



The entrepreneurial function and the capture of value: Using Kirzner to understand contemporary capitalism*

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abstract

This paper suggests that contemporary capitalism is increasingly shaped by a ‘finders-keepers’ model of entrepreneurship. Intellectually, this model has its origins in the Austrian School of Economics and, as such, it has been bolstered by the neo-liberal turn of post-fordism. Its greatest proponent is Kirzner. The model is ideological in that it attempts to legitimate entrepreneurial capture as the ‘ultimate knowledge’ despite the fact that it does not create, innovate, or produce. It is also increasingly engaged in the use of property rights as a means of capturing value produced beyond the corporation through ‘free’ labour and the enclosing of skills and knowledge developed elsewhere. As such, it encourages a society based in secrecy and mistrust.

Introduction

This paper examines a central figure in the modern neo-liberal economy. This figure supposedly acts as a catalyst of resource allocation, a disseminator of knowledge, a key to growth, and to competition. The figure’s qualities are at the core of the recent attempts to morally rejuvenate the subject in a bid to reinvigorate capitalism by embedding responsibility, risk-taking, self-sufficiency, and creativity within each of us. Of course, this figure is the entrepreneur. For neo-liberals, the entrepreneur occupies a central role within capitalism – he or

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she is the ideal of what capitalist subjectivity should look like – if you will, this figure is the superhero of the enterprise society (Hayek, 1945; 1948; Mises, 1996; Drucker, 1984).

What follows will examine the role of the entrepreneur in post-fordism (Vercellone, 2007). It suggests that this role is ideologically used to justify a new regime of accumulation. This regime is more unequal, appears to be increasingly located in rent as opposed to the search for profit driven efficiencies within the production process and, somewhat unexpectedly, is characterized by capital's growing un-interest in the how or where of production in favour of the capture of already existing value. As we shall see, this shift has led to the argument that we are experiencing a new form of subsumption (Hardt and Negri, 2000: 255) as management moves beyond the firm and uses the firm as a shell to capture value. This value is often created in the common or, from the perspective of a specific corporation, by 'free' labour and the extraction of such value is legitimated by a 'finders-keepers' (Burczak, 2002) model of entrepreneurship.

It will be argued that this 'entrepreneurial society' (Drucker, 1984) can be analytically understood better by a return to the entrepreneurial function described by Kirzner – that is, one where existing opportunities and value are captured by the entrepreneur rather than created or produced by them. This implies something of a break with recent aspects of entrepreneurship studies which have been positing an entrepreneurship located in the work of Schumpeter or Knight. In these renditions the entrepreneur is productive in creating or imagining the future (see Foss *et al.*, 2007; Klein, 2008; Chiles *et al.*, 2007; 2010). In opposition to this, what follows re-affirms a Kirzner-based 'discovery' theory of entrepreneurship despite a contemporary turn against his work within entrepreneurship literatures (see Alavez and Barney, 2006; Burczak, 2002; Shane and Venkataraman, 2000).

The paper argues that, analytically, the notion of 'capture' is a better way of understanding entrepreneurship. This is because emerging tendencies in the post-Fordist regime of accumulation suggest value is ever more created beyond the formal organization which then uses its resources to capture this value. For example, consider the following five instances of such capture: innovation increasingly occurs amongst customers before being integrated into the corporation (Oliveira and von Hippel, 2010); peer review commons production is increasingly prevalent and harnessed by firms e.g. open source software is often developed by peer review of ongoing work which is then incorporated into organizations (Benkler, 2002); there is the growing corporate use of litigation to protect property rights rather than creating anew (Perelman, 2002); the development of copyleft and other legal forms were deemed necessary to halt the

capturing of existing value by corporations e.g. in the publishing or computer software areas the product is often kept free to users by asking them to agree to legal terms and conditions prohibiting privatizing the initial work in later products produced on the basis of this knowledge (Lerner and Triole, 2005; O'Mahony, 2003); and through internships and other forms, labour value is 'freely' extracted by corporations (Perlin, 2011). This is the new regime and entrepreneurial capture not creation is in its heart.

The corporate emphasis on entrepreneurial capture is intimately linked to two tendencies – namely, the increased development of skills and knowledge created outside the organization e.g. the corporate exploitation of value created via open-source programmers in their spare time (Lerner and Tirole, 2005) and the increased use of property rights to capture value created beyond the organization. This second development stifles use and hence productivity – as we shall see it is here that Kirzner's analysis is lacking. These developments have led to capital's (relative) declining interest in the immediate production process which is in contrast to earlier regimes of accumulation wherein profits often came from efficiencies developed within the factory (Braverman, 1974).

