



PHD

Organisational restructuring, job insecurities and work intensification in the Thames Valley high-tech cluster

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Award date:
2019

Awarding institution:
University of Bath

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Organisational restructuring, job insecurities and work intensification in the Thames Valley high-tech cluster

Kye Parkin

A corrected thesis submitted for the degree of Doctor of
Philosophy
University of Bath
School of Management

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Abstract

Work intensification first began to attract academic attention in the 1980s due to a widespread impression - evident from popular reports and casual empiricism - of an increasing tension and strain in the workplace. In definitional terms, the notion is used by scholars to describe an uplift in work effort in terms of number of hours worked, levels of discretionary work effort or both. Work intensification tends to be viewed as having a negative impact on society, given that it has been linked to a variety of personal and social issues, including poor mental health and wellbeing for example. Scholars have identified five common features of contemporary working life that are linked to work intensification: high-commitment work systems, organisational restructuring, job insecurities, new technologies and managerialisation. Empirical explorations of these factors typically take the form of large-scale surveys that record work effort changes across the population or organisational case studies. Given that these two research streams are macro and micro-level units of analysis respectively, scant attention has been paid to exploring work intensification at the meso-level of social activity. Against this background, the thesis introduces geographic clusters as a valuable, but overlooked, meso-level concept for exploring work intensification. Assuming that the employment relationship represents an incomplete contract, the thesis develops the theory that firms in clusters have the upper hand as regards the work effort-mobility bargain with employees, thereby dampening resistance to work intensification. Based on 46 semi-structured interviews with employees drawn from 16 high-tech firms in the Thames Valley cluster, the thesis describes how repeated restructuring, redundancies and outsourcing have led to a fearful work situation, whereby employees feel powerless to resist excessive working hours and demands. In view of these findings, the theory that clusters play a central role in structuring the conditions of work and employment locally is re-evaluated and advanced in the concluding chapters of the thesis.

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List of abbreviations

CMS – Critical Management Studies

CR – Critical realism

FTE – Full-time equivalent

HRM – Human resources management

ICT – Information and communication technologies

LPT – Labour process theory

MNC/s – Multinational corporation/s

OS – Organisation studies

ROI – Return on investment

Tech. – Computing technology

Acknowledgements

I would like to thank all involved in helping me in the conception, development and execution of this research, from drafting the research proposal and securing funding to conducting fieldwork and writing up in that order.

My thanks are extended to Professor Dean Patton for offering invaluable advice regarding the PhD application process and Dr. Charlie Walker and Dr. Stephen Rhys Thomas for acting as academic referees. I would like to thank Dr. Gregory Schwartz for helping me to develop my research proposal in its embryonic stages and acting as internal sponsor for my funding application to the University of Bath School of Management.

Acting in their capacity as the funding selection panel, I would like to thank Professor Yiannis Gabriel, Professor Juani Swart, Dr. Jonathan Raelin for and making this research possible. In their capacity as supervisors I wish to thank Professor Yiannis Gabriel, Dr. Phil Tomlinson and Dr. Gregory Schwartz for their practical help and intellectual guidance over the course of the last four years.

Furthermore, I would like to offer thanks to PhD programme administrators Suzanne Swallow and Chris Barnes for their kind and diligent support assisting me with bureaucratic and processual aspects of studying for a PhD. Some of the ideas developed in this thesis were aided by conference funding from the Society for the Advancement of Management Studies and by anonymous reviews and the editorial team of Regional Studies, Regional Science. My particular thanks are extended to Professor Lee Pugalis.

Finally, outside of the academic and university domain, I would like to thank my partner Carly for her continued patience and support, in addition to my parents Andrew and Tracy for always being on hand to lend a sympathetic ear.

Related publications

The thesis contains material from the below publication:

Parkin K. (2016) Inter-organizational power and work relations in a regional ICT cluster. *Regional Studies, Regional Science* 3: 258-263.

Preface

In 2011, I began working for a multinational high-tech firm located in Reading.

Thankful that I was one of a small handful of peers who got a job straight out of university, I knew nothing much about the place (or the world work) and the only ballpark cultural reference point that I could compare it with was nearby Slough as featured in *The Office*. This didn't fill me with inspiration.

Nevertheless, in spite of my preconceptions, I quickly realised that I worked with good people. Good people who also felt trapped in their place of work, and who felt increasingly browbeaten by the effects that the global financial crisis had had on their working lives.

Hence, when I decided to return to academia to pursue a PhD, I decided to write about this, something which I had known, albeit very briefly.

To this end, the process of researching and writing this PhD has been guided by the aim of developing the best possible representation of working life in this place.

What follows, therefore, is my faithful attempt to represent in my capacity as a graduate student of organisations the working people of the Thames Valley high-tech cluster.

Chapter 1 – Introduction

1.1 The work intensification debate

Debates regarding the intensification of work, or the idea that work, despite taking up less of our actual leisure time (historically speaking), is becoming more and more demanding, less rewarding and increasingly stressful, have been rumbling on for decades now. A theme that has surfaced across the social sciences in some form or another for many years, residing in the thought of luminaries such as Sennett (1999) and Boltanski and Chiapello (2005) for example, in addition to forming the core social theoretical background to much of critical management studies (Alvesson and Willmott, 1992). More recently, it has emerged as a discrete research topic in its own right, as numerous contemporary studies of work and employment (e.g. Boxall and Macky, 2014; Chesley, 2014), and large-scale government reports arguably demonstrate (e.g. Burchell, Lapido and Wilkinson, 2002).

Despite this, however, and despite how intensification might be regarded as an essential problem to do with work under capitalism (Budd, 2011), the analytical concepts hitherto employed to explore it in empirical settings remain somewhat underdeveloped. While a flurry of publications over the past decade have done much to establish it as an area of academic and policymaking interest (Green, 2001; Green, Felstead and Gallie, 2003; Green, 2004; Felstead, Gallie, Green and Inanc, 2013). A polarised set of voices on the topic has emerged and there is divergence between the established core of macro driven work intensification research (Green and McIntosh, 2001; Green, 2004, Valeyre, 2004; Green, 2007) and critical assessments that deal almost exclusively with micro-level organisational phenomenon (Adams et al, 2000; Kelliher and Anderson, 2010; Boxall and Macky, 2014; Chesley, 2014).

Macro-level work intensification research typically uses data from large-scale, cross-sectional work and employment surveys, such as the UK *Skills and Employment Survey 2012* and the *European Working Conditions Survey* for example. This involves either scoring data to shed light on work intensification as a workforce well-being issue - an example of which is Green's (2004) 'Work Effort Index' - or developing and refining variables to take stock of broad economic and workplace transformations related to the

trend (Green et al, 2014). Themes to have been addressed under this rubric include national skill mixes and shortages (Sutherland, 2012), skill utilisation among the overqualified (Green and McIntosh, 2007), technological diffusion and national training provision (Borghans and Ter Weel, 2006), and the gendering of performance standards and work effort increases for example (Gorman and Kmec, 2007). Said macro-economic assessments also form the basis for cross-national comparisons and discussions surrounding global and national economic competitiveness (Felstead and Green, 2008).

Regarding micro-level intensification research, analyses tend to centre on instances of organisational change and redesign, the changing nature of particular occupations and job roles or a combination of the two. Whereas a series of recent works comparing managers in the USA, UK and Japan found a growing intensification of managerial work in organisations globally (McCann, Morris and Hassard, 2008; McCann, Hassard and Morris, 2010; Hassard, Morris and McCann, 2012). Adams et al (2000) and Ogbonna and Harris (2004) for example discuss 'managerialisation' - or the growing pressure put upon workers to adopt managerial duties and roles in addition to their existing responsibilities - as the main outcome of organisational restructuring in hospitals and universities respectively.

Another current is also present which seeks to evaluate the extent to which new sets of working practices might be a source of work intensification. Kelliher and Anderson (2010) for example conclude that remote working and flexible-working practices in general contribute to work intensification because workers tend to overcompensate for a lack of direct managerial supervision. While these and above examples differ in terms of empirical content and their specific explanations of work intensification, each is constructed primarily on the basis of engagement with accounts of internal organisational practices. In turn, this constructs work intensification either as the outcome of discrete organisational decision-making or as reflecting widely adopted sets of HRM policies and practices.

Despite these differences, however, the two approaches are similar in one aspect, scilicet their tendency to generalise work intensification through top-down (macro) or bottom-up (micro) modes of analysis. While organisational research arguably adds greater granularity and refinement to

the theme of work intensification in pinpointing specific examples of what organisations actually do that results in intensification. I argue that analyses fail to connect what goes on in organisations to what happens around them. Themes that defy exploration solely through macro or micro-level research remain underdeveloped.

For example, there is no distinctive middling analytical view which takes account of extra-organisational factors such as 'organisational fields' (Di Maggio and Powell, 1991), meso-level discourses (Fairclough, 2014) or professional networks. Therefore, this has restricted space for exploring intersections where extra-organisational factors overlap with meso-level units of analysis or mechanisms occurring at the meso-level of the social (Fine and Hallett, 2014).

Greater emphasis on this, I argue, confers not only richer understandings of work intensification in organisations. It also helps to develop a more relational understanding of broad factors contributing to work intensification in a particular context. That is to say that in developing research at the meso-level and connecting it with other researches at different levels of social activity (Archer, 1995) the 'partiality' with which work intensification is currently represented would therefore be overcome (Grey, 2003).

Against this background, the thesis intends to fill a gap in the literature by adopting a meso-level unit of analysis. The meso-level unit of analysis is understood here as representing the layer of activity between micro-level organisational behaviour and the macro-level economy. Reed (2005a) describes this as the 'intermediate level' of social structuring whereby large-scale processes and smaller-scale organisational events and scenarios interact. In practical terms, this refers to the variety of systems, networks and hierarchies that govern (and are governed by) the actions of organisations.

Accordingly, this thesis adopts a meso-level unit of analysis through which to explore work intensification - specifically geographic clusters. Applying the geographic cluster concept provides an avenue for exploring work intensification at the meso-level by theorising co-located firms as being the primary 'producers' of work relations in regions (McQuarrie and Marwell, 2009). The benefit of this is that it allows for an analysis of geographic

clusters as inter-organisational structures or systems, facilitating analysis of work intensification in relation to the underlying conditions of work locally.

1.2 Clustering and control over labour

A defining feature of geographic clusters is the co-location (clustering) of work organisations in a certain sector or production chain across a regional or local geographical scale. Assuming that material context conditions 'the nature and basic structure' of human actions in some way (Schatzki, 2005: 267), geographic clusters can be understood usefully as a 'material scaling' of the broad organisation of work (Brenner, 2000). Furthermore, they are a useful lens for exploring inter-organisational structures or systems, which in turn facilitates a better understanding of the lived experience of work and employment contextually in relation to the structural position of labour.

Despite this, however, Martin and Sunley (2003) contest the notion. Based on a 'deconstruction' of the empirical and theoretical underpinnings of 'cluster theory'¹, their call for caution regarding the conceptual validity of the notion. Something, which they argue, gives grounds to dismiss clusters as a 'brand' rather than as a concept proper.

While on the one hand I am receptive to their criticisms, I fully recognise the generality of the notion, in addition to its implication as a managerial/policymaking 'fashion' (Abrahamson, 1996). I am unsympathetic on the other hand because they risk unnecessary 'conceptual throwaway' by misplacing critique at a conceptual level (Sunley, 2008: 2), when paying critical theoretical attention to the material conditions of clusters would be much more fruitful in terms of social research, particularly for work intensification research. Approaching the concept in a critical realist² frame, I

¹ Consult Maskell and Kebir (2005) for a detailed discussion of 'cluster theory'.

² Critical realism is an approach to social research that is based on Roy Bhaskar's (1986) ontological critique of empirical realism, and has been utilised extensively in the study of organisations in recent years (Reed, 2005a). Although some critical realists might object to my use of the label, I adopt it in order to distance myself from a strong social constructionist view of the cluster concept rather than engaging in ontological debates (Fleetwood, 2005), certain methodological and theoretical applications of critical realism have nonetheless been adopted during the course of this research.

argue, demonstrates it as useful lens for analysing the power and work relations underlie work intensification.

A central methodological application of this approach is the recognition that social reality is 'conceptually-mediated', and because of this any observations made by researchers are inherently imperfect (Sayer, 1992: 54). Given that this cannot be avoided, emphasis is placed on working with concepts and interpretative frameworks that are 'practically adequate' (Sayer, 1992: 86-91); with concepts/frameworks so considered if they allow us to access important aspects of the phenomena at study. It is argued that the cluster notion falls under this umbrella as it provides an entry point for addressing an essential question to do with the regional scale, namely: how inter-organisational power shapes the nature and experience of working life in a particular geographic context.

Although this has been partly addressed through analysing labour market outcomes (Benner, 2002) and empirical research concerning Silicon Valley for example (Wong, 2005; Zlozniski, 2006; Shankar, 2009; English-Lueck, 2010), how these insights relate to inter-organisational power in regions specifically remains unclear. Applying the cluster concept, however, provides an inroad in this regard by theorising co-located firms as being the primary 'producers' of work relations in regions (McQuarrie and Marwell, 2009). The benefit of this is that it allows for an analysis of regions as inter-organisational structures or systems, which in turn facilitates a better understanding of surface phenomenon in relation to the structural position of labour.

The link here with power and work intensification is well established. In their paper, Coffey and Tomlinson (2006) describe ways in which globalisation and corporate power interact and shape the nature of the modern market economy. As part of this Coffey and Tomlinson (2006: 35-6) suggest that geographic industrial scalings such as geographic clusters would facilitate enhanced strategic control over local employment structures regarding work effort. Put differently, clusters are a 'source of increasing returns to scale' insofar as, in theory, they enable firms to harness control over labour (Asheim, Cooke and Martin, 2006: 4).

1.3 Work effort-mobility bargaining and work intensification in geographic clusters

Coffey and Tomlinson's (2006) paper raises an interesting proposition for an exploration of work intensification in the context of a geographic cluster. If we are to accept that work effort bargaining is a fundamental aspect of the employment relationship, as Burawoy (2012) and Thompson (2010) do, and that control over this bargain is a fundamental to human resources management. Cowling and Tomlinson's (2005) suggestion of a degree of alignment between locational strategy and human resources management implicates, in theoretical terms, that geographic clusters help employers assert control over this bargain.

Assessing key characteristics of geographic clusters, I argue that this is entirely possible as a result of what it infers for labour mobility. Smith (2006) argues that in addition to the work effort bargain, employers and employees are also locked in a labour mobility bargain. Whereas the expectation or obligation to increase work effort is likely to cause tension in terms of the work effort bargain, the labour mobility bargain effectively acts as a stress test to this, insofar as employees can simply choose to leave an organisation they are not willing to work harder. However, if as Coffey and Tomlinson (2006) suggest clusters represent strategic control over local employment structures, then mobility must be a key dimension of this.

On the one hand, geographic clusters are typically places that are 'sticky' to labour (Markusen, 1996). That is to say geographic clusters usually have strong local labour markets, which makes them attractive to labour and capital. On the other hand, the more 'embedded' an individual is within a particular context, the more bounded and less mobile they arguably become. Geographic clusters are said to socially regulate or have an embedding effect on labour through a variety of means (e.g. English-Lueck, 2000).

Against this background, then, there is potential scope in a geographic cluster for labour mobility to be weakened. Furthermore, in light of the link between labour mobility and work effort bargain, resistance to work intensification can in theory be overcome. However, numerous studies of employment in clusters emphasise the ways in which labour mobility is enhanced rather than restricted, with frequent 'job hopping' between firms in

geographic clusters being viewed as the norm (Fallick, Fleischman and Rebitzer, 2006; Berrebi-Hoffman et al, 2010). While there is a clear logic to this argument given that a concentration of job opportunities within a particular location offers workers greater scope for career progression and promotion at co-located firms. Such emphasis on inter-firm mobility within the cluster arguably downplays the more restrictive aspects of geographic clusters in terms of outward mobility. Moreover, it paints a positive picture of employees 'job hopping' voluntarily, when numerous case studies confirm that work is simply insecure (e.g. Barley and Kunda, 2004; English-Lueck, 2000).

1.4 Job insecurities and work intensification in clusters

The perception of 'hyper' worker mobility in clusters highlights an interesting issue with employment in geographic clusters that deserves further examination in relation to work intensification I argue (Fallick, Fleischman and Rebitzer, 2006; Berrebi-Hoffman et al, 2010). Furthermore, in relation to the broader points made in sections 1.2 and 1.3 regarding work effort mobility bargaining and strategic control over local employment structures (Coffey and Tomlinson, 2006).

Regarding the former, there are numerous case studies that suggest geographic clusters, particularly high-tech clusters, offers workers a localised sense of 'flexicurity' (e.g. Storper and Scott, 1990; Peck, 1992). Due to the project-led and cyclical nature of high-tech markets, employment in the sector tends to be flexible and insecure, but the agglomeration of firms within a particular geography means that there is typically a degree of job security, insofar as they are centres of local job creation. Demonstrating this, Barley and Kunda (2004) explore the responses of temporary workers and contractors the ups and downs in the business cycle in context of a high-tech region. English-Lueck has also written a series of books focusing on Silicon Valley, emphasising the negative personal and psychological consequences of flexibilisation.

These studies raise an interesting point regarding worker's responses to the local conditions of employment and touches upon the issue of work intensification I argue. In the case of Barley and Kunda (2004), when faced with increasingly insecure work the response of workers was demonstrated to

be a hardening self-resilience. Respondents described how they embraced 'the art of staying current in the labour market' (pg. 4) and their sense of individual competition 'remembers it twenty years later and still reeling' (pg. 6) in addition to a growing tolerance for working through burnout (pg. 5). Similarly, English-Lueck describes how a pervasive hard work culture coexists alongside declining job security in the context of Silicon Valley, again touching on a growing self-resilience among workers. Although these studies do not expressly connect the dots between insecure local conditions of work and work intensification - it is undoubtedly a factor. Employability, individual competition and a hard work culture are all indicators of the intensification of work it is argued.

As responses to the local conditions of work, the connective thread between the aforementioned indicators arguably reflects how consent been 'manufactured' through impelling workers to embrace the fundamentals of deregulated, neoliberal capitalism and in effect making them work harder (Burawoy, 2012). In terms of an explanation for this, I argue, in short, that 'strategic rationality' is at play (Burawoy and Wright, 1990: 252). In other words, the logical appeal of compliance, or in other words the motivation for repeatedly exchanging one's labour in the cluster (despite the apparent drawbacks) is based on an ongoing assessment of the perceived security of employment there. Yet, because patterns of local labour market action can normalise feelings of uncertainty, demonstrated most explicitly by the growing acquiescence of workers toward it (Burawoy, 2012). Accordingly, the extent to which 'rationality' can operate is bounded by labour's growing tolerance for its subject position. Therefore, although compliance as a social action entails 'cost benefit/assessments' said assessments are continually being remade by local labour market action in context (Burawoy and Wright, 1990).

Practically speaking, 'downsizing, delayering, culture change, role redesign and lean production' would be the likely currency here (McCann, Morris and Hassard, 2008: 343-347). There is an established link between organisational restructuring that leads to job insecurities and work intensification (Hudson, 2002a). Green (2004: 720) for example says that insecurity stems from restructuring and means that employees 'devote above-the-norm effort levels either to help support their employers' business or to

move themselves toward the back of the redundancy queue'. Furthermore, there is evidence to suggest in these conditions that workers 'pick up the slack' in order to compensate for absent colleagues following restructuring (Hampson, 1999).

