneurs was such that they sometimes exhibited ‘immunity from the ubiquitous drive for bureaucratic rule’ (Ebner, 2005: 262-3; Finch, 2007). While Weber depicted modernity as an ‘iron cage’ of rationalisation, then, his conception of the spirit of capitalism embodied within these personalities acknowledged Simmel’s concern with how life involves a constant ‘reaching beyond’ current boundaries into circumstances marked by uncertainty. It is this dimension of Weber’s work that is echoed in Merton’s (1965) argument that ‘innovation’ rather than rationally adaptive action constitutes a positive and creative response to the uncertainties associated with capitalism (Deutschmann, 2011: 373.)

Weber’s suggestion that it takes a particular type of personality to respond to the calling embedded within early modern capitalism has been reiterated in the changed circumstances of the current era. It is implicit in Castells’s (1996: 198) account of how the dissolution of large corporations into webs of multidirectional networks requires informational entrepreneurs capable of identifying and exploiting opportunities for the advance of their interests. Sennett (2006: 3) also argues that 'only a certain kind of person', adaptable and at ease with change, can prosper in the new capitalism, while Boltanski and Chiapello (2005: 107) identify the 'connexionist' (a personality characterised by innovation, networking and entrepreneurship) as the exemplar of contemporary change (see also du Gay and Morgan, 2013; Cooper, 2008: 34). Against this background, it becomes interesting to ask what characteristics typify the arbitrageur, the individual who perhaps most obviously embodies the singular devotion to the calling of making money in the current era.

There is broad general acknowledgement that arbitrage today is a highly complex, technically demanding form of trading and 'the preserve of an elite group of market professionals' (Beunza, Hardie and MacKenzie, 2006: 735, 722), though the economic literature on the subject expresses inconsistent understandings of what it involves (Hardie, 2004: 239-40; see Lilley and Lightfoot, 2014; Shleifer and Vishny, 1997). In what follows, drawing on a range of ethnographically and empirically-informed studies of arbitrageurs, we highlight their ideal typical characteristics, focusing on their orientation to innovation, their reflexive engagement with uncertainty and their 'what if' future-orientedness.

It is important to note that not all analysts agree with the suggestion that arbitrageurs display an orientation to innovation. Hardie (2004: 240, 242), for one, denies this, returning instead to the standard financial textbook vision of arbitrageurs as traders seeking to exploit the 'mispricing' of assets across markets (the price of anything being the 'equilibrium point' of supply and demand), thus seeing them as performing an essentially *rationalising* rather than innovative role with regard to market 'inefficiencies' (MacKenzie, 2003: 349). This accords with Hull's (1997: 10-12) distinction between three types of derivatives traders: *hedgers*, who try to limit exposure to risks they already face; *speculators*, who bet on whether prices will go up or down; and *arbitrageurs*, who seek 'riskless profit by entering simultaneously into transactions in two or more markets'. While Hardie argues that only the latter should properly be called 'arbitrage', however, a number of influential analyses of arbitrage make it clear that this is certainly not how it is understood and practiced by arbitrageurs today.

MacKenzie (2003: 353) and Beunza and Stark (2004: 374), for example, stress that 'real-world' arbitrage involves a great deal of risk, most notably exposure to substantial losses. Miyazaki's (2007: 401) ethnographic study of Japanese derivatives traders reinforces this further: 'No trader I knew actually believed that their arbitrage operations were risk free'. While Miyazaki acknowledges that something akin to Hull's distinction between arbitrageurs and speculators was important for how these traders conceptualised their own activity – all of them refuted the suggestion that they were engaged in speculation – he also notes that, in practice, this was not clear cut at all. Rather, the distinction between arbitrage and speculation served as 'an important marker of their particular epistemological stance, identity and ethical commitment'; a marker that elevated arbitrage to a sort of calling, albeit one expressive of the ambiguity of arbitrage, not least with regard to risk (Miyazaki, 2007: 407).