This shift suggests a move towards an increasing subsumption of society to capital (Hardt and Negri, 2000; Tronti, 1970). Today, profits emerge more from the rents in the manner Smith (1981: 160) outlined for landlords in the pre-capitalist past. That is, where the tenant improved the land and the landlord extracted this value via property rights and charged higher rents to tenants for the improvements they themselves had made (Smith 1981). Using Kirzner's notion of 'capture', this paper will argue that these developments undermine claims that entrepreneurship can have an emancipatory role into the future (Rindova *et al.*, 2009; Calas *et al.*, 2009) or a productive or innovative role (Foss *et al.*, 2007; Klein, 2008). Central to this is the use of property rights to limit access to knowledge and value that is already there. Thus knowledge that is already disseminated is captured and monopolized via this function thereby preventing the widest spread of use and hence of potentiality.

What follows will argue that because of its emphasis on creation, contemporary entrepreneurial studies are missing this capture. However it will also go a step further to argue that although analytically Kirzner's notion of capture provides an accurate image of the relationship between entrepreneurship and creativity, the political role of creativity within contemporary capitalism needs to be considered outside entrepreneurship studies, within post-workerist scholarship. It is the pleasure, joy, and the refusal of work which the paper does through the use of capitalist social relations that is driving the creation currently being captured e.g. elements of open-source software. As we will see later in the paper, today

innovation and entrepreneurial property rights are political enemies because the increasing resort to and expansion of property rights will limit and hamper innovation – the ‘knowledge’ economy and property rights are in conflict. However, before we reject entrepreneurship out of hand, we need to examine the role accord to the entrepreneur in neo-liberal thought.

The entrepreneur and moral rejuvenation

Austrian neo-liberalism criticizes mainstream economics because of the role it gives to market equilibrium (see Hayek, 1948: 33-56). In essence, the claim is that in equilibrium the processual nature of the economy is denied, people are made passive and individual decision making, wherein the outcome of today is based on a decision made yesterday, is underplayed (Hayek, 1948: 94-99; Kirzner, 1973a: 30-43; 1997). In short, the contention is that the market is dynamic, people have incomplete knowledge, and the future is unknown hence people need to exhibit agency, spontaneity, and ingenuity in order to survive (Hayek, 1945; 1948). The entrepreneur is the epitome of this active subjectivity.

The core building blocks of this position are based on the work of Hayek and of Mises. Hayek’s emphasis on the incomplete nature of knowledge, on spontaneity, and an unknowable future implies we can never achieve steady-state equilibrium. Nevertheless, through our actions and constant learning we can move towards it by trial and error (Hayek, 1948: 100). For example, in the used car market we will learn from the actions of others and from our previous experiences e.g. what is too expensive, what is cheap, what is correctly priced – but of course what price we offer is based on an unknowable anticipation of the future and is therefore entrepreneurial. Within neo-liberal theory this makes the entrepreneur central to capitalism because s/he acts as a disseminator of knowledge. By seeing where there are differences in the market, the entrepreneur disseminates knowledge to other actors about where resources are under-valued and where high profits can be achieved, thereby shifting the allocation of resources. However, if they can, entrepreneurs will avoid spreading this knowledge via property rights, collusion, sabotage and other methods (Metcalf, 2006; Foss *et al.*, 2007). Thus entrepreneurship is always double-edged and inherently contradictory because dissemination is accompanied by the tendency towards monopoly, secrecy, and a lack of trust.

For Mises, entrepreneurship is a human trait. In different places and circumstances we are all essentially entrepreneurial¹. He provides this definition of the entrepreneur:

In any real and living economy every actor is always an entrepreneur and a speculator...The function is not the particular feature of a special group or class of men, it is inherent in every action and burdens every actor. In embodying this function in an imaginary figure, we resort to a methodological makeshift. (1996: 252)

Mises centralizes two aspects of entrepreneurship. Firstly, the entrepreneur does not need capital nor take risk (he is somewhat contradictory on this point, see Foss and Klein, 2010). He or she must access capital but the capital and risk are owned by the capitalist, not the entrepreneur (Mises, 1996: 253; Burczak, 2002) – as we will see, Kirzner makes a similar argument. Secondly (prefiguring Becker, 1962), ontologically we are all entrepreneurs because of time – we all have to anticipate the future. For example, the labourer invests in his or her skills in an entrepreneurial anticipation of future needs (Mises, 1996: 254). Temporality and anticipation hold for all and, as a result, so does entrepreneurship – the fact that there is no risk involved nor capital required, ensures an entrepreneurial persona is open to everyone provided they embrace it or are forced to embrace it (see also Burczak, 2002). Ideologically, such a proposition implies that the conflict between capital and labour is obliterated because all can act entrepreneurially so there is no necessary tension between labour and capital – all there is, is an equality of opportunity.