In theory then it is perfectly logical that to gain control over local employment structures - as Coffey and Tomlinson (2006) describe - in a cluster do so in order to maximise extra 'unpaid' work effort (Burawoy, 2012: 26-29). Moreover, that the modus operandi in question is organisational restructuring given the assurance of labour supply in geographic cluster. Individually organisations can use this to create an advantageous wage bargaining position or to harness employee commitment for example. Inter-organisationally, however, this could work by creating locally embedded patterns of organisational/worker action that act as a form of 'social regulation' to work and employment in the region (Peck, 1996).

At one level this means that organisations, in responding strategically to the local labour market context and broader economic and social structures, engage in embedded economic behaviours that regulate labour supply and demand if work organisations periodically embark upon cost cutting and restructuring programs involving employee redeployment and redundancies. Although these are prompted by individual organisational change and redesigns, they are in theory facilitated by the local labour market insofar it gives work organisations confidence that if they need to rehire for the same positions later on they can do. A broader implication of this, however, is that it potentially produces dynamics and structures for future patterns of labour market action (Fleetwood, 2006).

For example, large-scale redundancies at one organisation would mean that co-located organisations can then recruit their former employees on potentially lesser (in/formal) terms. This is because labour's relative bargaining position is weakened by increased labour market supply but also because workers' individual job expectations might be lowered. Such a situation allows organisations to, among other things, replace sections of their workforce with lower cost alternatives and to create internal competition by creating new positions, thereby coercing existing employees into working harder by generating anxiety about their personal job security. Inter-

organisational labour market actions therefore weaken the relative position of labour and act as a proxy for gaining control over the employment relationship and intensification.

1.4 Thames Valley high-tech cluster

The issues raised have been studied most extensively among hardware and software firms in the US (English-Lueck, 2000; Chun, 2001; Benner, 2002; Ó'Riain, 2002; English-Lueck, 2010; Lane, 2011; Hyde, 2015). Moreover, each of the aforementioned works - excepting Lane (2011) – based their empirical research in Silicon Valley, the cultural (Weisinger and Trauth, 2002) and operational 'home' of the global high-tech industry (Sonderegger and Täube, 2010: 385). While this has revealed much regarding the downsides of work and employment in a region that has been hailed as the poster child for regional economic development the world over (Bresnehan, Gambardella and Saxenian, 2001). Due to a lack of empirical work exploring organisational restructuring, job insecurities and work intensification in other high-tech clusters around the world, the literature fails to incorporate workers' perspectives from geographic clusters globally, where institutional employment structures are vastly different.

It should be noted that while geographic clusters represent geographic and 'economic landscapes' that condition what goes on in the workplace, in the high-tech industry they are understood as forming part of a network of global value chains (GVCs) (Rainnie, Herod and McGrath-Champ, 2011: 298). As a result of the 'captive centre' offshoring models that MNCs have historically adopted in the course of the industries' internationalisation (Oshri, 2011). The latter describes how global expansion and offshoring of internal corporate functions - such as finance, HR and so on – tends to be dissected and segmented across the GVC by firms. The result of which is that most will MNCs operate 'task' specialist local subsidiaries located in various different clusters located around the world (Grossman and Rossi-Hansberg, 2008).

In practice, said arrangements further engender the structuration of local subsidiary locations into an organisational hierarchy that places Silicon Valley at the top (Humphrey and Schmitz, 2002; Ó'Riain, 2004). Herein, the

'most sophisticated' (high) value chain activities that MNCs undertake (Porter, 1994: 36), such as research and development for example, are usually concentrated in Silicon Valley (Saxenian, 1996). Centres for the provision of IT services - which expanded rapidly in the 1980s and 1990s to subsidise innovation costs – typically find themselves located in regions with strong service economies (Coe and Townsend, 1998) - including Il-de-France near Paris (Shearmur and Alvergne, 2002) and the M4 corridor for example (Breheny, Cheshire and Langridge, 1983).

Whereas routine operational and administrative activities – which includes hardware and software distribution, licensing and localisation for example - occurs in a number of clusters (Bresnehan, Gambardella and Saxenian, 2001), though most notably in Ireland (Ó'Riain, 2004; Barry, 2006). Further down the value chain still, customer support services and so on are often located call centre clusters in India (Arora, Gambardella and Torrisi, 2004; Giarratana, Pagano and Torrisi, 2005). Generally, firms have outsourced their manufacturing; therefore, it does not form part of the internal GVC per se (McKay, 2006; Chan, Pun and Selden, 2013).

Apart from obvious institutional differences, a main implication of the high-tech GVC upon job quality in general and work intensification in particular, relates to the differential distribution and allocation of human and financial resources hierarchy belies (Ghoshal and Nohria, 1989). Throughout the boom years of the late 1980s and early 1990s, MNCs pooled large amounts of human and financial resources into Silicon Valley. Workplaces became archetypes of the new economy, affording engineers and developers extensive autonomy and freedom for which they enjoyed substantial benefits and remuneration (English-Lueck, 2000). Moreover, local subsidiaries, which provided IT sales and services through captive centre clusters located around the world, were treated no less favourably (Boddy, Lovering and Bassett, 1986; Bassett, 1990).

Nevertheless, research suggests such a picture has changed dramatically in recent years (Berrebi-Hoffman et al, 2011). Although the dotcom crash of the late 1990s was the main catalyst to MNCs beginning to introduce ever more flexible staffing models and stricter performance measures (Brenner, 2003). In the wake of the 2008 banking crisis, large-scale

layoffs are occurring with increasing regularity (English-Lueck, 2010). Industrial 'upgrading' in high-tech clusters across India the past decade too (Patibandla and Petersen, 2002; Atlenburg, Schmitz and Stamm, 2008) has seen more and more knowledge services employment shift eastwards from the US (Feuerstein, 2013; Manning, 2013).

Beyond Silicon Valley, work and employment in Europe's 'mature' IT services clusters has also been affected by recent changes in the GVC (Pinch et al, 2003: 385). On the one hand, global ICT services markets have become much more competitive due to increasing fragmentation and fewer barriers to entry (Arora and Gambardella, 2010), and MNCs have responded by entering joint partnerships to sell complementary products and services (Darr, 2006), thereby reducing the number of frontline sales workers. Moreover, among larger firms, who have been slow to roll out 'cloud offerings' (Cusumano, Kahl and Suarez, 2015), there have been large-scale layoffs in a number of ICT services clusters (Economist, 2014).

Compounding matters further, 'legacy investments', such as pension liabilities and wage growth linked to length of service for example (Monk, 2008), mean that employees in these locations are becoming increasingly exposed to the possibility of restructuring. The growth and spread of IT skills and markets in Asia and Eastern Europe has opened up the possibility of moving highly skilled operations from mature clusters in high-wage nations to locations elsewhere. This is particularly true of traditional 'major players' who have the resources to fund large-scale redundancy programmes when winding down established subsidiary bases (Richards, 2004).

Against this general background, the thesis intends to explore connections between organisational restructuring, job insecurities and work intensification in the Thames Valley ICT services cluster. Located along the aforementioned M4 corridor. The geographic area of the cluster is intersected by the River Thames in South East England, which encompasses the districts of West and Central Berkshire. Consisting of a number of large towns including Reading, Bracknell, Newbury and Slough, the cluster is noted for its dense population of multinational computing and telecoms hardware, software and services firms (Macgregor et al, 1986). This is beneficial in methodological terms as it facilitates data collection from across the

geographic cluster and hence an appreciation of work intensification at a meso-level. Furthermore, as a mature cluster, it provides a strong basis for empirical exploration the process of work intensification, which by its very nature is an historical process.

1.5 Research questions

On the basis of the previous sections, I have arrived at the following research questions:

1. What forms of organisational restructuring, job insecurities and work intensification are present among firms in the geographic cluster?

There are a number of established linkages between organisational restructuring, job insecurities and work intensification (Hudson, 2002a). However, each of these phenomena can occur independently of one another. That being so, this question is designed to strengthen the empirical linkages between them and add novelty through exploring them in the (meso-level) context of a geographic cluster.

2. Why do workers choose to put up with it?

Whereas question 1 is designed to establish the nature of the surface phenomenon, this question is designed to relate said phenomenon to an underlying cause at group level. In other words, to try and explain why – if at all - respondents choose to comply with these facets of working life, which are generally viewed as negative. On the flipside, of course, without wanting to pre-judge the empirical work, the potentially positive aspects of organisational restructuring, job insecurities and work intensification need to be considered as part of said explanation.

3. To what extent does the geographic cluster explain why employees put up with organisational restructuring, job insecurities and work intensification?

Given the emphasis on identifying the underlying 'source' of work intensification in the literature – as discussed in section 1.2 - it is important to ascertain to what extent the geographic cluster is the 'real' cause of the observations outlined, or if it is merely contextual (Green, 2004). In other words, having identified the mechanism(s) by which consent to work intensification (and its antecedents) are generated, it is necessary, using the chosen theoretical framework, to evaluate the degree to which the mechanism is derived from the cluster context itself. More concretely, this involves scrutinising whether or not the patterns of organisational restructuring, job insecurities and work intensification observed could feasibly occur in a substantively similar way independent of context. Emphasis on these aspects is as a result of the layered ontology approach adopted in the research, which well complements the study's scope, and will be expanded upon in the literature review and research methodology chapters.

1.6 Structure of the thesis

In chapter 2, the literature review, I introduce and draw connections between the topics of organisational restructuring, job insecurities and work intensification in relation to high-tech clustering and offer a conceptual framework for the study. I begin by tracing the origins of the work intensification debate from the broad issue of job quality before moving on to give an overview of the sources of work intensification covered in extent literature, including organisational restructuring and job insecurities. Against this background, I locate the contribution of the thesis to this literature in terms of providing a novel, meso-level context in the form of a geographic cluster. Following this, the chapter establishes an integrated conceptual framework for investigating organisational restructuring, job insecurities and work intensification in the context of the Thames Valley high-tech cluster.

Chapter 3 gives an overview of the chosen philosophy of research design and the research methods which have been employed during the course of the empirical research. A philosophy of research design describes the process of developing discrete methodological choices out of the researcher's underlying philosophical orientation to the social science discipline (Easterby-Smith, Thorpe and Lowe, 1994). Accordingly, the chapter

begins by establishing how a layered ontology can be usefully operationalised in a geographic cluster, before describing practical details of the research providing a reflective account of the methodological procedures that were followed in the collection and analysis phases of the research.

In chapters 4 and 5, the research findings are described. Barley and Kunda (2004: 35) argue that 'social life is a collection of stages, or social worlds, each with its own cast of characters who repeatedly retell a loose but identifiable story by improvising around a set of motives, props, backdrops and stage directions.' The Thames Valley cluster is viewed as one such world and because of this why respondents' chose or not to put up with the conditions of work is described historically through a series of stages.

Chapter 6 provides a discussion of the findings in relation to the research questions and aims. Accordingly, it examines to what extent the geographic cluster can be described as a source of work intensification and whether or not Green's (2004) emphasis on identifying sources is helpful for the research agenda. Furthermore, having described the productivity of power - i.e. the effects of organisational restructuring, job insecurities and work intensification in the geographic cluster in the previous chapter - it provides a discussion of the intentionality of power. In other words, although the empirical material described may present geographic clusters facilitating enhanced strategic control over local employment structures (Coffey and Tomlinson, 2006) – I question to what extent and on what basis the phenomenon described in chapters 4 and 5 is part of an overt and clearly articulated strategy on part of employers. Finally, the conclusion chapter 7, summarises what the thesis has found, what this adds to the literature and how this can improve and add value to future research.

Chapter 2 - Literature review

2.1 Work intensification

Ever since the publication of Braverman's (1974) *Labor and Monopoly Capital* there has been an understanding among scholars that even though work in developed economies is, in the main, better paid and better regulated than has historically been the case, it is becoming increasingly more difficult and demanding, often in subtle, less obvious and unseen ways. Indeed, for all the lip service paid to work-life balance (Gambles, Lewis and Rapoport, 2006), and, in more recent times to the concept of employee and organisational 'wellness' for example in academic, policymaking and practitioner discourses (Haunschild, 2003); debates surrounding the issue of stagnating or declining job quality that many post-industrial economies in Western Europe, North America and Australasia face, continue to gain traction (Burgess and De Ruyter, 2000; Kalleberg, Reskin and Hudson, 2000; Holman, 2013).

Poor job quality is arguably a fundamental problem with work under capitalism and it is for this reason that it commands not only the interest of work and employment scholars, but that of scholars across the social science disciplines (Budd, 2011). Perhaps the most obvious factor that underlies this is the role that job quality would appear to assume within the wider intellectual project that is the ongoing post-mortem of modernity's numerous unfulfilled promises. Chief among these promises (that job quality relates to) is the prediction that technology would bring about 'the end of work' and that a 'leisure society' would emerge in its absence (Granter, 2016). Alas, given that this never actually materialised, the idea that work is hard and or getting harder, often with deleterious personal consequences, continues to be a central pillar of much of critical and radical scholarship today (Berardi, 2009; Hardt and Negri, 2010; Zizek, 2011; Srnicek and Williams, 2015).

Ever since the first rumblings of debate regarding the transformation of work and employment in the new economy (e.g. Gershuny and Miles, 1983; Castells, 1996; Stewart, 1997; Smith, 1997), the theme of regressing job quality has required social scientists to confront an interesting paradox. Namely the question of how can work that appears to be objectively good on

the surface - or at least an upgrade on the work that was commonplace in industrial society - actually be bad for us?

Although seminal works by luminaries such as Hochschild (1983) and Sennett (1999), have long since put to bed any reasonable suggestion as to the qualitative superiority of service or knowledge work in the new economy for many. The whole academic exercise of developing knowledge claims on the basis of a healthy skepticism toward the good *in* and *of* work, remains shaped against a contention with influential (and seemingly progressive) writers on work in the new economy (e.g. Florida and Kenney, 1988). This in turn various investigatory topics and themes have opened up where 'immanent critique' has been applied. In other words, it has required scholars to develop a stock of knowledge that substantively demonstrates to what productive end a scepticism toward the quality and qualities of work may be put when living in an era of the cleanest, safest and most autonomous work in the history of capitalism?

Reflective of the various disciplinary lenses through which the challenges of the new economy have been viewed, innumerable sub-areas, sub-topics, sub-debates and sub-themes have emerged that touch upon the issue of job quality to a greater or lesser degree. In business and management studies, for example, the critical management studies (CMS) 'project' has foregrounded the issue of job quality by 'denaturalising' (Fournier and Grey, 2000) managerial constructions of freedom and autonomy in work as false (Alvesson, 2004). In human geography, the growing literature that concerns the unevenness of job creation and job quality within and across Western nations (e.g. Theodore, 2007) is a development related to the politics of regional economic development under neoliberal capitalism (Keating, 1998; Lovering, 1999). A final example, in the discipline of economics, job quality has come to increased prominence due to a gradual falling away of the orthodoxy that links economic growth with the enhancement of human happiness (Easterlin, 1974; Oswald, 1997).

Theoretical and methodological pluralism has been positive insofar as it sheds light on different aspects of the broad problem of job quality. However, it has also seen a highly fragmented set of voices develop in and around the general theme, with little in the way of systematic integration or

commensuration between equivalent concepts, topics, theories and themes. At best this has made a comprehensive reading of the topic of job quality in post-industrial society a multidisciplinary exercise; at worst, it has yielded a hotchpotch of similar or identical concepts and theories that take little notice of one another. This extends equally to sub-topics and sub-themes such as precarisation and workplace automation, which have developed unevenly and intermittently within rather than across disciplines. One aspect of job quality that has bubbled below the surface against this background of fragmentation is work intensification.

A simple definition of work intensification would describe it as an uplift in work effort. On the one hand, work effort can be measured objectively as number of hours worked. On the other hand, it can be viewed as a matter of discretion i.e. the level of effort an employee could put in if they wanted to, but above and beyond the minimum required (e.g. Kelliher and Anderson, 2010). Work intensification first began to attract academic attention in the 1980s due to 'the widespread impression evident from popular reports and casual empiricism, of an increasing tension and strain across many workplaces' (Green, 2004: 704). A series of national surveys conducted in 1992, 1997 and 2001 revealed an increasing number of individuals employment felt they were working 'very hard' year-on-year. Moreover, the number of Britons regularly working over 48 hours had been rising since the 1980s - a trend that has also been replicated in the US, Japan and parts of Western Europe.

Critics link work intensification to a variety of personal and social issues, including poor mental health and wellbeing for example (Wichert, 2005). As a result of the potential negative impacts of work intensification on society, academic and policymaking interest in the phenomenon has risen steadily. In documenting the causes and factors influencing work intensification, five key sources have emerged as significant.

2.1.1 High-commitment and high-involvement work organisations

Guest (1987) describes the prevailing wind that characterised much HRM theory and research up until the 1990s as 'hard HRM'. Guest applies this label to express the fact that theory is largely concerned with helping practicing managers to achieve business-strategic priorities through exerting

enhanced control over employees. More recently, however, the attention of 'mainstream' HRM academics has increasingly focussed on 'employee commitment models' or 'soft HRM' as it is known (Thompson, 2011: 357). 'Soft HRM' describes a variety of HRM policies, practices and techniques that emphasise employee commitment and engagement as more effective means of extracting additional work effort than control or coercion.

In light of the growing prevalence of high commitment work organisations, scholars have drawn a number of links with the trend towards increased work intensification. Amongst the earliest research to develop these linkages, is a study of high involvement working practices by Delbridge, Turnbull and Wilkinson (1992). In their study of a Japanese-owned consumer electronics plant in Britain, Delbridge, Turnbull and Wilkinson (1992: 100) found that increased surveillance and monitoring of employee performance through technology led to a heightened sense of responsibility and accountability that lead to increased work intensification. They also found evidence of how the creation of internal 'customers', or intra-firm accountabilities, heightened peer pressure that motivated workers involvement in the continuous improvement of the production process.

The timing of the aforementioned research correlates with Green's (2004: 615) suggestion that the period from the 1980s to 1997 is when the trend of work intensification emerged, and it is interesting in terms of the dual sources of work intensification it identifies as operating in the organisational context. On the one hand, technological surveillance and visual reminders of individual job performance production against targets were displayed prominently on the production line. On the other hand, management created inter-personal obligations to team members of the need to reach and/or exceed the set production targets. Research by Kelliher and Anderson (2010: 92-93) on flexible working suggests that these two techniques reflect how sophisticated the high commitment work organisation can be at engendering both 'imposed' and 'enabled' forms of work intensification.

Flexible working allows employees to work a range of working patterns, which includes reduced hours, non-standard hours, various forms of remote working, and compressed working time, and is commonly associated high-commitment work organisations due to the strong element of trust involved.

Kelliher and Anderson (2010) argue that flexible working patterns can enable work intensification by allowing people to work harder more easily through the removal of distractions associated with the office environment for example. In the context of flexible working, imposed intensification is said to largely affect reduced hours workers in situations whereby their actual workload fails to decrease in line with their contracted hours. Broadening this out beyond the context of flexible working practices, a formal change in job specification could be an example where imposed intensification ostensibly occurs. Kelliher and Anderson (ibid.) also identify work intensification as a result of reciprocation, where employees increase effort to protect the right to flexible working as a result of the perceived benefits on a personal level.

Based on the above it is arguable that explorations of high-commitment work places are strong in identifying and mapping the key causal elements of, and overlaps between, high-performance management practices and processes, and discussing what factors in the employment relationship that it broaches (e.g. Macky and Boxall, 2007; Boxall and Macky, 2009).

It is particularly true that these explanations are strong in terms of their explanation of how formal job performance indicators are underpinned psychological obligations in the fulfilment of the incomplete contract. However, their analysis fails to address how these psychological obligations change over time, for example, tolerance of high intensity of work effort, which over time lessens in relative terms to the individual.