This ambiguous relationship to risk is central to those ethnographic studies that emphasise the inherently innovative orientation of arbitrageurs. Just as Knight (2006) stressed that entrepreneurs cannot simply exploit already existing opportunities for profit in a rational marketplace but must also *create* them, so too arbitrageurs today construct and calibrate unexpected associations between assets to facilitate profit in an experimental, theory-driven process (Beunza and Stark, 2005: 86; Beunza, Hardie and MacKenzie, 2006: 733; Finch, 2007: 134; Miyazaki, 2013: 8). Here, rather than being risk-averse correctors of irrational ‘mispricing’, arbitrageurs ‘operate in an environment of Knightian uncertainty’ (Beunza and Stark, 2007). Risk is an *inherent* component of most acts of arbitrage, and arbitrageurs seek to manage it, but the key characteristic of their pursuit of a profit is the creative leveraging of opportunities emergent from uncertainty rather than the exploitation of gaps in other traders’ knowledge. This is not to underplay the significance of knowledge. As Beunza and Stark (2002) note, the vast array of information available to Wall Street arbitrageurs today, displayed on the walls of flat screens in front of them in their trading rooms, is vital for helping them make sense of informational patterns (e.g. matching data to models, making associations). Nevertheless, Beunza and Stark (2002) also quote Jon Corzine, then-CEO of Goldman Sachs, noting that, today, ‘No one really generates a long-term competitive edge just because they know something that someone else doesn’t’. For them, arbitrageurs exploit knowledge but they are also *explorers*, engaged in the kind of ‘search where you don’t know what you’re looking for but will recognise it when you find it’ (Beunza and Stark, 2002: 5).

Thus, contrary to ethnographies of trading rooms that depict them as either hyper-rational information gathering centres or emotionally charged bear-pits (Lilley and Lightfoot, 2014: 86; see Zaloom, 2006; Ho, 2009), Beunza and Stark’s analyses foreground arbitrageurs’ balancing of risk management with the creative generation of profit through a reflexive engagement with uncertainty. Arbitrageurs characteristically ‘slice and dice’ their exposure to companies (thus managing risk), but do so through a creative disassociation of stocks and properties from each other. This is not about breaking a company up into different, more or less profitable *divisions*, as corporate traders do, but determining its different *properties*, and then positing associations, which can be reinforced by various forms of hedging, and using of instruments such as derivatives, options, and futures. A trade involving a company such as Boeing, for example, might here disaggregate it (on the basis of theoretically driven judgments about uncertain future trends) into a technological, aviation, consumer travel or American stock, facilitating a very broad range of potential associations with other companies, or elements of companies, with 'similar' properties, such as Microsoft, Northrop, Disney or the S&P 500 index (Beunza and Stark, 2004: 376). As a creative engagement with 'heterogeneity, ambiguity and path variety' (Ailon, 2011: 141-3), arbitrage is in this account attuned to what Soros (2009) calls the new 'paradigm of reflexivity' now shaping financial markets rather than the 'old paradigm' of equilibrium.

It is not that the rational management of risk becomes unimportant, then, but, rather, that arbitrage characteristically embodies a reflexive, interpretive and, in the face of uncertainty, *bold* trading strategy: for all the 'trimmings, hedging, and cutting, this is not a trading strategy for the faint of heart' (Beunza and Stark: 2004: 17). The broader cultural significance of this focus is suggested by its parallels with accounts of the relationship between financial investment and the 'spirit of biocapital', and the affinities that exist between neo-liberal economics, arbitrage and current developments in the life sciences and bio-tech industries. These suggest that we now exist within an innovation based economy where elements of life itself can be disaggregated, reconstructed and subject to capitalisation via future-oriented genetic, microbial and cellular interventions (Rose, 2007a: 31, 40, 52, 48; 2007b; Cooper, 2008: 17-18, 13, 19, 24). Such developments recall Marx's suggestion that the 'drive to overcome limits and relocate in the speculative future is the defining movement of [financial] capital' (Rose, 2007a: 31, 48; Cooper, 2008: 17-18, 13, 19), as does arbitrageurs' meta-reflexive approach to the world open to the profitable possibilities that inhere within uncertainty (Miyazaki, 2013: 151). These characteristically centre around ‘what if’ questions, as can be seen in the example of ‘merger arbitrage’.

As Beunza and Stark (2004: 377) explain, merger arbitrage can happen at the point when two companies announce their intention to merge. Instead of involving a rational assessment of the pros and cons of these interests merging on a basis approximating to their current composition, however, arbitrageurs often ask ‘what if’ questions based on uncertain predictions about the combination and re-constitution of only limited aspects of their business. Excluding from these ‘what if’ equations those elements of the businesses they have no interest in, arbitrageurs may here engage in trades that ‘long’ the index for these undesirable properties (placing their significance into the uncertain future) and look to realise swifter profits on associations they make between other elements of the companies in relation to other stocks in other markets. Such an approach does not just involve reflecting on the distinctive elements of companies, but also entails a form of reflexivity enacted in relation to the wider market possibilities they raise.