One of the key characteristics of post-fordism or an entrepreneurial society is the tendency to extend entrepreneurial activity to more and more areas of social life (Foucault, 2007; Drucker, 1984). This is a fundamental element of the recent state driven neo-liberal turn. The Austrians argue that the entrepreneurial function should be made to grow so that it becomes the key social relation and that it and competition are the most important motifs of capitalism (Mises, 1996; Röpke, 1948, 1992). For them, enabling this extension was central to the moral rejuvenation of a decaying capitalism. Pivotal to this is the entrepreneurial, private, and individual pursuit of self-interest (Mises, 1996; Hayek, 1945; Röpke, 1948; 1992).

The centrality of the entrepreneur is therefore significant for two reasons. One, it breaks the grip of expert or specialist knowledge by enshrining entrepreneurial knowledge at the heart of capitalist social relations. Two, it enables the

¹ This is the basis of one of the criticisms levelled at entrepreneurship – namely that entrepreneurship studies has spread its net so wide that every creative act can be claimed as entrepreneurial.

entrepreneurial function to drive development both in the marketplace and within the organization by making this social relation the primary social relation in life (e.g. within the family, between individuals, within the firm).

This neo-liberal heritage is at the heart of Kirzner's entrepreneur who acts as a price taker searching for undervalued resources via an 'arbitrage theory of profit' (Kirzner, 1973a: 85). Rather than innovate, the entrepreneur uses his or her alertness to see opportunities for price differentials and under-valued resources (Metcalf, 2006; Alvarez and Barney, 2006; Foss *et al.*, 2007; Klein, 2008). In this sense, by spotting under-valued resources the entrepreneur not the expert, the labourer, or the inventor is the creative function in society. On the contrary the labourer, or the inventor, fulfills society's creative function. Provided it can avoid its contradictory nature and is not sabotaged, this activity then adds to everyone's knowledge of the market. What makes this arbitrage different is the temporal dimension – the entrepreneur anticipates the future. This anticipation then leads to entrepreneurial profit or loss.

Entrepreneurial knowledge and the human will

In an entrepreneurial society, knowledge is the key resource, not capital. As stated, entrepreneurs are central in this theory of knowledge because, through spotting and exploiting variability in the market, they disseminate knowledge (Hayek, 1948: 45; Mises, 1996: 299). In so doing, the entrepreneur has anticipated the future and thereby shifts 'the ownership of the means of production from the hands of the less efficient into those of the more efficient' (Mises, 1996: 299). For neo-liberals the key knowledge is not data or information. The knowledge prioritized in this tradition is about vision and alertness to the potential application of knowledge rather than the mere possession of it (Kirzner, 1973a: 68; Burczak, 2002). Kirzner (1973a: 38 emphasis in original) comments:

Entrepreneurial knowledge, may be described as the "highest order of knowledge", the *ultimate* knowledge needed to harness available information already possessed or capable of being discovered.

In today's economy, it is perhaps unsurprising that entrepreneurial knowledge is so revered and that all knowledge is reduced to capitalism's arbitrage. Shades of this haunt management studies of entrepreneurship – when reading Drucker (1984) one is struck by the feeling that the person or firm that brings the product to the market is the entrepreneur rather than the knowledge creators – indeed Drucker's work is highly skeptical of science in favour of 'common-sense' (see Drucker, 1984: 48, 84-5, 138-9). Similarly, Schumpeter (1983: 88) values the

innovator/entrepreneur over the inventor because it is the innovator/entrepreneur who sees the profitable application of invention. And yet, Kirzner's entrepreneurial knowledge is not quite so positive because it means entrepreneurs do not generate anything. For example, Kirzner (1973a: 74, emphasis added) states:

I view the entrepreneur not as a source of innovative ideas *ex nihilo* but as being *alert* to the opportunities that exist *already* and are waiting to be noticed. In economic development, too, the entrepreneur is to be seen as responding to opportunities rather than creating them; as *capturing* profit opportunities rather than generating them.