2.1.2 Managerialisation, professionalisation and role expansion

Managerialisation is commonly understood to describe a blurring of the boundaries between managers and non-managers (Grey, 2005). While there is a substantial literature dedicated to defining management in relation to these boundaries, in the context of work intensification, managerialisation is perhaps best understood in context of 'new managerialism' in the UK public sector (Webb, 1999; Ogbonna and Harris, 2004). Although this term itself is contested, broadly speaking new managerialism is said to describe the trend toward the adoption of 'organisational forms, technologies, management practices and values more commonly found in the private business sector.' (Deem, 1998). Accordingly, work intensification is said to occur when non-

managerial employees to take on tasks, duties and behaviours typically associated with managerial occupations (Adams et al, 2000).

As a result of this genealogy, work intensification has been explored most extensively among UK academics and the nursing profession. In the case of academics, work intensification stemming from managerialisation has most commonly been discussed in context of increased bureaucratic pressures and workload in UK universities (Noble, 1998: 363; Jones and O'Doherty, 2005; Willmott, 2011). Whereas a number of studies suggest that reduced autonomy and the increased role of 'emotional labour', or the management and self-regulation of feelings (tending to the emotional needs of students for example) contributed to work intensification for academics in UK universities (Ogbonna and Harris, 2004). In nursing, National Health Service restructuring and policy changes are said to have engendered work intensification for nurses as a result of managerialisation. Adams et al (2000) suggest that the required mix of skills in any given ward/department had been expanded through restructuring meaning that nurses were increasingly required to take on managerial roles and responsibilities, such as reporting, to comply with new demands.

Running parallel to the trend of managerialisation in nursing, a number of scholars have suggested that nursing has undergone professionalisation too – exacerbating work intensification (Brannon, 1994; Cameron, 1998; Ackroyd and Bolton, 1999; Norrish and Rundall, 2001; White and Bray, 2003; Hyde et al, 2005). 'Professionalisation' is a term used to describe a set of pressures that compel individuals belonging to a particular occupational group to engage in activities that enhance their skills or enhance the perception of the job that they do. On an individual level, this could involve workers codifying their tacit knowledge through formal learning or the pursuit of markers of professionalisation, such as membership of a professional body.

Critics suggest these examples of professionalisation can lead to work intensification by putting additional pressure on workers to engage in work-related activity outside of their day job or else they risk falling behind in their careers (Williamson and Myhill, 2008). Professionalisation of the culture of a work organisation has also been linked to work intensification and there are numerous examples where senior manager's attempt to instil a culture of

professionalism in organisations, required employees to carry out work tasks with a greater degree of skill, precision or accuracy than before (e.g. Bratton, 1991; Sewell, 1998).

More recently, Hassard, Morris and McCann (2009) have broadened the debate regarding the link between managerialisation and work intensification, suggesting that there has been an intensification of managerial work. Whereas work intensification in the UK public sector during the 1990s was said to have emerged out of the increased adoption of private business practices, Hassard, Morris and McCann (2011) suggest that the job of management is becoming more intense generally.

Examining the workloads of middle managers at large corporations in the UK, USA and Japan over the course of a three-year period, they concluded that continued 'downsizing, delayering, culture change, role redesign and lean production' had led to exponential intensification of managerial work specifically (McCann, Morris and Hassard, 2008: 343-347). Despite participants reporting increased autonomy and skill as a result of the wave of restructuring they had experienced – something the authors suggest has accelerated from 1980s onwards – they noted hours and intensity of work had increased, as a result of flattened hierarchies and frequent changing of tasks (McCann, Morris and Hassard, 2008). While a range of factors are discussed as having influenced the patterns of restructuring that appear to have led to an intensification of managerial work in large corporations, these forces largely reflect the 'long-term rationalisation' of production that is integral to capitalism according to the authors (McCann, Morris and Hassard, 2008: 343-347).

The fact that middle managers are increasingly bearing the brunt of restructuring and work intensification reflects their declining status it is argued. Thomas and Dunkerley (1999: 158) suggest that this decline was set in train by 'anti-hierarchy' management gurus such as Peters, who labelled middle managers as representing the 'non-value-adding stratum of the organisation'. Such a message, they continue, has been reinforced by the HR literature and its emphasis on workforce flexibility and decentralised decision making, leaving managers exposed to job loss and organisational restructuring – a source of work intensification. There has also been a 'worsening of the key

extrinsic rewards...making up the traditional psychological contract between the employer and the middle manager', which may plausibly encourage subjective feelings of work intensity (Thomas and Dunkerely 1999: 162).

2.1.3 Organisational restructuring

As suggested in the previous section, there is an established link between large-scale organisational restructuring, including 'downsizing, delayering, culture change, role redesign and lean production' and work intensification. In terms of the organisational forms this takes, it has been suggested that forms of restructuring that involves a headcount reduction, such as downsizing and delayering, often means that workers 'have to pick up the slack' in order to compensate for absent colleagues (Hampson, 2009: 73). Additionally, where downsizing and delayering is as a result of technological changes in the organisation, certain jobs, functions or departments will be made redundant or smaller, and work intensification can arise from greater skills pressures (Hall, 2002).

A number of studies suggest there is link between work intensification and 'survivor syndrome' (Ebadan and Winstanley, 1997; Littler, 2000). Following downsizing or delayering, employees that remain, typically experience higher levels of guilt, anxiety and stress, which can contribute to subjective feelings of intensity at work (Devine et al, 2003). However, it is also true that survivor syndrome can lead to an uplift in work effort, with Green (2004: 720) suggesting that it may trigger employees to 'devote above-the-norm effort levels either to help support their employers' business or to move themselves toward the back of the redundancy queue'.

Instances of culture change have also been linked to work intensification. Implementation of a safety culture – which is described by Cox and Flin (1998: 191) as 'values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management' - can engender work intensification in organisations as a result of increased bureaucracy or role expansion.

Cross-border acquisitions and mergers involving corporations from nations typically considered to have a long-hours culture, such as the United

States, United Kingdom and Japan, can also lead to work intensification if said culture becomes 'dominant' (Cowling and Tomlinson, 2005). An increasingly common example of culture change linked to work intensification in recent years are initiatives designed to create entrepreneurial culture or a culture of open innovation. In this context, a culture of open innovation implies the added expectation and pressure to think or work creatively, with critics arguing that measures designed to impel creativity invariably lead to a lengthening of the working day (Walker, 2011).

2.1.4 Technology

New technology needs little introduction as a driver of occupational changes. However, in terms of the subjectivities that it engenders in relation to work intensification, the computerisation of office work has been identified as a key cause of work effort and stress among workers (Baldry, Bain and Taylor, 1998; Hall, 2002; Chesley, 2010 and 2014). Nevertheless, the widespread diffusion of digital technologies at home and in the workplace in the years since the research was published has meant that 'digital natives' typically experience less work intensity than 'digital immigrants' did during the 1990s (Kubicek et al, 2014).

Despite this, however, there is also evidence to the contrary, which suggests that digital natives feel much more burdened by the pressure to multitask and keep up with their social media while at work than digital immigrants do, meaning that they also experience stress and intensification (Rosen cited in Chesley, Siibak and Wajcman, 2013). Relatedly, research is gaining traction that looks at how work intensification is dealt with differently by individuals across the generational divides in work organisations (Brown, 2012).

2.1.5 Job insecurities

An edited book by Burchell, Lapido and Wilkinson (2002) develops a number of linkages between work intensification and job insecurities and relates these to a variety of organisational and institutional factors. Regarding the latter, Hudson (2002a) suggests that 'numerical flexibility' in the UK's labour market is one of the main conditions engendering job insecurities and

work intensification (Hudson, 2002a: 40). While flexibility in labour markets is typically discussed as supporting a 'core-periphery' model of national labour supply and demand - in which a constant surplus enables organisations to address short-term fluctuations in demand for their products/services - Hudson (2002a: 42) found that UK firms rarely ever have to rely upon 'buying-in' labour despite increases in demand for products and services.

Hudson (2002b) also explains that the UK's flexible employment regime is an antecedent of cognitive (real) and affective (perceived) job insecurities, which inspire positive work intensification across the population (Anderson and Pontusson, 2007). In other words, due to employment deregulation, there is a realistic chance of job loss ongoing, which, for all intents and purposes, is a key causal element of work intensification (at least on an individual level). Hudson (2002a: 47) continues to suggest that this encourages organisations to pursue downsizing and delayering in particular as long-term rationalisation strategies, something also discussed by McCann, Morris and Hassard (2008). Employment legislation and union opposition to downsizing and delayering poses 'little hindrance' to organisations when pursuing flexibility, she explains (Hudson, 2002b). For workers, one potential outcome of these institutional conditions is the normalisation of survivor syndrome, whereby the transformation of organisational attitudes and expectations via restructuring orients workers toward compliance with higher workloads. Hudson (2002a: 46) notes that a caveat to this is individual orientations to the risk of being made a casualty of future restructuring in the face of long-term unemployment.

2.1.6 Discussion of conceptual issues

From this discussion, it is apparent that there are a number of plausible explanations and sources of work intensification. Furthermore, that work intensification represents a growing area of academic interest, with broad appeal across business, management, organisation studies and analogous fields. Despite this, however, a number of scholars have suggested that a 'definitional ambiguity' pervades the conceptual notion of work intensification, which it turn makes it difficult to draw meaningful comparisons in terms of theory (Elger, 1990; White and Bray, 2003: 1).

This is largely as a result of academic discourse being multidisciplinary. Application of the term 'work intensification' lacks consistency or equivalence when studied across the social science disciplines (Steffy and Grimes, 1986: 322). While scholars are in broad agreement that work intensification describes an increased intensity of work effort, there is a lack of interdisciplinary debate regarding a conceptual definition. For example, it is equally common for researchers to include either hours worked and the subjective experience of work pressures in their definitions or both (e.g. Boxall and Macky, 2008).

A further schism exists separating overtly critical explorations of work intensification (e.g. Hassard, McCann, Morris, 2009) from the more pragmatic and normative approaches (e.g. Felstead et al, 2013). It is perhaps the case that because academic interest in work intensification stems from a much broader concern with declining job quality, different views have been brought to bear on underlying issues such as freedom and autonomy.

At one end of the spectrum, there are scholars who frame work intensification as a practical problem in terms of how to maximise job performance whilst minimising the potential negative consequences of work intensification such as burnout (e.g. Walsh and Weber, 2002: 406). At another end of the spectrum, scholars who are institutionally associated with critical management studies (CMS) (e.g. Hassard, McCann and Morris, 2009), and who adopt, to a greater or lesser degree, a position of non-performative intent have done work intensification research (Fournier and Grey, 2000). Located somewhere in the middle (figuratively speaking) is Francis Green and collaborators, who view work intensification as a health-related social problem and an economic inefficiency that should be treated as a conventional policy concern (Green and McIntosh, 2007; Felstead and Green, 2008). Additionally, there are examples of research that make tangential links to work intensification, or mention it in passing, without providing a substantive discussion of conceptualisation the topical themes (e.g. White et al, 2003: 192).

The levels of analysis used to explore work intensification phenomena and phenomenon provide another key dividing line. The predominant view is that work intensification is a by-product of change in the macro-economic

environment. A substantial body of analytical and theoretical work evaluating work intensification phenomena via:

1. Large-scale surveys documenting subjective perceptions of work effort changes across the population (e.g. Gallie et al, 1998; Ashton et al, 1999 and Felstead, Gallie and Green, 2002).
2. Secondary research identifying 'substantive increases in directly reported subjective effort levels' between successive large-scale surveys.
3. Surveys documenting the perceived factors that pressurise employees to work hard (e.g. Green 2001).

These three key types of explanation are broadly characteristic of research at the macro-level.

More recently, scholars such as Kelliher and Anderson (2010) have sought to shift the focus away from macro-level influences such as increased competitive pressures and technological change toward the workplace. In contrast to macro-level work intensification research, micro-level intensification research, analyses tend favour case studies centring on particular instances of organisational change and redesign (Hudson, 2002a) or the changing nature of particular occupations and job roles (Adams et al, 2000) or a combination of the two (Ogbonna and Harris, 2004). Another current is also present which seeks to evaluate the extent to which new sets of commonly adopted working practices, such as homeworking, cause work intensification (Kelliher and Anderson, 2010; Granter et al, 2019).

One of the main theoretical underpinnings of this stream of research is the 'psychological model' of the employment relationship in involves (Green, 2004: 710). In other words, work intensification is found to have arisen from a tacit understanding of the expectation to increase effort in context of high-commitment work environment, or from material changes brought about by job redesign for example. It follows that a psychological obligation to increase work effort is the key motivating factor. Because obligations form part of an 'incomplete contract' (Hart, 1988) - meaning that fulfilment of said obligations can be breached - this largely frames work intensification as a problem of

management control. In contrast, macro-level analyses are more typically concerned with identifying and refining variables that help to measure work effort changes in the population over time, rather than producing theories of management control per se.

2.1.7 Identification of literature gap

Fragmentation between the established core of macro driven work intensification research (Green and McIntosh, 2001; Green, 2004, Valeyre, 2004; Green, 2007) and more critical assessments dealing exclusively with micro-level organisational practices (Adams et al, 2000; Kelliher and Anderson, 2010; Boxall and Macky, 2014; Chesley, 2014) has led to two inter-related underdevelopments in the literature I argue.

On the one hand, there is lack of dialogue between the two streams of research, meaning that established sources and explanations for work intensification are seldom analysed in relation to one another. This is particularly true of organisational restructuring. On the other hand, descriptive explorations of these factors in empirical contexts that do not lend themselves well to macro or micro forms of analysis, or which span multiple levels of analysis, are lacking.

Against this background, it is suggested that a conceptual gap in the literature exists, which can be filled with a research thesis that successfully establishes the practical basis for an integrated conceptual framework to analysing work intensification, develops substantive theoretical linkages between the factors engendering work intensification within a novel context and provides a robust relational explanation of the process of work intensification in said context.

Accordingly, the remainder of this chapter will introduce clusters as a novel context for exploring work intensification using multiple levels of analysis, explore the benefit of adopting an integrated conceptual approach in this context and provide a comprehensive theoretical overview of the empirical context in relation to factors engendering work intensification, specifically organisational restructuring and job insecurities.

2.1.8 A conceptual framework of work intensification

As mentioned, for much of the last decade, the bulk of research into work intensification has been carried out in the field of labour economics (Green, 2006). More recently, however, the topic has experienced a surge in interest from management and organisation studies scholars concerned with how changes in management and pressures borne of the global economic downturn have contributed to the rising intensity of work (e.g. Brown, 2012; Stanton et al, 2014; Clark and Thompson, 2015; Granter, McCann and Boyle, 2015). Going slightly against the tide of postmodern and poststructuralist perspectives that drive a fecundity of critical scholarship on contemporary workplace issues (O'Doherty and Willmott, 2001), the recent upsurge in interest in work intensification has been influenced by the labour process tradition (e.g. Ogbonna and Harris, 2004; McCann, Morris and Hassard, 2008). Such an approach, I argue, provides a sound theoretical basis for developing a conceptual framework that takes into account how various inter-related conditions affecting the employment relationship might be expressed as work intensification at the meso-level.

The strength of the labour process approach stems from a parallel between its 'core' assumption regarding the use value of labour power to employers and the work effort dimension of work intensification (Thompson, 1990). Labour process theory's (LPT) core assumption regarding the use value of labour power is that it represents an 'indeterminate' commodity for 'buyers' (employers) (Thompson, 1990). In other words, the labour contract simply guarantees employers a capacity for production. To create economic value for the employer, labour power needs to be applied to a production process that results in a conversion 'moment' - when goods or services acquire market value (Smith, 2015: 206). Labour, unlike the other forces of production, however, needs to be compelled to comply with the production process. Hence, an imperative exists within the production process to control the extraction of work effort from labour capacity, and this is known as the labour process.

From the perspective of employers, two key dimensions govern the role of the labour process: the direction of task effort and intensity of task

effort. It is along these two dimensions that employers seek to assert their dominance over labour in the production process (i.e. to remove indeterminacy), through controlling the means of production. Accordingly, because task effort intensity is a key element of work intensification, control over the labour process is viewed as a key mechanism through which work intensification is theoretically generated.

Such an understanding of work intensification helps to draw attention to the objective conditions of work under capitalism and employers' strategies to control them. In the workplace context, any transformation of the design, distribution and measurement of work tasks in the production process can be causally linked to the intensification of work effort under this rubric (Thompson, 2010: 10). The strength of this relationship has enabled scholars to frame organisational restructuring as a key source of work intensification, with some suggesting that work intensification is intrinsic to the 'long-term rationalisation' of production under capitalism (McCann, Morris and Hassard, 2008: 343-347).

An emphasis on changing conditions at the workplace level, however, does not automatically exclude consideration of macro conditions under this framework (Friedman, 1990). On the surface, of course, there is a clear correlation between an employer's transformation strategies and the changing macro environment. For instance, a number of scholars have linked the global economic downturn following the 2008 financial crisis to intensification of work in large corporations (e.g. Hassard, McCann, Morris, 2009). However, it is argued that in order to develop a fuller understanding of how macro conditions influence employers' transformation strategies, which increase work intensity of effort, employers' strategies in relation to the local labour market also need to be incorporated into analysis.

The reasoning behind this is set out by Smith (2006). Smith suggests that in addition to the indeterminacy of effort, employers also have to contend with the indeterminacy of labour mobility. In context of organisational restructuring, any transformation that creates the physical, social or psychological expectation or obligation to increase effort is likely to cause tension in terms of work-effort bargaining. An employee's perception of the work-effort bargain concerns the acceptability or fairness of demands for

increasing work effort. Labour mobility effectively acts as a stress test to this, insofar as employees can simply choose to leave or threaten to leave an organisation. Yet, labour supply/demand conditions may prove a limitation to this in reality.

Refusal to increase work effort could in theory mean that a worker is more likely to lose their job. In adverse market conditions, an employee may decide that it is not worth the risk and comply with increased effort demands. On the flipside, if the opposite were true, and an employees' prospects of finding a new job are strong, they may 'threaten exit' in order to tip the work-effort bargain back in their favour. As a result, it is expected that the relative strength of either party's position in relation the work effort-mobility bargain will reflect the current state of macro-conditions.

In times of recession, for example, it is to be expected that mobility power will be restricted as jobs are seen as less secure and job opportunities less plentiful. Employers can also draw upon a variety of resources and mobilise strategies through meso-level contextual systems, networks and hierarchies to strengthen their hand in terms of work effort-mobility bargaining it is argued (Reed, 2005a: 1634). Employees in travel to work agglomerations for instance typically demonstrate a degree of psychological 'stickiness' to place that restricts mobility bargaining power to and benefits employers (Markusen, 1996). Furthermore, business location decisions enable employers to embed themselves in local labour markets and gain a competitive advantage or benefit from certain economies of scale in relation to labour. Additionally, there is an established body of literature that theorises the network effects of localised structures and contextual systems on the employment relationship. Numerous accounts of paternalist industrial enclaves, company towns and labour markets dominated by a few firms, for example, explore how employees' perceptions and expectations and material circumstances are conditioned through relationships of trust, reciprocity and mutual dependency (e.g. Dale, 2002; Manning, Sydow and Windeler, 2012). The social regulation of work through meso-level structures and systems as described is clearly related to the control imperative of the labour process, however, despite the implication of work intensification here it remains hitherto unexplored.