Going beyond the parameters of rational action, then, the work of arbitrageurs is directed toward breaking down ‘the continuities between past, present and future trades by dismantling narratives of success or failure’, in an economy of information and speed, where they have to be adept at pattern-recognition and *re-cognition*, reconceptualising situations and making novel and previously unanticipated associations (Beunza and Stark, 2004: 369, 372-3; Zaloom, 2006: 128; Lilley and Lightfoot, 2014: 79). It is this ‘creative destruction’ that makes differences and similarities relative and theory-dependent, allowing arbitrage to be extended to virtually anything (Miyazaki, 2013: 8).

Arbitrage and Doubled Existence

Suggesting that the ideal-type personality and activities of arbitrageurs have at their core a meta-reflexivity in relation to uncertainty has implications not only for how these individuals navigate financial markets, but also for how they relate to other people. Indeed, for commentators such as Stiglitz (2009), arbitrageurs constitute a new and dangerous class of the financial elite, able to operate outside the parameters that constrain other members of society, and possessed of the capacity to destabilise national and international economies. Weber's (1992) emphasis on the robust individualism of the capitalist entrepreneur, and its disruptive consequences for established social and cultural orders, is of note here, as is Simmel's (1971) association of modern individualism with multiple 'doubled existences', wherein individuals are never fully embedded within one social group, but tend towards multiple, time-limited and conditional connections with others.

In looking to identify the particular ethic that underpins arbitrage in Japan, Miyazaki (2007: 406) talks of such 'doubledness', while, with reference to Wall Street, Beunza and Stark (2002: 13) identify arbitrageurs' 'competitive' and 'fiercely individualistic' characteristics. Quoting a trading room manager's depiction of arbitrageurs as 'anti-social', however, they also imply that the way in which a trading room is organised suggests a more 'doubled' form of existence. Successful trading rooms require an interactive sharing and testing of ideas, so arbitrageurs are grouped in ways that facilitate this; on the other hand, they are moved around frequently, so they do not become too settled into particular groups – only the trading room manager remains in one place, at the centre of the room (Beunza and Stark, 2002: 14).

This to some degree calls into question MacKenzie's (2003: 371, 373) emphasis on what he sees as the potentially strong social links between arbitrageurs.

Focusing on how arbitrageurs are influenced by ‘slim’ and exclusive interpersonal networks of their own kind (Granovetter, 1985), he highlights how the information exchanged within these networks can prompt extreme price movements and the possibility of ‘arbitrage flight’, where the selling off of assets creates panic and potential financial crises impacting on wider communities (see also Knorr Cetina and Bruegger, 2002: 907). From this perspective, arbitrage is an inherently ‘social’ thing, even if associations between arbitrageurs are potentially free of the constraints of wider societal norms (Beunza, Hardie and MacKenzie, 2006: 739, 742). This depiction is challenged, however, by Callon’s (1998: 2) argument that arbitrageurs are disembedded from even slim social networks as well as from wider societal norms as a consequence of their work distancing them from stable social and cultural forms (Arminen, 2010: 171-4; Preda, 2009).

Developing Callon’s account, Beunza and Stark (2004: 396-7) suggest arbitrageurs ‘perform’ their trades through a reflexive awareness of the key role of their own innovation in recursively-constructed financial markets. Arbitrage here entails a ‘reflexive social distancing’ from other arbitrageurs, from those involved in producing the goods and services that are traded, and from the wider social, economic and political consequences of such trades (Ailon, 2014: 615-16). This is aided by the technical properties of digital networks: transactions within financial markets utilise technologies characterised by interconnectivity, simultaneity, and decentralised access, facilitating the multiplication of fast-changing transactions, a lengthening of transaction chains (i.e. the distance between instrument and underlying asset), and an increase in the number of participants involved in trades (Sassen, 2005: 18; Beunza and Stark, 2004). It is also aided by the *heterarchical* organisational settings within trading rooms, which mitigate against arbitrageurs being drawn into forms of sociality that might compromise reflexivity as a key 'tool of the trade' (Beunza and Stark, 2005: 89; 2004).