Thus within the economy, profit is not created by the entrepreneur, it is captured and the entrepreneur is reactive to opportunities that already exist 'out there'. As suggested earlier, one can see elements of this in, for example, the open-source movement wherein new legal forms e.g. copy-left, were created to stop corporations entrepreneurially making minor alterations to a code and then patenting it (Lerner and Tirole, 2005; O'Mahony, 2003), in the parasitic relationship between publicly funded science and the private sector (Perleman, 2002; Armstrong, 2005), or in the fact that fully forty four per cent of new banking electronic services were developed first by user innovation before they were taken and turned into a services by banks (Baldwin and von Hippel, 2011). In short, corporations used alertness to reap profits from innovations developed elsewhere – capture, not creativity.

This entrepreneurial 'alertness' to capturing existing value may provide an indirect benefit by teaching the less alert about price differentials and thereby lessening them – this is what locates them at the heart of neo-liberal economic development (Mises, 1996). However, given the double-edged nature of entrepreneurship, entrepreneurs will also actively seek to limit the use of such knowledge in order to maintain their entrepreneurial profits. They will do so via property rights (Baumol, 1990), through the sabotaging of innovation (Metcalf, 2006; Hayek, 1948), and/or monopoly (Kirzner, 1973a: 22). Thus entrepreneurs can and do both capture value generated elsewhere and restrict economic development in order to expand and extend entrepreneurial profit.

Despite this, neo-liberals see the entrepreneur and entrepreneurial activity (which sits in all of us alongside other roles – consumer, producer, or manager) as the legitimate appropriating mechanism of the value they have captured (Mises, 1996: 297). They argue that this captured value is then correctly used to pay others their market price e.g. capitalists, landowners, workers, or other entrepreneurs. Building on Locke and Mises, Kirzner (1973b; see also Burczak, 2002) argues that entrepreneurs display initiative and it is this human will, and

not what flows before or afterwards, that is the key to wealth generation and to their rights over it.

In this view the product has come into being only because some human being has *decided* to bring together the necessary productive factors. In deciding to initiate the process of production, this human being has *created* the product. In his creation of this product this entrepreneur–producer has *used* the factors of production which his vision has brought together. He has not cooperated jointly with these factors (so that this view does not see the entrepreneur’s contribution as consisting of a portion of the value of a product with the remaining portions being the contributions of “other” productive agents). He has produced the *whole product entirely on his own*, being able to do so by his initiative, daring and drive in identifying and taking advantage of the available productive factors’. (Kirzner, 1973b: 10 emphasis in original)

In this quote we see the inherently contradictory nature of entrepreneurship. The process of production is obviously a social endeavor – ‘In his creation of this product this entrepreneur-producer has *used* the factors of production which his vision has brought together’ and yet this socially cooperative moment and the dependency of the entrepreneur on the skill, knowledge and sociality of others is vehemently denied in order to legitimate Kirzner’s model of capture within society. Rather than acknowledge this productive role of cooperation, Kirzner suggests that because entrepreneurs are alert to the value or opportunity that is already there, and because they have the initiative to capture it, they have the right to all of that value and they legitimately keep what is left after the mere factors of production have been paid their market rate. Hence human action and entrepreneurial knowledge justify ‘a finders-keepers’ society (Burczak, 2002). Within this, Kirzner suggests the entrepreneur in all of us is a conjurer, a magician – creating profit out of nothing and determining the distribution of resources.

The nature of human action in entrepreneurial moments

Kirzner (1973a: 52-62) hypothetically outlines what entrepreneurship looks like. This is essentially a description based in deceit. The example used by Kirzner is one of hunting. To summarise, an entrepreneur thinks that hunting will prove to be a lucrative area where price differentials could be exploited. As such, the entrepreneur gives no capital and seeks no risk, but hires a gun to exploit the high price of meat. If their view is correct, others will see the entrepreneurial profits and then enter the market, thereby lowering the price of meat and average profit because the entrepreneur has provided information for those who are alert enough to recognize it. The entrepreneur may not be a specialist in hunting in their own right and so will hire an employee to hunt for them. If the employee is an average hunter with average talent, the entrepreneur will get surplus simply