In light of this discussion, Burawoy's (2012: 93-94) game metaphor may be usefully applied to understand the nature of contingent consent that implores work intensification in a meso-level context. According to Burawoy (2012), the work organisation is a tool designed to control and dominate employees that 'manufactures' consent through encouraging the workforce to embrace the fundamentals of capitalism and in effect work harder. Practically speaking, work organisations adopt a number of reward based techniques or 'games' that obscure the exploitative nature of wage labour under capitalism to create consent. Competition to exceed performance targets, competition for promotion and recognition by one's peers are reward games, whereas bargaining created the illusion of participation and choice says Burawoy (2012: 27). Whilst Burawoy's analysis is centred on a manufacturing firm, it is argued that the manufacture of consent extends in this way beyond the formal work organisation and potentially to geographic clusters.

The contextual systems, hierarchies and networks, such as clusters, like work organisations are a tool of control and domination, which operate as a sophisticated extension of the 'game' I argue. Writing in 1982, Burawoy suggests that all forms of organisational development (e.g. geographic clusters) are to overcome new challenges hurdles to consent, to maximise the extraction of excess 'unpaid labour'. Accordingly, it is argued that material circumstances, which are conditioned through relationships of trust, reciprocity and mutual dependency, are a type of game related to extra-organisational factors at the meso-level.

There is a clear link here between Burawoy's theory and the key sources of work intensification as outlined in section 2.1. High performance work practices, for example, conform to what Burawoy (2012: 79-86) describes as reward 'games', insofar as they emphasise the intrinsic rewards of higher efforts. It is also true that job insecurities create the illusion of choice (or lack thereof) regarding the mobility bargain, whereas restructuring creates new job roles and duties.

Against this background it is argued that Burawoy's theoretical insights are highly relevant to a conceptual framework for exploring work intensification on a meso-level in a geographic cluster. On the one hand, his social-organisational concept of consciousness sheds light on the role of

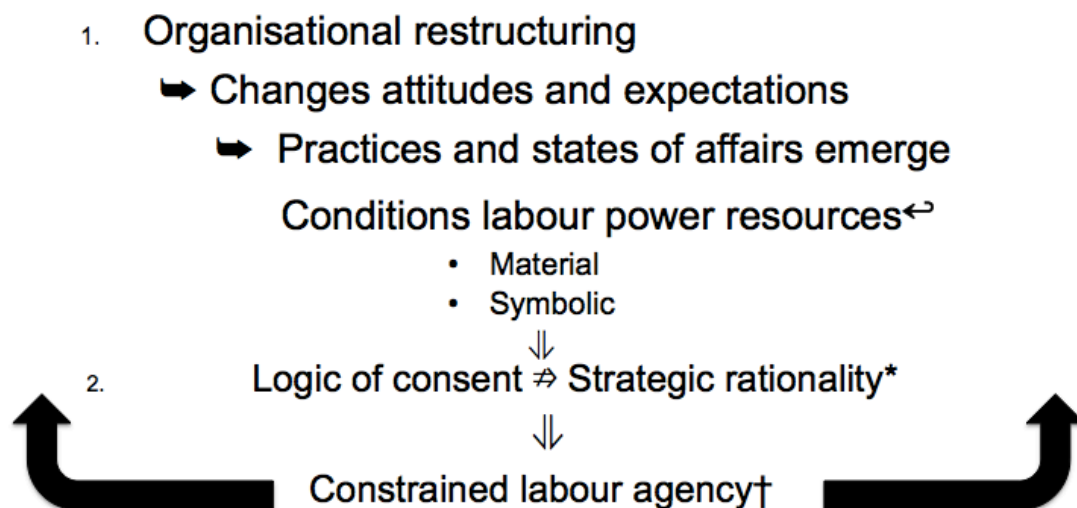
consent in the work intensification process, insofar as it draws attention why workers put up with it. On the other hand, it emphasises the organisation of work as giving shape to this process. Therefore, when the organisation of work is interpreted in a broad sense to encompass the macro economy, contextual systems such as labour markets and the organisation itself, it provides a framework for interpreting how sources of work intensification at various levels combine. Finally, as alluded to in the previous paragraph it provides the basis for interpreting sources and conditions of work that are related to work intensification empirically speaking.

While Burawoy has much to recommend in terms of addressing the lack of complexity discussed in the previous chapter, one particular shortcoming is the strongly materialist orientation that it entails. Chiefly such a view overlooks the more symbolic or discursive aspects of work organisation, which must be considered as part of the mix. The individual elements that condition and makeup said judgments can be categorised as being reflective of the positioned interests of workers according to their material or symbolic qualities. For example, strong work orientation that flows from the discursive aspects of organisational culture, such as brand, could be said to be symbolic, whereas if the wilful logic of struggle is distorted by high wages it would be an example of material interest.

It follows, according to Smith (2006: 394), that the onus is on employers to devise a variety of social and economic constraints, obligations and forces in order to regulate the mobility power of labour. In other words, to minimise the disruptive potential of worker's quitting or threatening to quit in order to secure higher wages, better shift patterns etc. Consequently, a mobility struggle is present between employers and workers whereby each party will attempt to mobilise their respective strategies and resources according to their own interests in a variety of organisational scenarios, this overlaps with struggles concerning work effort, and an example of which could be when a lack of market opportunities available to workers during an economic recession say, means that firms are able to get more out of their workers. When represented on an ongoing basis, a sudden and permanent or gradual expansion of work effort is evidence of the process of work intensification.

To summarise, labour power represents an ‘indeterminate’ commodity for ‘buyers’ (employers) insofar as it constitutes a capacity to work rather than the absolute guarantee of production (Thompson, 1990). To this end, a key imperative for buyers is to attempt to reduce or resolve the ‘indeterminacy’ or contingency of effort direction and intensity, so that controlled production occurs profitably. However, the fact of labour’s ability to withdraw from this process (the labour process) means that it still has the potential to disrupt or destabilise production.

Figure 1. A conceptual model of organisational restructuring and work intensification



(*Burawoy and Wright, 1990; †Coe and Lier, 2011)

2.2 Geographic clusters and work intensification

As discussed in sections 1.2 and 2.1, there is a lack of literature exploring sources engendering work intensification at the meso-level. Taking into consideration the materialist notion of work intensification developed in the previous section - work organisations are understood as the primary ‘producers’ of the conditions of work (McQuarrie and Marwell, 2009). On that account, the meso-level is defined here as the ‘intermediate level of social structuring’, or in other words, the layer of contextual systems, networks and hierarchies that sits in between the macro and micro economic/organisational structures that govern the conditions of work (Reed, 2005a: 1634). More

specifically, I am referring inter-organisational power structures, such as industrial networks and occupational labour markets for example (Ouchi, 1980; Leflaive, 1996).

Against this background, geographic clusters are identified as an appropriate meso-level lens through which to explore conditions of work intensification. A defining feature of geographic clusters is the co-location (clustering) of work organisations in a certain sector along a regional or local geographical scale. Assuming that material context conditions 'the nature and basic structure' of human actions in some way (Schatzki, 2005: 267), geographic clusters can be understood as a 'material scaling' of work organisation (Brenner, 2000). In other words, they are material context through which the conditions of work and the social relations of production as described are produced in certain settings.

Industrial spaces such as geographic clusters have long been viewed as a way of employers exercising control over workers. The construction of housing near factories in company towns such as Bourneville for example is understood in the Marxist tradition as complementing the workplace through social and cultural control (Porteus, 1970). Moreover, the historical emergence of industrial spaces such as company towns is also understood as reflecting the changing relations of power at play in capitalism, insofar as shifting modes of production lead to new spatial arrangements of work (Herod, 1997). The role of geographic clusters has been viewed similarly in this way by critics. On the one hand as enhancing control over labour beyond the practices of the workplace and on the other hand as a materialisation of corporate power in an increasingly globalised world. English-Lueck (2002) for example illustrates how control over labour is exercised in the Silicon Valley technology cluster, describing employee lives as being 'dominated by work' as a result of a 'blurring of the organisational boundaries between work and home'. In contrast, Cowling and Tomlinson's (2005) notion of 'divide and rule' elucidates the latter point in describing how the geographical concentration of corporate power in clusters for example counteracts challenges associated with economic globalisation.

Considering this, there are important parallels that can be drawn between these theoretical aspects of labour control in clusters and the

process of work intensification it is argued. It is interesting, for example, that English-Lueck (2000) identifies a widespread culture of hard work among employees in the Silicon Valley cluster. While it would be a causal leap to say this culture of working hard is evidence of work intensification (without prior conceptual clarification), the cluster setting is identified by English-Lueck as playing a role in socialising employees' attitudes and orientations toward hard or demanding work. This insight relates to the discussion in section 2.1.8 of the underlying psychology of consent and work intensification, given that the socialisation process described in the Silicon Valley cluster resembles that of Burawoy's (2012) games metaphor. That is to say English-Lueck describes a process in which workers are socialised into identifying with a particular way of working, and one that is characterised by as Burawoy (2012) puts it aimed at extracting 'unpaid labour' from the standpoint of employers.

In addition to this psychological dimension, the geographical concentration of corporate power – shared between a few key players in a cluster – is the material basis of strategic control over local employment structures (Cowling and Tomlinson, 2005: 35-6). In other words, rather than increasing competition for labour between employers as could be assumed, they suggest geographic clusters provide the basis for collusion in terms of the expected conditions of work - a similar observation to that of English-Lueck. Addressing the latter point regarding the psychology of consent, in oligopolistic local labour markets – where there are only a few main employers – this can be used to their advantage by making the threat of relocation seem more credible in an attempt to nullify any potential labour militancy. Such an observation speaks strongly to the work effort mobility bargain explored in the previous section (Smith, 2006).

Regarding how these two dimensions of geographic clusters relate to the sources of work intensification, there is a compelling overlap in terms of the link between organisational restructuring and job insecurities. Organisational restructuring, as was established in section 2.1.3, is one of the main sources of work intensification given that it can lead to increased workplace demands and pressures. A knock-on effect of organisational restructuring according to Hudson (2002a) concerns fears over job security, which can see employees 'devote above-the-norm effort levels...to move

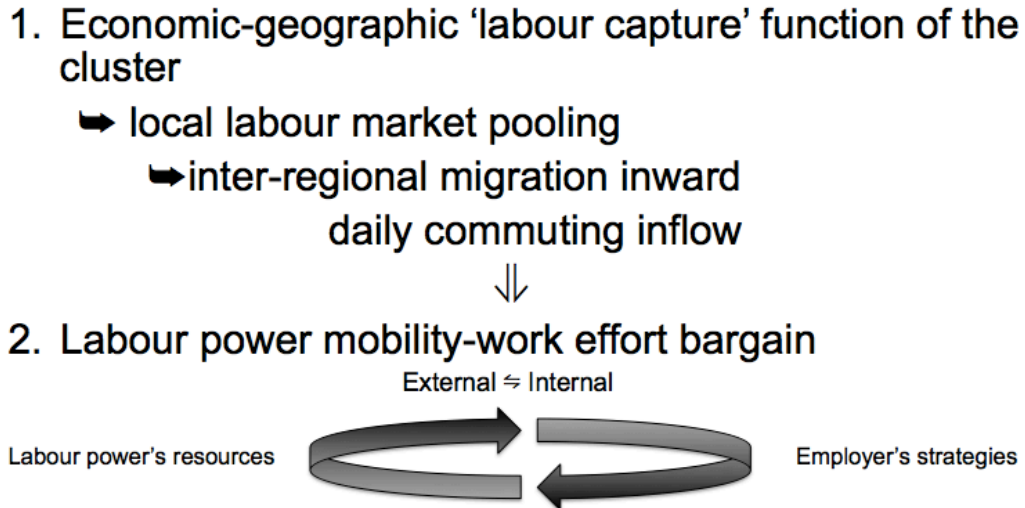
themselves towards the back of the redundancy queue' in an organisation. If, as has been suggested by McCann, Morris and Hassard (2008), that employers pursue organisational restructuring as a long-term strategy, then it could be viewed as 'game' in which employee's material interests and symbolic options are gradually depleted (Burawoy, 2012). That is to say the content of work becomes more intense, as labour's predilection to resistance in theory becomes weaker. If long-term organisational restructuring is pursued and replicated across employers in a geographic cluster, then there is an argument to suggest clusters are a sort of co-ordination mechanism that psychologically and materially weakens labour's bargaining power (Leflaive, 1996).

For example, organisational restructuring by employers in a geographic cluster regulates local labour supply and demand dynamics, which are material. Downsizing at one employer, for example, could mean that other employers in a geographic cluster are able to recruit returnees on more favourable terms due to increased local labour supply. Reemployment of returnees could cheapen labour costs for other employers in a cluster by reducing wage bargaining pre-employment (a kind of work intensification by proxy) (Thompson, 2010: 10). Negative experiences of redundancy and unemployment could also generate a psychological contract in which returnees will contribute higher than normal levels of work effort to negate risk of future redundancy. Represented as a 'game' (Burawoy, 2012), it is argued that these dynamics mean that employers local labour market actions could be viewed as co-ordinated in a sense insofar as they occur in relation to one another's (Fleetwood, 2006), and a 'source of increasing returns to scale' in terms of labour (Asheim, Cooke and Martin, 2006: 4).

However, if this were the case in a geographic cluster, why in theory could employees choose to put up with it? While a geographic cluster that gives rise to cycles of organisational restructuring, job insecurities and work intensification might not provide steady work, aggregate labour demand suggests that it would provide a steady stream of job opportunities. Considered against the rising tide of precarious work, this could be a key reason employees choosing to base themselves there. Another compelling explanation is that 'strategic rationality' comes into play (Burawoy and Wright,

1990: 252). The cycle of organisational restructuring and redundancies as described above has the potential normalise feelings of insecurity, insofar as it obfuscates labour's true agency in the work effort mobility bargain. That is to say, although employees judge the material and symbolic rewards they receive against the work effort required and what they might receive from another employer or in a different geography, over time their rational assessments of this may become embedded or bounded by the 'game'. Put differently, perception of the conditions work in a geographic cluster are socially regulated, meaning that employees' responses to work intensification are contextually driven and conditioned by it as an ongoing state of affairs. Hence, it is suggested that geographic clusters provide a potential framework for inter-organisational coordination that engenders work intensification through job insecurities stemming from organisational restructuring (Leflaive, 1996).

Figure 2. The labour agency re-embedding process



2.2.1 Overview of the cluster concept

The cluster concept was neologised and popularised by influential business strategy scholar Michael E. Porter (1998a: 197-288). The concept may usefully be thought of as a reinterpretation of Marshall's (1890/2010) industrial district for the post-industrial age, given that they share a number of key characteristics. Said characteristics include the co-location of

complementary firms in a particular geography, the existence of formal and informal linkages between economic actors within the geography and local competition and collaboration between firms (Porter, 1998b: 79).

Porter's (ibid.) emphasis on the role of clusters as a 'new spatial organisational form' prominent in 'the new economy', means that the concept is most commonly discussed in relation to the science, technology and engineering industries. Due to this genealogy, the concept surfaces regularly in business, academia and policymaking circles. Some of the most prominent topics and themes discussed in relation to clusters include regional economic development and the knowledge-economy (e.g. Håkanson, 2005; De Blasio and Di Addario, 2005), business and innovation strategy (e.g. Das, 1998) and the cultural and economic regeneration of the inner city for example (e.g. Storper and Venables, 2004; Charnock and Ribera-Fumaz, 2011).

The ubiquity of the concept in business, academic and policymaking debates, means that there is a large literature on clusters. Despite this literature is not being the main focus of the thesis, rather a geographic cluster provides the context for analysing the lived experience of work and employment. The fact that 'cluster' appears in the title of thesis, however, means it would be an obvious omission to not provide a brief discussion of the concept.

As alluded to in the introductory chapter, clusters are something of a fuzzy concept. Martin and Sunley (2003) argue that the notion is an umbrella term that describes a range of ideas and assumptions in economic geography concerning industrial agglomeration. For this reason, it would be remiss to restrict this review to the narrow literature that self-identifies as 'cluster theory' without demonstrating the breadth of the empirical notion. While this empirical breadth is the reason that Martin and Sunley (2003) criticise the conceptual notion, such breadth also demonstrates its strength as a heuristic it is argued (Benneworth and Henry, 2004).

As mentioned on pages 45-46, the cluster is adopted in this thesis as a lens for exploring inter-related job quality issues within a particular geographical setting. Specifically, in this case the notion brings an attentiveness to inter-organisational power relations in a regional context and its influence on the conditions of work. Hence, as a baseline definition to

describe the economic agglomeration of business fields, the cluster concept provides a heuristic point of departure for diverse empirical research from a variety of perspectives. What follows, then, is a brief sketch of the extant literature, in so far as it sheds light on the diversity of research in which the cluster is the underlying heuristic concept. As one of the most well-known voices on clusters, it is logical to expand further on Porter's body of work first.

In genealogical terms, the influence of Porter's (1980) earlier work on competition and competitive strategy is strong, particularly in relation to his ideas regarding 'cluster theory'. Having already theorised the 'competitive' firm and the 'competitive' market environment; in *The Competitive Advantage of Nations*, Porter (1990) adds extra strata to his emerging conceptual model, by arguing that competition can also be embedded within the nation, thereby strengthening the 'competitiveness' of global economic systems as a whole. He later completes the model by conceptualising the 'competitive region' or cluster, which sits as a meso-level interface between the micro-level competitive firm and the macro-level competitive nation (Porter, 1998a: 221).

Clusters, then, are said to offer a way of organising production in regions, which enhances the overall competitiveness of the firm, nation and global economy. It follows then that 'cluster theory' as a body of work seeks to promote the above as a strategic model for innovative and high-growth, high-value-added sectors, such as engineering and high-technology, in business and policymaking circles (Martin and Sunley, 2003). It is on this point regarding innovative and high-growth, high-value-added sectors that Porter seeks to distance himself from the analogous literature on industrial districts.

In a co-authored book chapter, Porter states that while 'clusters and the concept of industrial districts share some essential characteristics...industrial districts are characterised by groups of co-located small- and medium-sized companies operating in light manufacturing sectors of the economy' (Porter and Ketels, 2009: 180-181). Differentiating between clusters and industrial districts on this basis is not an entirely superficial distinction as Martin and Sunley (2003) argue. Clusters have been characterised as fostering knowledge sharing and a culture of innovation that enhances the innovative capacity of regions beyond the benefits typically associated with economic agglomeration, such as labour pooling for example.

Such an understanding has been fruitful for scholarship in terms of providing a point of departure for documenting and evaluating regional innovation processes (e.g. Cooke, 2001; Asheim and Coenen, 2005) and their antecedents such as 'buzz' for example (Bathelt, Malmberg and Maskell, 2004).

Valuable as these perspectives may be to an understanding of the role that regions play in the knowledge economy, however, the underlying conceptual notion is largely 'indistinguishable' from that of industrial districts it is argued (Martin and Sunley, 2003: 29). A common theme in the industrial district literature is 'Italianate industrial districts', which describes a number of light manufacturing agglomerations in northern Italy, typically focussed on fashion, food and furniture, and are noted for their economic efficiency, innovative output and high employment levels (Natali and Russo, 2009).

Despite relating to different sectors, the basic characteristics of clusters and industrial districts are the same. Both describe the co-location of complementary firms in a particular geography, where the existence of linkages between firms and economic actors generates certain competitive or collaborative social dynamics. As perspectives, they also emphasise regional industry structure as a model for economic growth, albeit in slightly different ways (Ortega-Colomer, Molina-Morales and De Lucio, 2016). Whereas cluster theory tends to champion high-growth success stories (Braunerhjelm and Feldman, 2006), scholars of Italian industrial districts emphasise the importance of social ties for sustainability and resilience, mindful of examples of industrial decline (Ortega-Colomer, Molina-Morales and De Lucio, 2016).