The reflexive management of *trust* in the trading room is also indicative of the limits of arbitrageurs' social embeddedness, and further evidence of their 'doubled existences'. Trust is needed when an arbitrage position looks set to yield losses that will turn into subsequent profit only if the theory underpinning it is correct (Beunza, Hardie and MacKenzie, 2006: 722). While in trading circles it is said that the 'white sheet' (profit and loss statistics) does not lie, the arbitrageur may make the judgement it does (at least for the time being). In such cases, the trust required by arbitrageurs is neither automatic (managers frequently force arbitrageurs to abandon a position at this point), rational (it is a matter of interpretation rather than simple calculation), or a matter of a reciprocal relation (trust is given on the basis of a conditional assessment of an arbitrageur's particular interpretive capacities and the underpinning theory, rather than reflecting an underlying sociality) (Beunza, Hardie and MacKenzie, 2006: 734-5). If trust within the trading room is conditional in the face of uncertainty, however, outside it arbitrageurs' doubled existences generate notable *distrust* and accusations that the contemporary capitalist ethos of uncertainty is harnessed to unethical practices.

Arbitrage and Ethics

We have already noted that many of the ills of financialisation have been attributed specifically to arbitrage (Stiglitz, 2009: 346-7, 353; Archer, 2012: 35; Farlow, 2013). Widen's (2012) account of the 'arbitrage of truth' in reference to phenomena such as Greece's utilisation of derivatives and other sophisticated financial products to mask the extent of its financial obligations, in collusion with Wall Street, is representative of such interpretations. ‘Arbitrage’ here becomes a label for financial activity that is technically legal but inherently fraudulent, thereby making arbitrageurs the yardstick for all that is judged ‘unethical’ about contemporary financialisation.

Harrington’s (2012) sociological account of a wide range of types of fraud and its perpetrators helps highlight the inappropriateness of such claims, not least in her focus on the highly instrumental nature of fraud, which utilises deceit with the intent of obtaining monies under false pretences (see also Tade and Aliyu, 2011; Baker and Faulkner, 2004: 92). Certain types of fraud may indeed be facilitated by instruments that are now central to financialised capitalism (Lapavitsas, 2011; Bryan and Rafferty, 2014), but this does not mean that the calculations and actions specific to arbitrage can be classified in this way (individuals may pose fraudulently as arbitrageurs but that is another matter).

In pursuing the issue of arbitrage and ethics further, however, it is useful to revisit Weber once more in terms of the ideal typical distinctions he draws between the (Puritan) entrepreneur, and the ‘unscrupulous speculators’ that exist at all periods of economic history (Preda, 2009). Weber’s depiction of entrepreneurs emphasises their conscientious approach towards business based upon honesty and the pursuit of profit. As speculators whose creation and use of complex financial instruments has been accused of distorting markets, arbitrageurs appear to stand in stark opposition to this model entrepreneur (Stiglitz, 2009: 353; Knorr Cetina and Preda, 2005: 3). Even if arbitrageurs do not engage in a fraudulent acquisition of resources, then, this distinction might be taken to suggest that they could be identified as an undesirable element of an increasingly abstract capitalism. Indeed, Merton’s (1965) association of innovation under conditions of uncertainty with actions at the verge of the law might seem to apply to arbitrageurs, particularly in the context of their reflexive social distancing from wider norms and groups.

Having made this point, however, it is important to note that Weber's conception of 'ethics' – explored in relation to the Puritan entrepreneur as well as in relation to such issues as the vocation of politics – does not refer to issues of 'right and wrong, of deceit or transparency, of honesty or probity' (Appadurai, 2012:7). Instead, it signals a *systematic co-ordination of action in relation to a deeply held commitment*. This is something evident in many specific acts of arbitrage: despite the fact that arbitrage may reflect emotional detachment from a particular trade, and embody a social distancing from its broader human context, that trade only becomes possible because of a strong attachment to the evaluative principle that makes it an opportunity for profit: 'to be opportunistic you must be committed to a principle' (Beunza and Stark: 2004: 7). Beyond specific trades, nonetheless, arbitrage takes on a broader ethical quality.

Here, we can note Miyazaki's (2013: 110) emphasis on how the Japanese arbitrageurs he studied had such a faith in arbitrage that they routinely deployed it systematically to all areas of their lives, as in the case of an arbitrageur who saw 'life decisions such as marriage and career options as arbitrageable'. The application of arbitrage even to intimate relations such as marriage suggests a thoroughgoing reflexive social distancing, which was also extended to matters of spirituality. Many of these arbitrageurs explored religious traditions as diverse as Christianity and Zen Buddhism, with their engagements shaped by the ambiguity and relativism that permeated their practice of arbitrage (Miyazaki, 213: 123-5). Contrary to Appadurai's (2012) claim for a 'religious reversal' of Weber's vision relationship between capitalism and secularisation, spirituality, like everything else, becomes arbitrageable.