from their entrepreneurial alertness to be early – over time this will be whittled down via competition. If, on the other hand, the employee is an average hunter but finds better hunting grounds and passes on all this extra value to the entrepreneur, then the employee is more productive but not entrepreneurially alert. Simply because this employee sees him or herself as expending the same energy as other hunters, they get the wage of other hunters and the entrepreneur gets the excess entrepreneurial profit because the employee has no entrepreneurial alertness. Finally, if the employee finds better hunting grounds but keeps the excess value for themselves then they have exercised their entrepreneurship by getting the ‘entrepreneur’ to hire their equipment and provide them with a wage whilst allowing them to capture (some of) the entrepreneurial profit (Kirzner, 1973a: 61-2).

Here there is secrecy, and a lack of trust but there is no creation, no innovation, no romantic, iconoclastic break with equilibrium – there are merely entrepreneurs and knaves who act as factors of production and, by implication, take the price offered (see Kirzner, 1973a: 32-52; Burczak, 2002). If entrepreneurial knowledge is the highest form of knowledge then in an entrepreneurial society to seek out arbitrage is to be alert while to strengthen institutions is foolish, to engage in public service is foolish, to share is foolish, to build an open source software program is foolish, to participate in open science is foolish, or to innovate without patenting is foolish.

Essentially, we are left with moments of deception or trickery which are re-packaged as moments of alertness because, in an increasingly commoditized world, society is ‘driven solely by the selfish’ (Mises, 1996: 291). Indeed, this is the stance taken by Lerner and Tirole (2005) when they rationalize participation in open-source as a means of gaining reputation from which one can reap benefits into the future. There is no acknowledgment that this may be a structural problem wherein one has to donate free labour to develop a career in software programming because of the entrepreneurial activity of corporations or, indeed, that such an expression of expertise might simply be a fun thing to do in your ‘free’ time (as Adorno, 1998 wished the term to mean; see also Butler *et al.*, 2011). Here is, at its best, an asocial, amoral exploitative society with a lack of trust as its bedrock and an implicit acceptance that profiteering, violence, mistrust, secrecy, exploiting the desperation of others, or immorality, are part of the social fabric and are simply ‘opportunistic’. In short, this is the emerging so called ‘knowledge economy’ where sharing knowledge is deemed counter-productive (Romer, 1990; Shane, 2002).

If this analysis of entrepreneurship is correct, the creator of value who does not hold onto it is a mere inventor – hence non-individualizing profit motivated

actions are naïve and merely enable others to entrepreneurially capture the value derived from them i.e. to allow oneself to be cheated and hence to deserve what you get. Capture is legitimated via property rights and this enables the already asset rich to claim the rights to the value produced elsewhere, thereby helping to further polarize wealth (Burczak, 2002). Here privatization of knowledge, invention and value is lauded as the one best way to secure future rewards for those who do not generate them yet somehow deserve them (Kirzner, 1973a; Burczak, 2002). This obviously denies the hugely important realm of knowledge or indeed innovation/invention as a public good – for example, hip replacement technology started through the ‘invention’ of public service doctors in the socialized medical sector known as the National Health Service in the UK (see Meeks 2011) and this value was then captured by others².

Legitimizing the future: Entrepreneurial society, knowledge and rent

Kirzner’s harsh ‘finders-keepers’ model of entrepreneurship illuminates today’s capitalism in interesting ways. A number of points will be made to recap. Within the entrepreneurial studies tradition, the scholars who have most appropriately theorized entrepreneurship are the Austrian School of Economics and, most particularly, Kirzner. Although management scholars often refer to Schumpeter or Knight, here it is argued that the entrepreneurial society advocated and taught by management theorists appears to be rooted in the reading of the private individual-entrepreneur as outlined by Mises, Hayek and especially Kirzner. These theorists see knowledge as the sensorium of capital i.e. in the work of these authors knowledge is useful if it acts in the interests of the entrepreneur. All roads lead to the entrepreneur whose knowledge in this society is the ‘ultimate’ knowledge and yet despite this, the entrepreneur does not generate.