Considering this, there is an argument to suggest that clusters and industrial districts are not distinct concepts, but in fact divergent perspectives on or separate typologies of territorial production (Markusen, 1996). On the one hand, cluster theory literature is typically focussed high growth sectors such as engineering and high-technology and tends to favour practical and 'business friendly' language (Martin and Sunley, 2003: 9). On the other hand, industrial district literature embraces a more scholarly and discursive tone and focusses on the decline and renewal of regional manufacturing in Western economies (e.g. Staber, 2001; Boschma and Ter Wal, 2007). This division

would not be so important but for the fragmentation that pervades this particular discursive arena.

Gabriel (2010: 758) provides an apt metaphor for describing how the lack of substantive dialogue between academic tribes occupying the same intellectual terrain has led to fragmentation in the social sciences. 'Ideas may nod politely at each other, gang up against each other or, quite commonly, take little notice of each other, coexisting, like people do in large metropolitan spaces, in their cloistered enclosures.' Such a description sums up neatly the divergence between cluster theorists and industrial districts scholars, despite, as has been discussed in this section, sharing 'common roots' (Porter and Ketels, 2009).

It is a result of this fragmentation, I argue, that there is scant research exploring organisational restructuring, job insecurities and work intensification in high-tech clusters. Whereas high-tech industry agglomerations have largely been studied by cluster theorists in a normative economic frame and are viewed on the whole as being largely positive for employees (Fallick, Fleischman and Rebitzer, 2006). The potentially negative aspects of work and employment in clusters would be of greater interest to industrial districts scholars who, as mentioned, typically work with case studies in light manufacturing (e.g. Ramazzotti, 2010). Consequently, the specific topic to be explored in this thesis has not yet been addressed in any theoretically meaningful way.

Thematically speaking, there are a handful of case studies that draw attention to the conditions of work and employment and the nature and extent of job quality in high-tech clusters (English-Lueck, 2000; Chun, 2001; Benner, 2002; Ó'Riain, 2002; English-Lueck, 2010; Lane, 2011; Hyde, 2015). However, the aforementioned case studies do little to explore linkages between inter-organisational power structures, local labour market dynamics and the conditions of work and employment. This is owed to the fact that the case studies largely overlook how clusters condition 'the nature and basic structure' of work and employment relations that produce lived experience (Schatzki, 2005: 265).

Against this background, there are two main arguments for adopting the cluster concept in this thesis. On the one hand, I choose to use the term

geographic cluster due to the volume of extant literature that applies the term to the high-tech industry. While the industrial district literature is more aligned to the topic of this thesis in terms of a critical perspective, extant research focussing on the high-tech industry typically uses the cluster notion (Bresnahan and Gambardella, 2004; Engel, 2014). Moreover, as the cluster concept is widely used in business, policy making and academia circles, it is arguably preferable to rival notions with a limited appeal beyond an academic audience (Benneworth and Henry, 2004).

The problem of 'conceptual throwaway' in this topical area is another key consideration (Sunley, 2008: 2). As has been covered in the previous pages, the intensive conceptual debate regarding the various forms of 'territorial production' has led to fragmentation in the literature (Markusen, 1996). This has led to a situation whereby separate communities of interest have formed around the most prominent concepts (clusters and industrial districts) despite the underlying concept sharing much in terms of their basic characteristics. To this end, there is value in embracing the cluster as a broad heuristic in order to avoid getting too bogged down in the conceptual debate at the expense of meaningful empirical research.

2.2.2 Organisational restructuring, job insecurities and work intensification in the Thames Valley high-tech cluster

Linkages between organisational restructuring, job insecurities and work intensification have been studied extensively in the context of high-tech firms (English-Lueck, 2000; Chun, 2001; Benner, 2002; Ó'Riain, 2002; English-Lueck, 2010; Lane, 2011; Hyde, 2015). Short product lifecycles and the rapid pace of technological change are key characteristics of this sector, which means that organisational restructuring, insecure, agency and project work are common (Berrebi-Hoffman et al, 2010). Furthermore, the prevalence of venture capital and private equity investment to fund product development, particularly in early stage start-ups, also means that there is a general short-termism about the business cycle, which leads to a lack of stability and frequent organisational changes (ibid.).

Contextually speaking, the Silicon Valley geographic cluster has been a particular focus for the explorations of these themes, as the cultural

(Weisinger and Trauth, 2002) and operational 'home' of the global high-tech industry (Sonderegger and Täube, 2010: 385). Barley and Kunda (2004), for example, explored work insecurity, organisational restructuring and workers responses to the ups and downs in the business cycle. In the British context, the Thames Valley high tech cluster is a near equivalent, with 13.1 percent of employees in the region employed in high-tech sectors – the highest rate nationally (Thames Valley Berkshire LEP, 2017).

The Thames Valley high-tech cluster is part of the M4 corridor, and its growth from the 1980s onwards owes much to this economic and geographic position. Like much of the rest of the UK, towns along the M4 corridor underwent a process of deindustrialisation as the national economy transitioned away from manufacturing to services during the 1970s (Kilpatrick and Lawson, 1980). Despite this, however, the region fared relatively favourably in comparison to large swathes of the Midlands and Northern England for example which suffered long-term economic decline throughout the 1980s (Martin and Rowthorn, 1986; Lewis and Townsend, 1989) and into the early 1990s (Nayak, 2003; Hudson, 2005). The so-called 'sunbelt' towns of Newbury, Reading and Bracknell along the M4 motorway (Boddy, Lovering and Bassett, 1986) were the beneficiaries of governmental assistance which smoothed their transition to service economies during the 1970s (Martin, 1988; Lewis and Townsend, 1989; Pinch, 1993). Accordingly, it is the renewal of industrial Berkshire towns including Reading as tertiary 'service centres' at the beginning of the 1980s (Cooke, 1986: 246), which is a main factor explaining why a high-tech cluster emerged there later on in the decade (Brenehey, Cheshire and Langridge, 1983).

As others have mentioned, the emergence of the high-tech industry in the area has little to do with high-technology development (Breheney, Cheshire and Langridge, 1983: 62; Romijn and Albaladejo, 2002; Romijn and Albu, 2002). The precursor of the transition, first to a local service economy, then to specialisation in business services (Coe and Townsend, 1998), and later to attracting foreign direct investment of US high-tech firms in the 1990s (Hall, 1995) was in fact 'office decentralisation' from Central London to South East England (Daniels, 1969). In the late 1950s, a shortage of commercial properties and available land in Central London meant that office blocks

began to be built on the outskirts of London, though their location exhibited no specific pattern according to Daniels (1969: 171). Later, changes in planning legislation and the development of the motorway infrastructure meant that a pattern emerged whereby office decentralisation began to spread westward (Damesick, 1986), and Reading emerged as an early 'office centre' in the region (Daniels, 1969: 175). As the growth of office space accelerated in the 1970s in Reading, Maidenhead and surrounding areas, service sector employment also grew (Brenehey, Cheshire and Langridge, 1983: 64). According to Leyshon, Thrift and Tommey (1986: 173), financial and 'producer' services³ employment in Reading grew 64 percent between 1974-1984. Additionally, their analysis of 1981 census data showed that Reading ranked second out of 64 UK towns and cities in terms of its concentration⁴ of producer services employment, which includes business service occupations such as advertising and PR, management consultants and computer programming (Leyshon, Thrift and Tommey, 1986: 164-5). In this sense, what is now known as the Thames Valley high-tech cluster, was in many respects an early centre of service employment, well before the UK's national economy made a similar transition.

Because of this, it would be tempting to argue that 'structural adaptation in the economy of the M4 corridor' generated localised and transferrable skill concentrations and labour market segmentations, which were attractive to US multinational high-tech firms who then subsequently formed a cluster around them from the 1980s (Brenehey, Cheshire and Langridge, 1983: 64). However, a number of accounts suggest that the first high-tech firms to establish operations in the area did so for reasons other than the availability of labour (Boddy and Lovering, 1983; Hall, 1983; Macgregor et al, 1986; Hall, 1995; Bassett, 1996). In fact, firms were described as being 'relatively isolated from the local economy' general speaking (Macgregor et al, 1986: 446). Nevertheless, there is evidence to suggest that they showed tendency toward recruiting from other large (non-

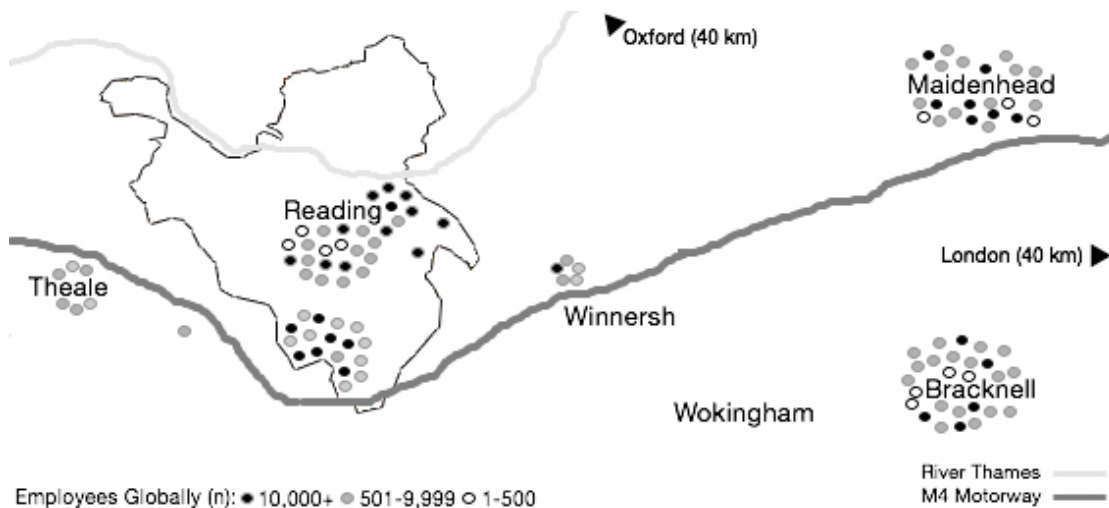
³ 'Producer services' is a term which has somewhat fallen out of fashion in economics and geography, describing intermediate or business-to-business professional and managerial service employment (Gershuny and Miles, 1983).

⁴ The authors used location quotient analysis to calculate this.

high-tech) organisations in the area (ibid.). Furthermore, it is because of high-tech that the area became a growth region in the 1990s attracting greater numbers of useable labour power (Boddy, Lovering and Bassett, 1986; Forster, 1990).

Comprised of a group of suburban towns to the west of Greater London, the cluster region is spread with a high proportion of multinational computing and telecoms firms. In the Thames Valley cluster said firms operate wholly/part-owned foreign subsidiaries or regional branch offices. Typically specialising in enterprise computing, hardware, software, telecoms and development, many of these organisations are headquartered in the US, with towns such as Reading and Bracknell for example serving as a base for their UK or 'EMEA' (Europe Middle East and Africa) operations. Focused largely on enterprise sales, marketing and related activities, strategic decision-making power is typically low within these firms as their unified governance structures mean that overall control tends to lie in their respective home countries (Hymer, 1976).

Figure 3. Approximate locations of high-tech firms in the cluster (not to scale)



Source: Parkin (2014)

In addition to MNCs, another type of firm common in the cluster is ICT service providers and hardware/software resellers. Generally speaking, these

organisations are individually entered into contractual alliances with MNCs to sell their products. Varying in size, it is unusual for these firms to have a presence outside of the UK or Europe unlike MNCs. Interactions between MNCs located in the cluster is low, meaning that as regional actors there is little in the way of direct influence over each other's business activities. It is, however, not uncommon for organisations to be involved in multiple contractual and equity based alliances at a corporate level. For this reason, the Thames Valley cluster is best described as a 'satellite industrial platform' according to Markusen's (1996: 304) typology. The picture is, however, slightly different when considering regional interactions between MNCs and resellers. Relations between MNCs and resellers and among resellers themselves generally conform to what Christopherson and Clark (2007) describe as characterising power within regions. Resellers will often 'partner' with MNCs and agree to sell their products, while remaining 'agnostic', meaning that they are open to selling competing products from other companies. MNCs will try to influence them through sanctions or incentives, all the while negotiating with other resellers for trade.

These institutional arrangements and relations of power have an important bearing on our understanding of the nature of inter-organisational power and work relations in the Thames Valley cluster. Particularly, it is argued, because of what it reveals about the rationale (or lack thereof) of co-location in terms of trade, rather than labour (Storper, 1995). Although organisations are located in the Thames Valley cluster, they do not trade exclusively in the wider South-East region, even though it is one of the UK's largest markets for enterprise ICT due to a high density of firms (Coe and Townsend, 1998). Organisations will tend to focus business activities around UK or European market segments such as the public sector or financial services for example. Moreover, organisations' formal linkages extend far beyond the region, maintaining partnerships with firms elsewhere in the UK and Europe that are managed centrally from the Thames Valley cluster. The rationale behind co-location, therefore, is not simply to do with capturing and influencing regional actors; it is arguably a type of 'spatial fix' (Herod, 1997). As a result of this, the cluster makes for an interesting case study, particularly

in terms of organisational restructuring, job insecurities and potential work intensification.

2.2.3 Additional factors influencing restructuring and job insecurities

As mentioned, from the 1980s, US computing companies began to internationalise and expand to Europe and Asia to capture the growing business-to-business computing and telecoms markets in these geographies. Throughout the boom years of the late 1980s and early 1990s, MNCs pooled large amounts of human and financial resources into Silicon Valley. Workplaces became archetypes of the new economy, affording engineers and developers extensive autonomy and freedom for which they enjoyed substantial benefits and remuneration (English-Lueck, 2000). Moreover, the cumulative effect of firm growth and government investments in the region meant that buoyant local labour markets provided a safety net against the often short-term nature of employment (Fallick, Fleischmann and Rebitzer, 2006; Brenner, 2003). Regardless of this, local subsidiaries which provided IT sales and services in cluster regions were treated no less favourably.

Indeed, there is an extensive body of literature which discusses US FDI and the growth of IT services in the M4 corridor as nothing short of economic miracle as far as job creation and job quality is concerned, albeit with a strong sense of critical irony (Morgan and Sayer, 1984: 190-262; Crang and Martin, 1991). Resultantly, the area came to be known as one of England's most economically successful – leading a number of commentators to describe it as the UK's 'sunbelt' (Boddy, Lovering and Bassett, 1986; Bassett, 1990). In comparison, however, indicators of job quality in local subsidiary clusters lower down the GVC, such as job security, fared less well (Ó'Riain, 2004a), the differential basis of the labour process notwithstanding (Taylor and Bain, 2005).

Nevertheless, research suggests such a picture has changed dramatically in recent years (Berrebi-Hoffman et al, 2011). Although the dotcom crash of the late 1990s was the main catalyst to MNCs beginning to introduce ever more flexible staffing models and stricter performance measures (Brenner, 2003). In the wake of the 2008 banking crisis, large-scale layoffs are occurring with increasing regularity (English-Lueck, 2010).

Industrial 'upgrading' in high-tech clusters across India the past during decade too (Patibandla and Petersen, 2002; Attenburg, Schmitz and Stamm, 2008) has seen more and more knowledge services employment shift eastwards from the US (Feuerstein, 2013; Manning, 2013).

Beyond Silicon Valley, work and employment in Europe's 'mature' IT services clusters such as the Thames Valley have also been affected by recent changes in the GVC (Pinch et al, 2003: 385). Global ICT services markets have become much more competitive due to increasing fragmentation and fewer barriers to entry (Arora and Gambardella, 2010), and MNCs have responded by entering joint partnerships to sell complementary products and services (Darr, 2006), thereby reducing the number of frontline sales workers. Moreover, among larger firms, who have been slow to roll out 'cloud offerings (Cusumano, Kahl and Suarez, 2015), there have been large-scale layoffs in a number of ICT services clusters (The Economist, 2014).

Compounding matters further, 'legacy investments', such as pension liabilities and wage growth linked to length of service for example (Monk, 2008), mean that employees in these locations are becoming increasingly exposed to the possibility of restructuring. The growth and spread of IT skills and markets in Asia and Eastern Europe has opened up the possibility of moving highly skilled operations from mature clusters in high-wage nations to locations elsewhere. This is particularly true of traditional 'major players', such as Microsoft and Dell in the Thames Valley cluster, who have the resources to fund large-scale redundancy programmes when winding down established subsidiary bases (Richards, 2004).

To this end, a further dimension to an analysis of labour in the context of a high-tech cluster is its interaction in the global economy. The importance of geographic clusters in this regard to the high-tech GPN is as a result of 'captive centre' offshoring model that MNCs have historically adopted (Oshri, 2011). This describes how global expansion and offshoring of internal corporate functions - such as finance, HR and so on – tends to be dissected and segmented across the internal GVC by firms.

As a result, most high-tech MNCs operate 'task' specialist local subsidiaries located in various different clusters (such as the Thames Valley cluster) located around the world (Feser, 2003; Grossman and Rossi-

Hansberg, 2008: 1978). In practice, said arrangements further engender the structuration of local subsidiary locations into an organisational hierarchy that places Silicon Valley at the top (Humphrey and Schmitz, 2002; Ó'Riain, 2004a). Herein, the 'most sophisticated' (high) value chain activities that MNCs undertake (Porter, 1994: 36), such as research and development for example, are usually concentrated in Silicon Valley (Saxenian, 1996). Centres for the provision of IT services - which expanded rapidly in the 1980s and 1990s to subsidise innovation costs – typically find themselves located in satellite platforms in regions with strong service economies (Coe and Townsend, 1998) - including Il-de-France near Paris (Shearmur and Alvergne, 2002) and the M4 corridor for example (Breheny, Cheshire and Langridge, 1983). Whereas routine operational and administrative activities – which includes hardware and software distribution, licensing and localisation for example - occurs in a number of clusters (Bresnehan, Gambardella and Saxenian, 2001), though most notably in Ireland (Ó'Riain, 2004b; Barry, 2006). Further down the value chain still, customer support services and so on are often located call centre clusters in India (Arora, Gambardella and Torrisi, 2004; Giarratana, Pagano and Torrisi, 2005). Generally, manufacturing is outsourced (McKay, 2006; Chan, Pun and Selden, 2013).

In respect of high-tech MNCs, who organise their operations globally, through establishing local subsidiary locations in high-tech clusters, this engenders various different interdependencies in terms of HRM (Boxall and Purcell, 2015: 297). Typically, the distribution and allocation of human and financial resources will differ between locations (Ghoshal and Nohria, 1989), in addition to the degree of flexibility and autonomy afforded local senior management teams (Bahrami and Evans, 1989). While in theory this presents a unique set of circumstances in each cluster and subsidiary location as regard the internal politics of corporate power, among US high-tech firms strategic, decision-making power is concentrated among elite corporate hierarchies located in Silicon Valley (Cowling and Sugden, 1998). Generally speaking, that is to say that that decisions that affect a firm's overall orientation, such as locational decisions or large-sale restructuring, resides in the US.

Keeping in mind how clusters continue to play a strong role in the 'locational' and 'organisational' offshoring (and re-offshoring) strategies of MNCs (Larsen and Pedersen, 2014: 411), as has been established by Christopherson and Clark (2007). Under a strongly locational orientation, firms incumbent in a mature cluster like the Thames Valley cluster might assess the ongoing benefits of maintaining operations in the location, while simultaneously making comparisons with other potential options (Larsen and Pedersen, 2014). Here options would include fully or partially re-locating operations (so-called 're-offshoring' (Gagliardi, Iammarino and Rodriguez-Pose, 2015), or adopting 'hybrid' models which involves the outsourcing of certain operational functions (Oshiri, 2011). Cost focused in nature, this logic operates most strongly in MNCs when potential cost savings make one location appear more attractive than another. For this reason, it would largely apply to centres of highly commoditised labour, which includes low-level service work such as customer support services (Mayer-Ahuja and Feuerstein, 2008), or increasingly routine knowledge work (Manning, 2013).