Indeed, what Miyazaki (2013) calls the ‘seemingly infinite extensibility’ of the relativist and comparative perspective of arbitrage helps account for its broader usage in contemporary capitalist cultures: the notion of ‘arbitrage’ here may be far removed from the actual practice of arbitrageurs, but its utilisation signals a resonance with perceptions of an underlying ethos specific to financialised capitalism. In this context, arbitrage may be viewed at its most general as the utilisation of innovation, reflexivity and ethical relativism – apparent within but also outside financial transactions – in order to negotiate multiple ‘doubled existences’ in conditions of Knightian uncertainty (Miyazaki, 2013: 8; Weber, 1992: 71-2; Simmel, 1971). Here, Seabrooke’s (2014) deployment of the notion of ‘arbitrage’ to capture transnational professionals’ strategic negotiation of identities across diverse social groupings takes it even further away from the actual financial practices of arbitrageurs, but it nonetheless captures the reflexive and relativist management of uncertainty central to it as an ethic.

Conclusion

We began by noting the widespread recognition of the importance of financialisation within mature capitalist economies, and its prototypical embodiment in arbitrage as a form of trading attuned to the creative exploitation of opportunities for profit via the utilisation of financial tools in ways increasingly abstracted from the tangible assets of the productive economy. Challenging the relative lack of attention to the cultural dimensions of these developments, we suggested that the arbitrageur can be understood to embody a new ethos of uncertainty that has become central to financialised capitalism. Relatedly, we also argued that this figure exemplifies the issues of ethics and innovation raised by those who now personify what Weber

(1992), with reference to an earlier ideal typical representation of the capitalist entrepreneur, called the ‘devotion to the calling of making money’.

In so doing we have not sought to minimise the importance of those structural transformations of capitalist economies that tend to dominate assessments of financialisation, but to utilise the identification of the arbitrageur as a contemporary analogue to Weber’s earlier ideal type as a way of casting fresh light on how cultural and structural transformations can combine to facilitate new patterns of decision-making in financial markets. These patterns cannot be reduced to simple narratives of the greed, deceit and predation of ‘casino capitalism’, but, rather, they reflect a particular ethical engagement with the increased opportunity structures characteristic of contemporary life.

Indeed, the practice of arbitrage provides an interesting route into questions about the fate of ethics in the current era. The very way in which arbitrageurs ‘perform’ economics operates through a meta-reflexive perspective on forging opportunities for profit while traversing forms, networks and transaction chains. Distanced as it is from social values or groups, this suggests there is an ethical relativism underpinning arbitrage, rendering *everything* ‘arbitrary’, since the different evaluative devices arbitrageurs utilise for financial gain can be applied to the uncertainties and opportunities of life more broadly (Miyazaki, 2013: 38, 63; Beunza and Stark, 2005: 87). Here, arbitrage is more than a trading strategy, and suggestive of ‘a principle of capitalism, of life, and even of mind’ within the ‘new telos of creative uncertainty’ (Miyazaki, 2013: 38,1; O’Malley, 2004: 174). From this point of view, the arbitrageur cannot embody the scrupulous honesty of Weber’s entrepreneur, but does represent an analogous embrace of uncertainty via a worldly ethic.

This worldly ethic can, indeed, be associated with the future-oriented, speculative ambition to overcome limits evident within a broader ‘bioeconomics’ where all life’s possibilities are open to conjecture and capitalisation (Rose, 2007a; Cooper, 2008; Lilley and Papadopolous, 2010). It can also be linked to Marx’s (1974) argument that economic activity offers humans the chance to add to the social forms or dimensions in which they exist rather than being confined purely to the ‘realm of necessity’ (see Marx and Engels, 1970: 48-9). So too, albeit from a very different perspective, it can be linked to Simmel’s (1990) observation that the money economy, irrespective of its limitations, enables individuals to liberate themselves from traditional ties and participate in forms of life that could not even have existed in the pre-modern era. As such, while the arbitrageur’s calling speaks directly to the transformations of contemporary financialised capitalism, it also resonates with the broader transformational possibilities long held to be central to modern economic life.

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