This entrepreneur is potentially ubiquitous and located in all of us because, building on Mises (1996: 253), capital or risk-taking are not required. What is

2 Hip replacement technology was designed by Sir John Charnley. He pioneered hip replacement treatment globally whilst working for the National Health Service, in the UK. He experimented on himself by putting polyethylene into his own body and left it there for months to test how the body would react before he was prepared to implant it as a ball and socket into a patient needing a hip replacement. His work was impressive and achieved a ninety five per cent success rate. On the basis of his success, the NHS provided hip replacements but not for profit – they merely had a use value. US firms took Charnley’s work and provided hip replacements for profit (less good ones as it happens) – so one big social question is who is credited with the innovation in this instance and who should receive the benefits – Charnley, the NHS, patients through socialized medicine, shareholders, patients as customers and how is the answer to this question then legitimated?

required is spontaneous entrepreneurial alertness to knowledge rather than knowledge acquired via craft, education, or prolonged study. This knowledge is something that is, in theory, available to all. Ideologically, this form of entrepreneurial society is rooted in the spontaneous knowledge applied by individuals. This occurs in an unplanned meritocratic fashion so that success is based on one's ability to seek out arbitrage – not upon ownership of capital, risk-taking, value generation, study, or expertise (Burczak, 2002). Here labour and capital simply become resources to be exploited by the alert entrepreneur in all of us. On this basis, distribution and reward are legitimated because the entrepreneurial 'finder-keeper' is the ideal capitalist subjectivity. The entrepreneur is what we should want to be³.

Prioritizing such subjectivity and such knowledge leads to an arbitrage society which supposedly ensures efficiency and meritocratic success – we each get our just desserts or are touched by fortune's fickle finger. It will also create an ideal subject – one who is uninterested in craft, security, organization, or institutions but is rather interested in money and exploiting opportunities for oneself and indirectly – but only indirectly, if at all – for organizations or institutions. However, this alertness to opportunity has enabled the corporation to reach beyond itself as the entrepreneurial subject threatens to subsume all of society to capital.

But there are surely some real problems with this 'ideal' worker and this form of society? The first thing to disintegrate is trust – we may have seen this in the recent crisis, banks lost trust in staff, in information, in each other, in the market. The social cohesiveness that Adam Smith describes is simply not encouraged by this entrepreneur who turns both themselves and us into individual speculative capitals (Burczak, 2002). For example, whilst exploiting in the pursuit of profit is a feature of equilibrium theorists like Keynes, this pursuit arguably also entailed the building of some collective social value whether it was via a factory or prolonged training or investment in social welfare. In the arbitrage of the entrepreneurial society of a Kirzner, social value and social bonds are weakened not strengthened. There is no emancipatory opportunity here despite the call of management theory (see Rindova *et al.*, 2009). Rather than Smith's trust and sociality, amorality and opportunism define the function. Indeed, when one reads about entrepreneurs (Armstrong, 2005; Collins *et al.*, 1963), one is struck by their asociality, by lives which have few bonds or interests

3 Given the popularity of television shows around entrepreneurship e.g. Dragon's Den, the rise and rise of entrepreneurial societies in Universities, and the increasing demand for entrepreneurship within Business Schools, it would seem the Austrian rejuvenation of this subject has met with some success.

beyond being a self-interested entrepreneur. Even when enmeshed in a network, self-interested activity is at its heart and if one can succeed in unilaterally exploiting this network through secrecy one would be a fool not to do so.

Post-workerism: Labour and capital in opposition – the return to rent

Central to entrepreneurship in the Austrian tradition is knowledge: the privatization of knowledge is deemed necessary to encourage entrepreneurship (Kirzner, 1973a). However, this privatization actually runs counter to economic development. For example in both innovation studies and strategy, scholars suggest that innovation and productivity are increasingly emerging from beyond the firm (see O'Mahony, 2003; Lerner and Tirole, 2005; Oliveira and von Hippel, 2010; Baldwin and von Hippel, 2011; Pralahad and Ramaswamy, 2004). Indeed, Lucas (1988) suggests that the escaping of knowledge from the private sphere, in what he calls 'external effects', is the vital ingredient for economic development and that it is both invisible and immeasurable. Here, unlike the classic Fordist factory, knowledge (and the labour that produces it) is not straightforwardly subsumed to capital (Vercellone, 2007)⁴.

Rather in today's capitalism knowledge is diffuse, located within and without the factory, and with this so too is management which becomes more diffuse in an emerging total subsumption (Hardt and Negri, 2000). Knowledge is no longer simply subsumed to capital but part of what Marx called the 'general intellect' (Marx, 1976: 706-8). This is not entirely new but it is a growing tendency within capitalism. This implies that labour and its knowledge are based in sociality – or something like Merton's (1968: 604-16) 'communism of science' or Lucas' (1988) 'external effects' which grow through use and are primarily social in nature. Our knowledge is based on what we have learned from history, what knowledge is embedded in technologies, and in our inter-individuality where we bring people together to provide products and services (Virno, 2004, 2006; Lucas, 1988). It is essentially not private, not individualised, not alertness.