In contrast, an 'organisational strategic orientation' regards offshoring, re-offshoring and relocation that is driven by 'more organisational objectives', rather than purely cost-driven ones (Larsen and Pedersen, 2014: 411). These strategies are generally focused on labour utilisation higher up the value chain, or in other words on captive centres where the benefits are relatively less replicable or rivalled elsewhere. Main examples of this are instances where MNCs relocate to clusters in urban areas that are focused on the digital economy, typically to capture the so-called 'creative class' (Florida, 2002). Large firms such as Google and Cisco have established various different subsidiaries in locations such as London's Silicon Roundabout where local 'buzz', or in other words cultural environment of work, is considered a significant factor in production (Kuah, 2000; Bathelt, Malmberg and Maskell, 2004). This is because digital platforms and content relies on radical knowledge work, assisted further, in practical terms, by the 'micro clustering' of producers (Nathan and Vandore, 2014). Though these 'captive relocation' (Kinkel, 2014) investments are of course risky, they are potentially highly financially lucrative, hence why organisations arguably persist.

Whereas 'locational strategy orientation' infers a competing tension between clusters in high-wage and low-wage nations concerning routine occupations. Emerging clusters of the latter kind, infers readjustment of the entire global value chain (Gagliardi, Iammarino and Rodriguez-Pose, 2015). In theory, this could mean that knowledge services clusters 'evolve', insofar as they are converted to become supportive of new higher value digital business models, products and services (Oshiri, 2011). However, it is also true that firms could choose to lessen the cost and resource drain of routine knowledge service clusters or wind down operations completely. Indeed, the aforementioned companies of Cisco and Google are a case in point regarding how this would affect firms differently. Because although both operate within the same broad industry space and compete in a number of markets, the latter is trimming its hardware portfolio of products whereas the former is expanding it. Furthermore, it exacerbates competition between high-wage and low-wage nations. In light of these processes and the recent problems that the high-tech industry has experienced, the strategic position of high-tech satellite platforms will be assessed in relation.

2.2.3 Summary

This chapter has established the rationale for exploring work intensification via a meso-level lens. It has established geographic clusters as one particular concept that would allow us to do this. Furthermore, how rational assessments of the employment relationship may become bounded by the 'game' in context (Burawoy, 2012). Finally, it introduced the Thames Valley geographic cluster and discussed why organisational restructuring and job insecurities would appear to be a factor causing work intensification.

Chapter 3 – Research design and methodology

3.1 Introduction

This chapter outlines the rationale behind the research design, discusses the data collection methods used and considers practical and ethical issues. In terms of structure, the chapter begins by matching the framework of work intensification developed in the previous chapter, to an appropriate research methodology (Easterby-Smith, Thorpe and Jackson, 2012: 16-74). Following this, I discuss how broad research methodology translates into specific choices regarding research methods and data collection instruments. Practical details of access and sampling are then discussed, before the role of the researcher is considered in terms of the presentation of research data. Finally, ethical considerations are outlined.

3.2 Research design

In the previous chapter, employee consent was identified as one of the main barriers to the work intensification process. Moreover, it was established that the process of work intensification mirrors the long-term rationalisation of production by work organisations. This understanding, to a greater or less extent, frames work intensification as largely indistinguishable from broader processes associated with capitalism. Such an explanation, however, is arguably a simplification that downplays the complexity of work intensification as a social phenomenon. Particularly so, given the breadth of evidence that identifies discrete sources of work intensification it is argued (Green, 2004). Hence, empirical research should seek to explain the antecedents of consent - organisational restructuring and the perception of job insecurities - in relation to the causal power of the geographic cluster in generating such effects (Burawoy and Wright, 1990).

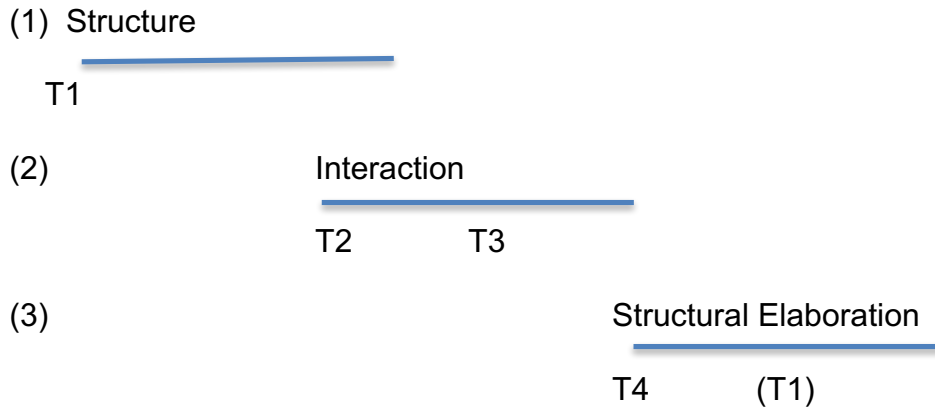
Another important factor to consider in terms of designing the empirical research pertains to the fact that work intensification is a process of change. For this reason, a causal explanation should put emphasis on the lived experience of work intensification over time. However, given that geographic clusters are theorised as structuring lived experience in a particular context, reference to change in the external environment also needs to factor into

analysis. While it would be tempting to assign direct causality to structure in terms of producing lived experience, it is necessary to incorporate a temporal process of change into the research explanation. Accordingly, it is important to maintain an open orientation to the field that does not prejudge the empirical work, and one which views the geographic cluster as an emerging and ongoing state of affairs, rather than closed and predetermined (Thompson and Vincent, 2010).

In order to achieve this, it is necessary to view the geographic cluster and the lived experience of work intensification through the prism of social morphogenesis. According to this view, the geographic cluster represents a 'social structure' that precedes 'the actions' of agents (Danermark et al, 2005: 181). However, it is also true that these actions ultimately 'lead to its...transformation' (ibid.), meaning that structure is emergent insofar as it 'comes after the actions which create it... [as a result] of the actions of agents' (ibid.). The implication of this is that social explanations cannot proceed merely on the basis of how structure gives agency, but, they must also account for how preceding actions lead to the 'elaboration' of structure (ibid.). Hence, the purpose of social analysis is to explain how interactions with structure (the social relations of production) transform conditions of agency (the cognitive and affective job insecurities leading to work intensification) in a cycle.

The explanatory model that this pertains to is Margaret Archer's (1995) theory of 'social morphogenesis', which provides a framework for aligning and grounding social explanations in context of ongoing social change. Practically speaking, it involves analyses being built up in analytical phases, starting with an explanation of the conditions of the social structure in terms of the constraints and potential transformations it gives rise to (T1). Next, actions and their effects on agents are contextualised against this background (T2-T3). After which, the way that this interaction has inspired structural changes is then recounted (T4), thereby completing the cycle and returning to (T1).

Figure 4. Analytical cycles in the interplay between social structure and agency



Source: Archer (1995: 76)

Accordingly, the T1 phase of the research will aim to document how the conditions of cluster emergence have shaped the nature of labour power agency, before outlining how this has constrained subjective perceptions of social and material options in relation to work effort-mobility bargaining (Smith, 2006). Under this model the purpose of the next phase (T2) is to overview how macro transformations interacts with these agency foundations to inspire cognitive and affective job insecurities that open up the possibility of work intensification. In other words, the purpose of this phase is to answer: how have the material and symbolic resources within the work effort-mobility bargain been shifted or augmented as a result of organisational restructuring in relation to macro economy? For example, it could be that case that firms have embarked on large-scale restructuring programmes en masse, which has led to surplus labour supplies in the local labour market. Under this scenario, it would be likely that the material options of workers would be heavily reduced, meaning that any work effort-mobility contest between employers and employees is effectively moot (T3).

Against this background, the ways in which these conditions set a precedent toward reducing the struggle/resistance against increasing work effort demands over time need to be explored (T4). Hereby attention needs to be paid to how the emergence of new workplace schema and practices that

lead to work intensification interact with the changing subjective perceptions of workers. In other words, when all things are considered, to ask the question: why do workers choose to put with a geographic work regime that demands increasing amounts of work effort from them? And furthermore, what can we conclude at the level of the cluster are the key causes of this cycle?

At this juncture, analytical attention should then turn to closing the theoretical loop and returning the discussion back to T1 by identifying the causal mechanism at the level of the real which causes work intensification. A heuristic principle guiding that guides this process is making choices between 'less realistic' and 'more realistic' theoretical options (O'Mahoney and Vincent, 2014: 14). Practically speaking, this involves a process of denomination by asking: 'what must the world be like in order for these findings to be possible?' (Marks and O'Mahoney, 2014: 81). And furthermore, trying to arrive at the best possible essential explanation (O'Mahoney, 2012).

3.2.1 A critical realist approach

This explanatory framework relates to a critical realist (CR) philosophy of research design. CR is a philosophy of the social sciences that stems from Roy Bhaskar's (1975, 1978 and 1979) criticisms of strong empiricism and relativism, and which has been growing in influence in business and management studies as an alternative philosophical approach to constructivist, postmodern perspectives (Ackroyd and Fleetwood, 2000). Like all philosophies it seeks to answer a fundamental question about the nature of world that we live in, and to this end the starting point of CR would be its concern with the nature of our access to reality, and, what as a result of this can we can hope to find out about it?

On that account, CR is perhaps best defined on the basis of its opposition to epistemology as *the* metaphorical gatekeeper of what we can hope to find out about the world. Furthermore, by its sceptical stance toward epistemological schools of thought which it considers to be strong or naïve. The matter that unites these two themes (in the minds of critical realists) is the 'primacy of ontology' over epistemology as the essential starting and

reference point of all human knowledge and knowledge production (Mingers, 2004: 93).

This perspective is based on the fundamental view that 'the world exists whether or not humans' conceive it, or, in other words, that an objective reality exists independent of human perception (ibid.). It follows that in order to truly 'know' this reality we have to begin by assessing the nature of our being within it. As a research philosophy, this infers a number of conditions and questions for the processes of human knowledge production.

First among them is the notion that all (research) methods which appear to give humans access to reality are inherently fallible and that any observations made using them are therefore reversible (Mutch, 2010). On the one hand, this standpoint positions CR in direct opposition to any research philosophy or paradigm in the social sciences that regards truth claims generated on the basis of empirical data alone as methodologically superior. It is for this reason that CR takes issue with positivism, given that it regards empirical sense data as a true reflection of the reality of the world 'out there' (Patomäki and Wight, 2000). On the other hand, it presupposes CR as a broadly 'critical project' in social science, insofar as it encourages a reversal of knowledge and knowledge structures, thereby opening up the possibility of ideological emancipation from the capitalist system (Habermas, 1970). Relating this to sociological paradigms for organisational analysis, this represents a disjunction with functionalist, so-called regulationist schools, which seek to play down the conflicts, paradoxes and tensions associated with capitalist organising (Burrell and Morgan, 1979).

It is for the ethical and political identifications that this paradigmatic position engenders, that CR has emerged as one of three or four main theoretical approaches, grouped under the 'umbrella' of CMS (Duberley and Johnson, 2009: 345). Referring to what Reed (2009: 52) describes as a 'heterogeneous and pluralistic intellectual movement/practice [that challenges] the orthodox socio-political theories, analytical models, and methodological paradigms lying at the centre of business and management studies'. The forms of theoretical opposition put forward by CMS to challenge so-called 'mainstream' business, management and organisation studies includes critical theory (Scherer, 2009), labour process theory (Thompson and O'Doherty,

2009) and poststructuralism (Jones, 2009), in addition to CR. However, in more recent years, a contest for theoretical primacy has emerged between CR and poststructuralism (Contu and Willmott, 2005; Fleetwood, 2005; Reed 2005a, 2005b; Willmott, 2005), as critical theory and labour process theory have largely ceased to be regarded as distinct theoretical lenses in their own right (O'Doherty and Willmott 2001; O'Doherty and Willmott, 2009; Scherer, 2009) or have become subsumed by other theoretical developments (Thompson and Vincent, 2010).

Although there is a great deal of theoretic and analytical crossover between poststructuralist approaches and CR, not least in their kindred rejection of 'the wage/labour–capital relation as the necessary and inevitable driver of (emancipatory) change in modern society' (Willmott, 2005: 769). Al-Amoudi and Willmott (2011) would go as far as extending this to certain aspects of methodology. CR's disagreement with poststructuralism stems from its constructionist ontology, which, as was established earlier, is a fundamental point of difference that owes to their incompatibility (Reed, 2005a).

Notwithstanding the fact that poststructuralism is a broad and varied intellectual movement, as a research philosophy it nevertheless determines adherence to certain ontological 'commitments' that are at odds with CR (Fleetwood, 2005). At its strongest, poststructuralist theory contends that there is no such thing as reality, only constructions of reality that are played out through discourse (Fleetwood, 2005: 205). Whereas more moderate or weaker versions of poststructuralism on the other hand would tend to premise such an assertion by stating a number of caveats, discontinuities or limitations to theory (Willmott, 2005). Though CR does not reject the idea that discourse plays a fundamental role in the shaping of reality outright, rather it rejects the idea that that is all there is (Fairclough, 2005; O'Mahoney, 2012).

Almost needless to say, the methodological implications of this are wide ranging, however, perhaps the most salient of them all is how poststructuralism conceives of the research process. As a consequence of designing empirical research on the basis of the assumption that no true version of reality exists, the meaning, nature and purpose of research under this rubric differs drastically from that of CR (Fleetwood, 2005). On the one

hand, it pertains to a rejection of the research process as a process of knowledge creation, and reformulates it as a process of inter-collaborative 'text' creation between researchers and research participants (Grant, Idema and Oswick, 2009: 215). On the other hand, it suggests a dismissive negation of the possibility that social research can ever have something substantive or useful to say about the world in which we live (Groff, 2004). Such an assertion has radically re-altered the intellectual terrain of management and organisation studies, leading to the abandonment of social scientific concepts and models that predate poststructuralism in some quarters (Knights, 1997).

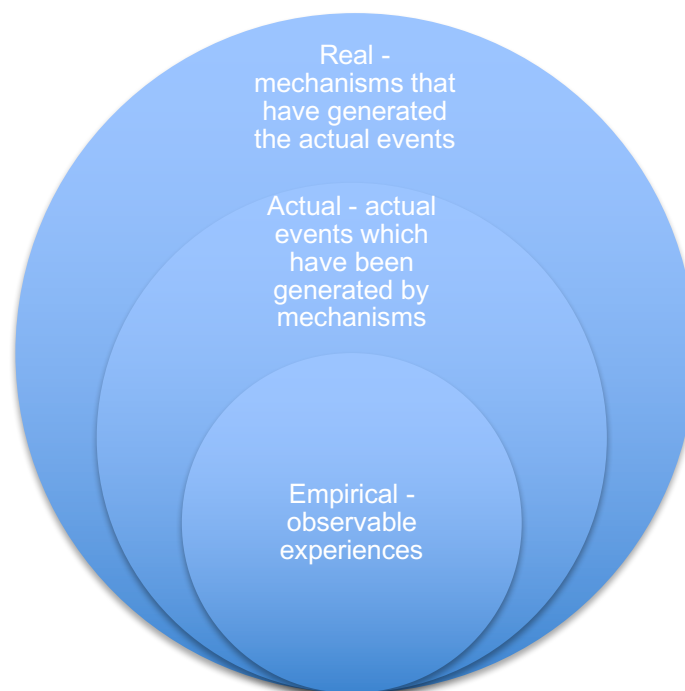
It is on account of this trend that poststructuralists would tend to regard traditional social science concepts such as structure and agency as 'outmoded' (Reed, 1997: 22). Accordingly, it is on this basis that critics of CR level the claim that CR methodology represents a theoretical justification of post-positivism⁵ after the fact of the literary turn (Klein, 2004; Cruickshank, 2007). It is true that CR does not share in poststructuralism's avoidance of forms of analysis that might involve reading social connections of various kinds through the prism of structure/agency (Archer, 1982), or for that matter, 'embracing essentialism' where it is theoretically constructive to do so (O'Mahoney, 2012). Moreover, it is also the case that CR shares many ontological features with post-positivism. However, the validity of these claims is not, I would argue, for lack or want of intellectual openness and theory development. Quite the opposite. For a central element of CR philosophy, and arguably its key strength as a methodological approach, is the theoretical framework that it provides for interpreting how different types of natural, social or material entities give 'causal efficacy' insofar as they 'make a difference to reality' (Fleetwood, 2005: 199).

The specific framework that I am referring to here is CR's layered ontology of the social. What this describes is a model for social theorising and analysis that posits the social world as an emergent and ever-changing 'open

⁵ Fox (2008: 600) states that post-positivism can be defined 'simplistically...as those approaches that historically succeeded positivism (for example, realism), but more rigorously, it may be understood as a critique of positivist epistemology and ontology.' And furthermore, as an attempt to 'incorporate approaches to knowledge growth rejected by positivism as unscientific, such as psychoanalysis, Marxism and astrology'.

system' that is characterised by profound complexities and wide-ranging unpredictability (O'Mahoney and Vincent, 2014: 6). Due to the inherent difficulty of developing social explanations within this system, CR proposes that the social world is broken down into its various constituent parts or entities, before addressing how said elements interact with one another across three interlocking domains or 'levels' of reality (ibid.). Commonly described as a 'stratified' or 'layered' ontology approach, this framework distinguishes between collections of entities constituting the 'real' underlying structures and causal mechanisms of the social world, the 'actual' patterns of actions and events that are produced as a result and our 'empirical' experiences of these (Collier, 1994: 46-53). Across these three levels of reality, entities are subsequently categorised as materially, ideally or socially kinds, depending upon the nature of 'affect' that they have on structuring our experience of reality (Fleetwood, 2004: 53).

Figure 5. A critical realist layered ontology



What this theoretical framework infers for the design of research is that 'iterative abstractions of necessary relations' are a key condition of the types of methodological choices that CR researchers might choose to make (Yeung,

1997: 62). That is to say that the assumption of a stratified reality requires the researcher to develop social explanations that 'move from a description of some phenomenon to a description of something which produces it or is a condition for it' (Bhaskar, 1986: 11). Or, to put it in more concrete terms, that the onus is on the researcher to follow a process of retrodution – a method of data analysis that involves testing the plausibility of emergent theoretical insights by iteratively applying the question: 'what must the world be like in order for these findings to be possible?' (Marks and O'Mahoney, 2014: 81). This is a valuable heuristic in light of the emphasis on consent and work intensification, which was discussed in chapter 2.

Broadly, this emphasis would suggest that one of only a handful of provisos associated with designing CR research is the internal validity and logical consistency of research explanations - i.e. whether or not they 'indicate that within the relevant context no alternative to that condition, outcome, truth-value or conclusion is possible' (Harré and Madden, 1975: 19). Moreover, given the fact of how the researcher's 'conceptually-mediated' access to reality is unavoidable - meaning that any conception of total objectivity within this rubric is inherently facile (Sayer, 1992: 54), CR ostensibly permits a certain degree of methodological pluralism. In turn, this has led to accusations that CR is a not only a philosophical 'under labourer' (Mutch, 2005: 781), but a methodological one too, considering that an embrace of methodological anarchism appears only to be acceptable where it assists in applying and extending the CR mode of explanation⁶.

Be that as it may - in his critical account of CR-inspired management and employment relations research - Brown (2014: 118) points out that CR theorising does hold a certain logical appeal when applied to 'local and specific sites' (the focus here). He continues to suggest that where the researcher might hope to observe 'multiple separable aspects...causally interacting with one another' and to seek to attribute these to 'a specific underlying structure or...causes or conditions' CR provides a 'potentially...useful' avenue for doing so (ibid.)

⁶ This presents an extreme view of the methodological openness of CR, which is not reflected in the views of all CR scholars, for the purposes of elaboration. See Yeung (1997) for an overview.

The implication of this for designing this research is clear. Considering that the cluster is at once a social and a material entity, possessing indeterminate structural qualities, which in theory gives rise to conditions permitting insecurities and work intensifications, it provides a valuable theoretical schema for orienting and integrating data collection and analysis. Additionally, in light of CR's strength as a theoretical framework for the design of 'context-sensitive research' (Edwards, 2005), a number of analytical and theoretical resources have been developed into a methodological toolkit to enhance the potential for generating meaningful empirical and theoretical explanations under this basic framework (Easton, 2010; Ackroyd and Karlsson, 2014).

3.2.2 Designing the research

Due to this orientation toward the field of study, the research will follow a case study research design (Yin, 2013: 3-26). At this juncture, with the research philosophy and overarching research design outlined, it is important to turn attention to the conditions for making knowledge claims that case study research methods engender. The strengths and weaknesses associated with case studies in terms of theory building will be considered, before the implications of conducting empirical research in a geographic cluster are brought into sharper focus (Eisenhardt, 1989). Then, with the nature of the empirical project laid out, discussion of what data constitutes evidential grounds for answering the research questions stated in section 1.5.

The main principles that Eisenhardt (1989) outlines in her account of the process of building theory from empirical case studies are so widely accepted and adhered to in contemporary organisational analysis that they barely even register as significant. Nevertheless, they are worth reviewing here. In her widely cited article, Eisenhardt established the case study as a de facto methodological approach for designing qualitative research in and across organisations, on the basis of the argument that substantive organisational theory can be developed out of case study research that

achieves 'theoretical saturation'⁷. In addition, the article established how theory may be regarded as novel if it challenges or enhances the extant literature in a particular way, challenging the status quo of objectivist notions of validity and generalisability (Ackroyd and Karlsson, 2014: 24).

According to Eisenhardt, 'theoretical saturation' is reached through 'within case analysis' and external 'cross-case' comparisons to refine hypotheses. The aim of within-case analysis is to develop an in-depth understanding and description of the phenomenon under study, whereas cross-case analysis is used when the unit of analysis is a case, such as a place or an organisation. Given that the Thames Valley cluster is the unit of analysis, and the aim of the research is to develop an understanding of organisational restructuring, job insecurities and work intensification, it follows that employees' lived experience will be subject to 'cross-case search for patterns' of similarity and variance in building theory (Eisenhardt, 1989: 540).

Inherent to the case study research design, then, given the centrality of cross-case patterns to theory, is a degree of what Eisenhardt (1989: 538) describes as 'overlap' between data analysis and data collection. Part and parcel of 'entering the field' is the simultaneous emergence and refinement of the researcher's strategic and theoretical orientations as they begin to deepen their knowledge and understanding of the research setting (Eisenhardt, 1989: 538-9). This has many beneficial qualities for research, however, perhaps the most obvious is how it allows for 'theoretical closure' to be achieved efficiently, by way of a gradual focusing down of data collection to the patterns most salient to theory until the data lapses into repetition, ceasing to produce anything useful or novel (Eisenhardt, 1989: 545).

For the research design under discussion, this infers that empirical data need not be drawn from every employee or employer within the geographic cluster in order for theory to be built. Rather, a series of 'iterative abstractions', so crucial to the CR mode of explanation, can be developed simultaneously as the research strategy is sharpened in the field (Yeung, 1997). This is inherently an interpretative research strategy, given that such

⁷ Theoretical saturation describes 'the point at which incremental learning is minimal because the researchers are observing phenomena seen before' (Eisenhardt, 1989: 545).

an approach involves the phasing of data collection based on subjective ongoing judgments as to the theoretical relevance of data.

The adoption of an interpretative research strategy such as this is concomitant with CR. CR rejects any claims as to the methodological 'superiority' of competing ontological positions (or that these should be 'followed invariably'), contending that the main imperative when designing research is to integrate the potential to yield 'valuable insights' (Ackroyd, 2004: 127). Nevertheless, given that CR recognises the value and flaws associated with both objectivist and subjectivist research paradigms and approaches, it is unlikely that qualitative interpretative data based on the strategy described above would offer sufficient 'ontological depth' on its own (Jessop, 2005: 45). On the one hand, there is nothing to suggest that ethnographic methods for example would provide 'privileged and special access to 'reality'' that others would not (Lumsden, 2009: 502). On the other hand, it is also true such methods would make it difficult to access 'objective aspects' of the 'reality' of the context under study (Carlsson, 2004: 346). Hence, interpretative research methods designed to capture subjective accounts of individual experience are but one single element of a researcher's already partial access to 'reality' (Smith and Elger, 2014).

In terms of data collection methods, CR theorists at one end of a methodological spectrum advocate triangulation of quantitative and qualitative methods, arguing this is the only sure way that both objective and subjective elements of reality are represented in research (Yeung, 1997; McEvoy and Richards, 2006). At the other end, scholars who work broadly within the interpretative framework of organisational analysis developed by Eisenhardt (1989), suggest that certain approaches to qualitative interviewing, which are sensitive to what qualitative interviews can actually tell us about 'non-relativist' conceptions of relations and structures, could potentially reduce the need for mixed-methods research (Smith and Elger, 2014: 111).

Smith and Elger's (2014) account of the compatibility of qualitative interviews with the aims of CR research is premised on the basis that because individuals have autonomy from structures, and researchers need to gain access to accounts of individual experience to better understand them, interviews offer a compelling research instrument. They continue by offering a

definition: 'interviews involve interviewer and respondent engaging in a fluid interactive process to generate a set of responses which formulate perspectives, observations, experiences and evaluations pertinent to an overall research agenda' (Smith and Elger, 2014: 119). Hence, bringing into focus the essential qualities that qualitative interviewing can bring to the research process, in addition to highlighting their fundamental use-value in the face of growing dissatisfaction at their position in social research (Alvesson, 2011). Incorporating these viewpoints into the research design would have it that - because the research's aim is to investigate the potential causal relation between the experience of work intensification and the cluster as a structure - qualitative interviews offer a potentially useful avenue. However, that their practical usage for accessing the experiences of agents (employees) is subject to certain limitations and caveats for theory. One of the key difficulties is representing 'complex phenomena' through language (Alvesson, 2003: 18). Moreover, the inherent difficulties associated with creating an 'ideal speech situation' sensitive to the critical theoretical framework that is adopted (Deetz, 1992: 162-170).

Taking the first issue, Alvesson (2011: 88) argues that the situated nature of the interview 'encounter' means that resultant data is a reflection of the interview situation, rather than an accurate reflection of how a structure 'really is'. In other words, there is an obvious disconnect between perception and the CR conception of 'reality' as it is represented through language. Secondly, it is unclear how the form of information exchange fostered by interviews would generate data of sufficient 'ontological depth' and fit comfortably within a 'realistic' scheme of theorising (O'Mahoney and Vincent, 2014: 14). Responding to these issues, Smith and Elger (2014: 119-124) emphasise the importance of data collection and analysis practices, suggesting three main principles for developing an approach to interviewing that is faithful to CR. The first of their recommendations concerns how 'informant expertise and the selection of interviewees' should be considered closely; determined on the basis of their knowledge and distance from the problem that is being investigated (Smith and Elger, 2014: 120-122). Put in a different way, this suggests that in addition to usual measures for enhancing sample quality, researchers should take into consideration different categories

of informant expertise based on their relationship to the 'interaction' at study. Furthermore, that other forms of evidence can be used to verify how substantive their claims are. A second recommendation is that interviews should be approached 'as a tool for investigating informant reflexivity' as well as a tool of knowledge transference (Smith and Elger, 2014: 122-4). This characterises the interview as a non-directive exchange, in which the relational nature of human agency and reflexivity is drawn out through individual accounts of the world. Their third and final recommendation is that the interview should be treated 'as a resource for analysing aspects of a layered social world' (Smith and Elger, 2014: 124-30). Practically speaking, this suggests developing and framing interview questions in order to elicit discussions that describe each level of complex 'reality' and the interactions between them, thereby acting as a proxy to ontological depth.

For the research design under consideration, it is concluded that against this background, qualitative interviews do in fact offer a useful and viable method for conducting empirical research within the framework adopted. Semi-structured qualitative interviews are hereby adopted as the main research instrument employed in this study. The fundamental strength of qualitative interviewing here stems from the potential to generate complex and rich accounts of 'dynamics within a single setting', which, in turn, allows for spatio-temporal closure of the cluster as a structure occurring within an open system (Ackroyd and Karlsson, 2014). That is to say that it is highly advantageous if the research is to deliver on its aim of establishing how and why aspects of a context occur and overlap to produce effects to be able to have a conversation that is sufficiently broad enough to take account of these effects. Furthermore, in sequential questioning we have a device for building a picture of how these different elements fit together in producing experience. Few appropriate alternatives offer the opportunity develop exchanges so directly and sequentially in this way.

While, as has been suggested, qualitative interviews are certainly not perfect, the conditions for developing theory can be improved given the application of an appropriate interview strategy (Pawson, 1996). To devise an interview strategy, the researcher must decide upon which interview techniques (structured, semi-structured and unstructured), forms of question

design (open or closed), interview styles (remote or conversational) and so on best fit with the approach and aims of their study. In other words, this involves determining how the 'flow of information' from the respondent via the interview would provide the 'operational fragments' of researcher's theory (Pawson, 1996: 298). Moreover, a key element of this process involves designing in specific practices that are likely to provide sufficient breadth (question design) and depth (interview style) of responses, thereby helping to fulfil the flow of information.

In practice, interview strategies are typically devised in one of two ways. Whereas the 'purist' favours a prescribed set of logically consistent methods and techniques; 'pluralists' follow 'a-bit-of-this-and-a-bit-of-that' style approach (Pawson, 1996: 296). According to Pawson, each approach is flawed given that the ultra-cautious rule-following of purists will, for the most part, result in narrow datasets leading to conservative theory-building and formulaic analysis, and pluralism meanwhile, offers 'no methodological refinements beyond the fuzzy mid-way compromise' (ibid.). The problem, as he sees it, concerns the 'flow of information' that each approach stimulates in relation to the researcher's theory (Pawson, 1996: 298). In the case of the former, interview data takes the shape of 'operational fragments' designed to fit the 'researcher's conceptual system', which has been 'imposed' on respondents in order to confirm or deny their hypothesis (ibid.). By contrast, the latter is said to facilitate a 'massive flow of information' in which the researcher is expected to fit together 'small fragments of the respondent's utterances into their own explanatory framework' (ibid.).

Recognising the potential contribution of both of the respective approaches to the qualitative research process, Pawson attempts to bridge them by developing the idea of the 'theory-driven' interview. The purpose of theory-driven interviewing is to optimise the flow of information to the researcher's theory without limiting or suppressing the active role of the respondent. To this end, it offers a compelling approach for conducting qualitative interviews in instances where the research's aim is to combine a theory of structure and agency, as is the case here.

To develop the interview strategy in such a way as to be theory-driven, Pawson (1996: 299) recommends prioritising the 'task' of the interview. That

is to say that, in other words, ‘the researcher's theory is the subject matter of the interview, and the subject is there to confirm or falsify and, above all, to refine that theory [emphasis added]’ (ibid.). While the operational benefits of this are self-evident, it is interesting to note how such an emphasis (on refining theory) bears an interesting parallel with the process of theory building from case studies that is suggested by Eisenhardt (1989). At the methodological core of theory-driven interviewing and the process of theoretical saturation is a combination between data collection and data analysis to form a research strategy. Therefore, it is a logical step to integrate them into the research design as complementing one another via a research strategy.

To devise an interview strategy on this basis, then, begins by considering the centrality of the theoretical model and how this can be incorporated within the interview schedule. In the context of this research, because the aim was to facilitate a cross-case search for patterns occurring at T1, T2-T3 and T4 of the cluster – a fundamental requirement of the interview questions was to generate responses that furnished knowledge of the context. Equally as important was to prompt respondents to frame their discussions of agency in these terms, or in other words to get them to talk about the cluster by talking about themselves in order for a complex picture of interactions between structure and agency could be built up. Practically this was achieved through designing a schedule of semi-structured interview questions, each of which contributed toward a particular strategic ‘task’ within the theory building process (Pawson, 1996: 299).

For example, questions that were more direct and purposive in nature such as question eight of the interview schedule (see appendix 2) were used in order to map and boost the conditions for theory. Open questions facilitating ‘non-directive exchange’, on the other hand, were important to challenge assumptions and to open opportunities for useful dialogue that theory may have missed. Additionally, questions became more and more focused on addressing positive and negative barriers to theory as the research progressed toward the point of saturation.

Finally, in terms of what this means for the epistemic status of interview data, it is important to develop a process interpretative triangulation using a

layered ontology. That is to say that it is insufficient to apply only the post-positivist or romanticist mode of interpretation to the interview data. Rather the intention is to try and delineate whether or not empirical descriptions related to 'actual' patterns of actions and events, facilitated by cross case analysis.

3.3 Putting the research design into practice

3.3.1 Access and sampling

To define the geographic boundaries of the cluster I used the Office for National Statistics' definition of the Thames Valley Berkshire Travel to Work definition (ONS, 2016). While there are a number of differing geographic definitions of the cluster, for example Hansen and Serin (2010: 40) describe it as a 'hub' within the wider Berkshire, Buckinghamshire and Oxfordshire regional cluster. I chose the Travel to Work Area definition due to common usage in policymaking literature, meaning that reliable information regarding the scale and breadth of the high-tech industry in this location is easily accessible (e.g. Thames Valley Berkshire LEP, 2018).

Regarding the potential sample, according to Thames Valley LEP (2017) there are 8,000 high-tech related companies in the geographic cluster. The majority of firms are located in the towns of Reading, Newbury, Bracknell and Wokingham, including the region's 'anchor' employers, such as Microsoft, Oracle and HP. Despite the fact up to 8,000 businesses are present in the region, the decision was taken to draw up a 50-strong shortlist of the largest high-tech businesses, specialising in a variety of products and services. This is because the larger firms show trend toward downsizing, rather than smaller business, meaning that the link between organisational restructuring and job insecurities is more likely to be captured (Thames Valley Berkshire LEP, 2017). Beneficially, a majority of the firms on the shortlist (32) were located across prominent business parks in the region, which in turn became the focus for gaining access.

In order to maximise the potential for gaining access to a number of eligible firms, contact was established with a local gatekeeper. The gatekeeper in question was the management company of one of the main business parks in the region located in Reading. In light of the fact that a number of eligible case organisations were located on the business park,

attention was focused on negotiating access via the park's management team. Initial contact with the park's management team was established through a network of professional contacts. Following this process was highly beneficial to the fieldwork strategy for two reasons. First, it helped to ensure that senior members of the park management team were present in the face-to-face meeting where access strategy and arrangements were discussed and finalised. In practice, this helped to speed up the process and to secure the co-operation of middle managers who would be responsible for introducing me to potential case organisations. Second, because it transpired that two of the senior managers had undertaken MBA's, and had a keen awareness of the intent and purpose of business, management and organisation studies research, they were more receptive to my research topic and forthcoming in their offer of assistance.

In accordance with 'Principle Five' of the Data Protection Act (1988), the gatekeeper organisation was unable to provide the contact details of firms directly. To this end I provided the gatekeeper with a document summarising the aims and objectives and practicalities of the research - along with a short ethics statement - to be forwarded to the gatekeepers' contacts at twenty firms on my behalf. Using this method, contact was established with representatives of five medium or large sized high-tech MNCs located on the business park. Respectively these firms specialised in IT project management (ITProjectCo), computerised business process outsourcing (BPOCo), graphical hardware products (GraphicsCo), local area networking devices (NetworkCo) and internet telephony products and services (TelCo).

After 'surface access' was granted (Alvesson and Deetz, 2000: 192-194), the firm representatives were instructed to canvas their colleagues by email requesting them to take part in the study. In each case, a series of blanket emails were distributed to employee mailing lists that served corporate office locations in the cluster. Once a list of positive responses from each organisation was collated, contact was established with potential research participants to introduce the study and to filter out any unsuitable candidates.

The prime basis upon which individuals were filtered out was the duration of time they had spent working for eligible firms in the cluster. The

main reason for this was to ensure that a rich picture of morphogenetic change in the cluster could be built up by ensuring that respondents were a) likely to have sufficient experience of work intensification and b) could provide thick description of industrial change and organisational life at a variety of levels. Accordingly, the search criteria were set at a minimum of three years' service working for an eligible firm located in the cluster. Furthermore, priority was given to interviewing respondents who had worked for multiple MNCs in the cluster during their careers.

As an additional matter, it was viewed important that research should try and canvas a diverse and representative cross section of different career categories and expert informants (Smith and Elger, 2014: 120). Regarding the former, efforts were made to try and determine the key local labour market segments that firms were active in and what proportion of their total workforce were represented by these individual segmentations. Although Thames Valley Berkshire Local Enterprise Partnership are active in compiling bi-monthly local labour market data for the region as a whole, they did not at the time of the research provide segmented labour market data that covers the activities of high-tech firms. As mentioned, given that the cluster is a 'satellite industrial platform' (Markusen, 1996: 296), which conforms to the NACE 72 (computer services and related activities) coding. Little technical development work occurs there, hence the sample was reflective of the types of productive activities undertaken in the cluster, and comprised mainly of respondents working in sales and marketing functions. Additionally, it was viewed as important to interview respondents working in internal HR, who could talk very directly about the process of managing redundancies for example.

Through the gatekeeper an initial cohort of thirty-two participants matching the description above was constructed. Following this, a snowball sampling strategy was adopted, which yielded an additional fourteen participants from a further five large MNCs located in the cluster. Of the forty-six individuals interviewed in total, forty-three were at the time of the research working full-time for mid-sized/large MNCs in the cluster. Of the remaining three respondents, two had done so within the past five years and one other was working part-time having recently returned to work from maternity leave. The sample included a mix of entry-level employees (n=10), middle managers

without direct reports (n=20), middle managers with direct reports (n=13) and senior managers (directors) (n=3) were interviewed. Reflective of the types of business activities undertaken in the cluster, the sample included a majority of employees (n=44) that were working broadly in sales and marketing functions, in addition to two employees sitting in finance (n=1) and legal (n=1) departments.

Moreover, the aim was to have an even split between female (n=23) and male (n=23) participants. While it is typical for studies of high-tech work and employment to differentiate between technical and non-technical employees it is not appropriate here. Although a few employees had some form of technical certification they were not involved directly in knowledge intensive computer programming or software development for example as this usually occurs in organisations' home countries. As such, there was arguably no requirement to reflect the gendered nature of such work in the sample, so it was made up of an equal balance of men (n=23) and women (n=23).