At the core of this form of knowledge is the interface (Virno, 2006). Workers increasingly communicate between work teams, customers, hierarchies, functions, or technology as work slides beyond the categories of the factory and the worker. Indeed, in growing elements of the global economy, communication is both the work and the product. This has given rise to a new type of labour which makes interfacing, exchange, porosity of organizational boundaries,

4 Knowledge itself was stripped from workers via management strategies of deskilling, technological innovation, and organizational restructuring – although such stripping is never complete – and would if achieved render capitalism inert.

politics, or trust central. The use of this knowledge should be to transform collective practice or life (Negri, 1991: 47). In this view antagonism is central. Antagonism, power, struggle, alternatives, these are the motor of change not individualized private capture. Knowledge entails conflict with other knowledge forms e.g. there is or there is not an environmental crisis but it is this, very materialist, conflict over knowledge (which often takes place on unequal terms) that enables innovation, creativity, or social reorganization.

Difference and the conflict that it engenders drives forward 'progress' because these oppositions create innovation and value (Negri, 1991: 44). Central here is a refusal of work. That is a rejection of capitalist social relations in favour of autonomy, creativity, sabotage, self-organizing, or the avoidance of the terms of the employment relationship even when one is located within it. These refusals may be seen in the pleasures of hacking but they are also witnessed in the development of spaces – however flawed – outside of labour as a pure commodity e.g. LETS schemes, open source, or self-organizing to name but a few. It is the knowledge to refuse life as simply labour power. It is difference and conflict that create the opportunities Kirzner's entrepreneurial function captures – one can see this in something like corporate social responsibility (see Hanlon, 2008; Hanlon and Fleming, 2009).

From this perspective social contestation not privatized capture is at the heart of innovation and change. Knowledge is both material and social – it is not individual in the entrepreneurial sense. Indeed, knowledge creates affect, desire, social value and through the encouragement rather than capturing of interaction it builds, releases, and expands value. In this view, to commandeer knowledge/value is to stifle and restrict it (Hardt, 2010). Capturing knowledge/value may allow you to own it but it does not facilitate its development. Here private property runs counter to productivity and innovation because it creates rival and excludable goods which do not have to be rival or excludable. That is, by privatizing innovations or restricting access to what are increasingly easily reproducible goods, we limit their potential productivity (Hardt, 2010).

For example, there is no reason why goods such as education, film, music, medicine, science, and the knowledge contained within them should be rival and excludable. They can be used simultaneously by many users at the same time and to limit this via privatization is to limit potentiality. In this sense entrepreneurial activity is an exercise in lessening possibility because it stifles innovation and creativity. Yet simultaneously entrepreneurship needs this refusal of capitalist social relations for creativity and innovation (and hence capture) to take place. Thus the knowledge economy is one where corporations increasingly

capture value created elsewhere and use property rights to ensure monopoly rents in a manner similar to the past. Facebook, for example, is simply a platform upon which users produce value for each other but the creativity of doing so is harvested by Facebook to sell as data (see Pariser, 2011). Hence contra entrepreneurship theory, a real knowledge economy is antithetical to an entrepreneurial society because knowledge is, by its very nature, a social product that grows via sharing and is limited by capture or monopoly.

Thus although both the Austrians and the post-Workerists emphasize knowledge they do so in very different ways politically. Post-workerism rejects the privatizing of knowledge, rejects sharing it with capital, and rejects a 'finders-keepers' model of production and distribution as a base upon which to build the present or the future. Here we have two very distinct visions of life or a knowledge society both of which are located in something beyond the organization, in the active agent, and in knowledge. One is liberating and enhancing and the other is parasitic and restricting. Entrepreneurial activity does not simply disseminate knowledge instead, and more importantly, it monopolizes its application and uses in order to extract from it.

The recently emerged post-Fordist economy has used entrepreneurial alertness and soft technologies such as HRM or Intellectual Property Law to capture the value created outside of the firm. Indeed, Vercellone (2007: 16) suggests that capitalism has returned to a mode of accumulation similar to the mercantile and financial accumulation of the putting out system of the 17th and 18th centuries (see also Marazzi 2008, 2011; Hardt, 2010). If he is correct, then it is not surprising that the entrepreneur, arbitrage, and primitive accumulation are at the heart of life today. Whilst generating nothing arbitrage, entrepreneurial knowledge or the capturing of diffused knowledge, allows capitalism to survive in its antagonistic relationship to labour's knowledge. In such a world, the 'smash and grab' entrepreneurial alertness of the Russian Oligarchs at the expense of any science, expertise, craft, or commonly produced and owned knowledge is to be praised rather than pilloried.

But it is not only such obvious capturing of wealth that is based on entrepreneurial alertness. Social media sites, academic publishing and education, music and film, or pharmaceuticals and bio-diversity are industries which are increasingly organized around capturing value generated outside their boundaries. This is what Christian Marazzi (2011) means by financialisation and it is at the heart of the emerging regime of accumulation. In post-fordism, the 'rules of the game' (Baumol, 1990) legitimate the use of entrepreneurial alertness to capture value in this manner. The current emphasis on the entrepreneur ensures that this socially dysfunctional relationship to knowledge,

to value, and to distribution is legitimated and that it will continue. And with its continuance so will we get increasing inequality and a reduction of human potential.

Conclusion

Today it is market power and capture rather than knowledge, productive capability, innovativeness, or creativity that is evermore central to profit. What is important is the ability to entrepreneurially capture value – any quick examination of the TV show *Dragon's Den* demonstrates this where innovators are forced to pitch their ideas to a wealthy panel of 'entrepreneurs' who say yes or no and dictate punishing terms. Closer to home, one needs only to think of the relationship between academics and the major academic publishing houses – in essence academics create and quality control intellectual works and the publishers capture them. We can also think of the harvesting of value from the subjectivities we create in the general intellect and socialization. This capturing has been at the heart of human resource management ever since Elton Mayo declared he was extending Taylor to the mind (Mayo, 1924: 258; see also Costea *et al.*, 2008; Fleming, 2009). We can see it in corporate engagement with open-source programming (Lerner and Tirole, 2005; O'Mahony, 2003). We can see it in attempts to 'ever-green' and to exploit our shared intellectual history and biodiversity (Perleman, 2002). Controlling resources and extracting rents are at the heart of entrepreneurship and its knowledge form. Here entrepreneurial activity is rent seeking activity, not innovation.

This post-workerist reading of knowledge and entrepreneurship leads to a very different understanding of the entrepreneurial economy and its view of knowledge as individualized, asocial alertness. In this reading the use of property rights and monopoly allows entrepreneurship limit access to knowledge's applications thereby limiting human potential because knowledge, productivity, and innovation are extended by open access. The so called knowledge economy increasingly generates goods that are easily reproducible, non-rival and non-excludable and, by embracing this, innovation and productivity will grow because more users can access goods thereby generating both more diversity and more quantity. Neo-liberal entrepreneurship stands in direct opposition to this – although within this scholarship Kirzner's capture analysis is more insightful for today's economy than those rooted in liberation or creativity. It appears that elements of non-Marxist management scholarship are also acknowledging some kind of shift even if they have not theorized it properly e.g. endogenous growth theory (Lucas, 1988), strategy (Prahalad and Ramaswamy, 2004) and innovation studies (O'Mahony, 2003; Oliveira and von Hippel, 2010) in different ways

register the increasing porosity of the organization and the important role that non-privatized knowledge and value creation has in our economic and social development.

And yet today, corporate activity has witnessed a rapid expansion of its use of property rights to privatize, to limit access and to gain entrepreneurial/monopoly profits (Perelman, 2002). In some respects this is based in the primitive accumulation of early capitalism which was characterized by colonialism, war, slavery, capture and super-exploitation. But it is also different because increasingly individuals often provide free labour through their consumption of YouTube or Facebook for those organizations to then entrepreneurially capture, privatize and exploit. Within this, these organizations do not manage the 'product' or control its production as they did through the assembly line – management is thus reaching into society and using the corporation as a 'unproduction based' shell to privatize use value derived from elsewhere and create exchange value from it. Today 'extreme neo-liberalism' as Harney (2009) might call it, has as its legitimating guide, an Austrian theory of knowledge capture which is spontaneous, individualized, opportunistic, amoral and exploitative. At the heart of which is the entrepreneur and the limiting of innovation and productivity.

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