Table 1. The firms and their participants

ITProjectCo	9
BPOCo	7
GraphicsCo	6
WiFiCo	5
NetworkCo	3
HardwareCo	2
SecurityCo	2
TelCo	2
ConCo	2
SoftCo	2
Others (firms with 1 interviewee)	6

Total: 46	

Table 2. The participants

Name	Company	Gender	Job Title	Began working in the cluster	Companies Firms Worked for in the Cluster	Total Years in the Cluster at time of interview	Total Years in high-tech at time of interview
Neil	BPOCo	M	Director	1998	4	16	16
Janet	BPOCo	F	Legal Counsel	1997	2	17	17
Lisa	BPOCo	F	HR Business Partner	2006	1	8	19
Lauren	BPOCo	F	Marketing Officer	2010	2	4	4
Ellen	BPOCo	F	HR Officer	2002	3	10	12
Karen	BPOCo	F	Operations Manager	2005	4	9	25
Mary	BPOCo	F	Marketing Officer	2010	3	4	4
Lucy	ITProjectCo	F	HR Business Partner	2011	1	3	4
James	ITProjectCo	M	IT Consultant	1991	6	24	24
Allan	ITProjectCo	M	Quality Manager	1999	1	16	16
Nick	ITProjectCo	M	General Manager	2006	3	9	9
Andrew	ITProjectCo	M	Project Manager	2006	5	9	19
Sarah	ITProjectCo	F	Project Manager	1994	5	17	21
Clive	ITProjectCo	M	IT Consultant	1994	1	21	23
Paul	ITProjectCo	M	Sales Manager	2012	3	3	3
Noel	ITProjectCo	M	Project Manager	2002	9	13	27
Linda	ConCo	F	Marketing Director	1984	4	31	31
Rebecca	ConCo	F	Sales Manager	2012	2	3	3
Katherine	GraphicsCo	F	Business Development Manager	1999	7	16	16
Tina	GraphicsCo	F	Marketing Manager	1998	2	17	17
Julie	GraphicsCo	F	General Manager	2012	3	3	3
Thomas	GraphicsCo	M	Marketing Officer	2009	2	6	6
Laura	GraphicsCo	F	Financial Officer	2012	2	3	2
Valerie	GraphicsCo	F	Marketing Officer	2007	3	8	8
Mark	SecurityCo	M	Marketing Officer	2010	3	4	4
Zara	SecurityCo	F	Marketing Manager	2007	3	7	11
Amy	NetworkCo	F	Marketing Manager	1980	9	31	35
Fay	NetworkCo	F	Marketing Manager	1995	11	20	20
Angela	NetworkCo	F	Marketing Manager	1995	7	20	20
Tim	WiFiCo	M	Sales Manager	2011	2	3	3
Darren	WiFiCo	M	Sales Manager	2001	8	13	13
Carly	WiFiCo	F	Sales Executive	2011	2	3	5
Robert	WiFiCo	M	Sales Executive	2011	6	3	3
Jason	WiFiCo	M	Sales Executive	2011	2	3	3
John	HardwareCo	M	Business Development Manager	2006	4	9	16
Gary	HardwareCo	M	Marketing Manager	1999	10	14	14
Damien	Other	M	Support Technician	2010	4	5	5
Debra	TelCo	F	Financial Officer	2002	4	12	17
Lee	TelCo	M	Project Manager	1989	7	25	30
Oliver	SoftCo	M	Marketing Officer	2011	5	4	4
Judith	Other	F	IT Consultant	1992	10	22	34
Roger	Other	M	Sales Director	1995	1	18	25
Jane	Other	F	HR Officer	2006	4	7	9
Wayne	Other	M	Sales Executive	2011	2	4	4
Kevin	SoftCo	M	IT Consultant	1994	2	3	21
Marcus	Other	M	Marketing Officer	2011	3	4	4

Disparities between total years worked in the high-tech industry and years worked the clusters includes years previous and discontinuous service

3.3.2 Interviewing and field notes

In-depth semi-structured 'theory-driven' interviews were arranged through the lead contact at each organisation or individually with participants. In respect of the former, once a filtered shortlist of respondents was finalised, the lead contact would typically arrange the dates and times of interviews with their colleagues. As regards the latter, in the case of ITProjectCo and WiFiCo, the lead contact forwarded me the contact details of respondents and I contacted them directly to schedule interviews. Or, as was the case with snowball sampling element of the research, interviews were arranged on an ad-hoc basis throughout the data collection phase of the research.

In most cases, lead contacts and respondents requested that interviews lasted no longer than sixty to one hundred and twenty minutes; in the end three lasted longer than that. In total, forty-three interviews took place in office meeting rooms or local cafes between June 2014 and September 2015. Three interviews took place using VOIP service, Skype. In each case this was due to respondents' travel commitments.

As Alvesson (2011: 56) suggests 'a first interview over telephone is seldom to recommend, at least not when the purpose...is to do a fairly reach and deep study.' With this in mind, Skype videoconferencing was viewed as offering improvement over telephone interviewing insofar as it facilitated a visual form of contact with respondents. Nevertheless, the difficulties with generating rich and complex data via this method are acknowledged (Rubin and Rubin, 2011: 177). Indeed, during one of the calls, the connection dropped approximately forty minutes in and although a connection was re-established this did harm the 'flow' of the interview. Even so, in view of investigative topic of concern and the chosen sample it was to be expected that a small number of respondents might be unavailable for a face-to-face interview as a result of to their heavy workloads. Accordingly, the risk of the connection dropping mid-interview was deemed an acceptable trade-off with Skype interviews, given the alternative of not being able to interview respondents (Bergvall-Kåreborn and Howcroft, 2013; Deakin and Wakefield, 2014).

Interview preparation took place in three stages. At the beginning of the

research before data collection had formally commenced, I conducted a number of pilot interviews with former colleagues to help refine the interview schedule, my interview style, approach and so on. Having established the basics, a few days prior to conducting research visits/meeting with individual respondents, I would prepare myself for the interviews by researching the case organisation, the respondent's current job role and their career histories. The purpose of which was to develop a set of field notes that served as a strategic guide to questioning and as a resource for reflecting upon the interview material later on. Regarding the former, depending upon the stage of the research, i.e. if I was reaching 'theoretical saturation', this process would help to establish priority discussion points and aid with devising sub-questions (Eisenhardt, 1989). Regarding the latter, this provided a useful document for adding and/or cross-referencing reflections upon individual interviews or the case study organisation. A final point on interview preparation: where interviews were conducted sequentially on-premises I was typically given around 30-60 minutes between respondents. I used this time to write up and cross-reference field notes and made any relevant adjustments to the intended interview schedule, which emerged as a result of the previous interview, so as to aid theoretical saturation.

As an additional matter, although I would have the interview schedule and the pre-prepared field notes close at hand to use as a prompt during the interview, I would tend to conceal them and/or commit them to memory. This was viewed as a practical way of reducing the barrier between myself and respondents, as removing artefacts that mark the formality of the interview encounter can help to build trust 'conversational and non-evaluative' (Archer, 2003: 162). I deemed these necessary conditions of the interview given that the aim was to generate data regarding organisational restructuring, job insecurities and work intensification. On a personal level, of course, this would typically entail respondents talking at length about painful or disappointing experiences such as the personal consequences of work intensification, organisational restructuring including redundancy or instances where their employer had treated them unfairly. To this end, it was necessary to establish trust and a conversational tone. As a further matter, respondents were reassured regarding the anonymity and confidentiality at the start of the

interview.

In terms of incorporating these aspects and putting the interview strategy into practice I applied a number of Smith and Elger's (2014) recommendations to the interview situation. For example, respondents were pressed regarding whether work effort increases in relation to the above were genuine or if they were simulated for the benefit of managers (Paulsen, 2015). Questioning also centred on clarifying the extent to which work effort increases have persisted (intensified) over time and are therefore reflective of work intensification proper.

Interviews were sound recorded digitally using a mobile tablet device. Unlike a laptop with a built-in microphone and audio recording software, research suggests that respondents view such devices as 'unobtrusive' by comparison (Paulus, Lester and Dempster, 2014: 70). Hence, they are less likely to create a barrier between researcher and respondent. Furthermore, the data is sound recorded digitally, which enables easy data transfer to a personal computer for storage and future listening.

3.3.3 Transcription, data storage and management

Once audio recordings were transferred to a personal computer they were played back using a set of loudspeakers with dictation software running in the background. This allowed for the production of two complimentary forms of interview transcript. The computer's dictation software automatically transcribed the sound recorded interviews, while simultaneously allowing me to transcribe the interview recordings 'selectively' (Ochs, 1979: 44).

In the case of the former, although the dictation software was not one hundred percent accurate it was very close, and the errors were amended manually by following the text during a second listening. Upon this listening, I also added non-verbal behaviour into the transcript for added context, as the dictation software did not pick this up automatically. Where transcripts were developed selectively, this helped with initial data screening by developing the foundations for content analysis, by, for example, identifying relevant sources of work intensification in the interview material separating them from those which are not (Vincent and Wapshott, 2014). Moreover, once the interview transcripts were prepared they were fully anonymised.

Sound recorded interviews and transcripts were stored in due accordance with the UK Data Protection Act (1998). In practice, this meant working in accordance with the 'Eight Principles of Data Protection'. Given that proportionate personal and sensitive data was collected for a lawful purpose, and respondents were made aware of this purpose, the 'First', 'Second' and 'Third Principle(s)' of the Act have been satisfied. The 'Fourth Principle' states that data should be accurate and the 'Sixth Principle' states in essence that respondents should have practical recourse to withdraw the data. To achieve these respondents were made aware of my contact details and position at the University of Bath, so that they would be able to request that their interview accounts are amended or withdrawn. Principles 'Five', 'Seven' and 'Eight' were satisfied, given that anonymised data was stored securely on a USB hard drive in a locked drawer at my home address, and will be deleted within five years from the interview date.

3.3.4 Data analysis

As mentioned, the data analysis was iterative and took place over the duration of the research project. To facilitate this process of retrodution, I used thematic analysis. This enables the researcher to organise empirical material into themes corresponding to the actual, real and empirical levels, as well to develop interrelated categories of regular control/resistance events that emerge from fieldwork.

Practically speaking, it was aided by the ongoing development of a field diary, which documented how the conditions of the broader organisational system were potentially causally implicated in the patterns of events that were being observed. This was carried out on the basis of a cross-case search for patterns that were observed at the level of the cluster, organisations and among workers. On this basis, 'competing explanations' as to the patterns of restructuring, job insecurities and work intensification witnessed were compiled (Mingers, 2004). On the one hand this involved differentiating between the causes that are expressly linked to unique features of the cluster (e.g. the social regulation of labour power) and those that are not. For example, whereas the local labour market is clearly a unique and essential feature of the cluster, high-performance work systems do not occur at the level of the 'real'.

Having established categories of potential local causes and non-local causes, a process of retroduction was followed to find the best local cause of them all. This involved tracing the 'sequences of causation or causal mechanisms' from empirical experiences, to patterns and regularities in the real domain and back to the causally real properties of the cluster structure (Ackroyd and Karlsson, 2014: 24). The logic follows that actions and events occurring at the actual and empirical level, such as redundancy and cognitive and affective job insecurities, are linked to the underlying real cluster production arrangements. At this juncture, a chain of causality was followed to address what fundamental elements of the cluster make this possible, apropos of materially real, socially real elements or a combination (Fleetwood, 2005).

Once a reasonably viable link connecting each domain had been established, the chain was then followed backwards. During this stage of analysis interrelated themes of local causes were introduced and then discarded or integrated into the overall theory. For example, it is possible that high performance work systems emerged at T2-T3. However, in order to factor into the final explanation, they must be demonstrated at the actual level and represent at T4 of the morphogenetic system. In practice this is achieved by repeatedly asking: does the mechanism explain the outcome? Or are there other potentially more 'realistic' explanations on the basis of the empirical evidence (Marks and O'Mahoney, 2014: 81). In short, this thinking is theoretically robust because at each stage the links of causation are auto-critiqued, by constantly theorising and discounting potential linkages.

In practical terms, themes were developed through a process known as coding the record using Microsoft Word (Hammersley and Atkinson, 2007: 153). Although advanced digital tools such as NVivo are typically quicker for developing theory from empirical data, the manual method was chosen as it better facilitated the ongoing process of retroduction, by allowing me to read, re-read and rewrite theories and explanations as they emerged (Bazeley and Jackson, 2013). Nevertheless, as Hammersley and Atkinson (2007: 154) point out, a key downside is that it does not provide any form of 'analytic index' as with NVivo. While this did risk losing certain elements, categories or themes within the data, the main problem I encountered was a lack of advanced

search functionality, which made searching data a more time-consuming process.

3.3.5 Ethical considerations

There are a number of ethical considerations that are raised by the research setting, methods and theoretical approach chosen here in a practical sense and in relation to the politics of representation (Clifford and Marcus, 1986). In respect of the first issue, it is clear that by choosing and naming a geographic setting in the research opens up the possibility of impacting upon the interests of firms and stakeholders in that location, particularly if its content is critical in scope. In the research design stage, the possibility of anonymising the location in the writing of research was considered. However, due to its high profile and the context-sensitive nature of the theory this was not practicably possible.

Accordingly, it was decided that research writing should therefore aim to guard the anonymity of firms and to avoid the 'unsupported assertion and rhetorical excess' that characterised previous locality studies within the region (Jackson, 1991: 216). In terms of the former, there is undeniable strength in the numbers of firms co-located within the geographic cluster, as demonstrated in Figure 4. Moreover, even though case organisations have been labelled according to their technical specialism e.g. 'ITProjectCo' and 'BPOCo', I argue that these are sufficiently vague enough given the sheer volume of similar firms. With reference to the second representational issue, even though research writing about places can alter perceptions of them, there are ways of handling this sensitively. For example, in this research it would be insensitive to 'revel in the particular' (Cresswell, 2004: 16), by framing theory and developing critical insight through the prism of local culture for example, as was the case in Morgan and Sayer (1984). The critical importance of the geographical context, then, is framed in terms of the forms of business and work organisation, which have emerged there under globalisation and that alone.

In respect of the performance of research methods, steps were taken to safeguard 'confidentiality' and 'privacy' by conducting interviews in sealed office meeting rooms or in quieter corners of public cafes (Easterby-Smith,

Thorpe and Jackson, 2012: 95). In turn, this meant that the chance of any such breach would be minimal and that no 'harm' could come to respondents' career interests (ibid.). Furthermore, to protect 'dignity' respondents were reassured that if they did not feel comfortable answering a particular question or discussing a particular topic that they should not feel obliged. It should be noted, however, that this never actually arose in practice.

As regards the ethics of conducting research that is 'critical', two key elements require attention (Alvesson and Deetz, 2000: 35). The politics of access with critical research are such that the true intentions of research might in some instance have to be concealed, though that was not deemed to be the case here (Alvesson and Deetz, 2000: 193). Nevertheless, it was viewed as paramount to communicate the 'nature and aims' of research with 'honesty and transparency' throughout (Easterby-Smith, Jackson and Thorpe, 2012: 95). To this end, the research topic was described verbally and in writing (see appendix 1) to gatekeepers, lead contacts and respondents as seeking to explore forms of organisational and job change among firms in the Thames Valley high-tech cluster. Part of which would of course involve investigating both positive and negative elements of this.

A further matter relates to how critical work, by its very nature, risks elitism at various different junctures in the course of an academic research project. On the one hand, it goes without saying that because 'issues of power, domination, constraints, social suffering and lost possibilities for action, etc. are seen as the most important to explore', under the surface of critical research is the implication of a privileged vantage point for viewing the social world (Alvesson and Deetz, 2000: 151). Moreover, given that many of the problematic issues that are a focus of the critical tradition have emerged as a result of a particular set of domain assumptions and are expressed through a particular sort of language, it poses issues for discussing relevant concepts and theories directly in interview scenarios. If these conversations are not handled sensitively it could risk angering, alienating or causing upset to respondents (Alvesson and Deetz, 2000: 193). Furthermore, if strongly held views are aired in the interview encounter it could prevent the generation of data that opens up 'multiple interpretations' (other than those of the researcher) meaning that it is important 'to steer away from traps and to

produce rich and varied results' (Alvesson, 2011: 107). A solution to this was incorporated into the chosen interview strategy, via the adoption of a combination of 'theory-driven' (Pawson, 1996) - based upon mutual understanding of what is a complex research problem - and non-directive (Archer cited in Smith and Elger, 2014: 117) techniques, so as not to force preconceived ideas and driven by respondents.

Chapter 4 – Findings – part I

This, the first of two findings chapters, describes the emergence of the cluster as a social world in order - as Barley and Kunda (2004: 35) put it - to set the 'scene'. Barley and Kunda's (ibid.) use of dramaturgical imagery here is intended to convey a sense of their orientation to the empirical field: as if it were a theatre set 'guiding' the behaviour of actors. To put it more concretely, this pertains to a view of sociological analysis as the task of identifying patterns of human behaviour in context of the 'social structures that constrain choice and guide action' (ibid).

In light of the view that the geographic cluster structures the conditions of work, the approach described above offers a fruitful way of beginning to develop the empirical analysis. Accordingly, sections 4.1 and 4.2 of this chapter seek to 'set the scene' through describing the cluster's emergence as an agglomeration and the structuring effect the local labour market has on the identities and orientations of employees. That is to say, having established the key characteristics that constitute the geographic cluster as a social world, the material interests of employees and the local conditions of work will be described to identify the basis of consent that underlies the cluster's emergence. Against this background, section 4.2 provides a picture of how the geographic cluster constrains choice and guides actions of employees, before the final substantive section of the chapter pays attention to how changing conditions of work were initially received by employees.

4.1 Emergence of the cluster as a social world and the structure of the local labour market

As has been established, because compliance is a significant causal component of work intensification, it is important to develop an understanding of to what extent there is social organisation of consciousness in geographic cluster. In other words, if we want to identify why employees would choose to put up with work intensification in the Thames Valley cluster, however reluctantly, in the face of other alternatives (McGrath, 2013), an account of how, and in what ways, 'meaningful agency' is derived from working there needs to be developed (Coe and Lier, 2011: 229).

If as Barley and Kunda (2004: 35) suggest 'social life is a collection of stages, or social worlds, each with its own cast of characters who repeatedly retell a loose but identifiable story by improvising around a set of motives, props, backdrops and stage directions'. It is necessary to begin by developing a descriptive account of the conditions of cluster emergence and the key factors that constitute it as a social world. Once established, the chapter will explore lived experiences of employees working in the Thames Valley cluster to tease out 'a loose but identifiable story' by paying particular attention examples to linkages between organisational restructuring, job insecurities and work intensification (ibid.).

Assessing the historical emergence of the Thames Valley cluster in relation to these assumptions, it was curious to discover that only a small fraction of the 46 respondents interviewed had actually resided in the geographic cluster all their lives (n=3). The majority of respondents (n=35) had relocated to the cluster's travel to work area from across the UK and Europe between 1986 - when the first large high-tech firms began to locate in the cluster - and 2015 - when the data was collected. A smaller number commuted extended distances⁸ from across the UK or telecommuted to their jobs in the cluster (n=8). This suggests that a high concentration of useable labour was not necessarily present in earlier years, and that a local labour market offering employers had emerged as the cluster had developed (Cooke, 1983).

Having discovered this, I decided it would be advantageous to begin to develop an understanding of the career pathways on offer locally before the cluster began to emerge. Of the three respondents who were resident in the area of the geographic cluster at the time of its emergence (circa 1986), Darren, a Sales Manager in his forties working at WiFiCo, remembered it most vividly he said. Accordingly, I asked him to describe his career history and how this compared to his peers:

'When I left school in 1988...very few people went into IT jobs...in Reading most people either ended up in insurance or a bank...then

⁸ Describing transportation links in South East England, Hall (1995: 70) defines long-distance as one-way commutes between the 70-130km range.

approximately 12 years later the insurance companies started merging...I was made redundant...then I just fell into IT...I was desperate.'

Darren's description tallies with academic literature on the topic of service industry growth in South East England during the late 1980s, which describes the Thames Valley as an erstwhile 'provincial financial centre' (Leyshon, Thrift and Tommey, 1989). As far as white-collar work was concerned, towns in the cluster's geography, such as Reading and Bracknell, became centres of financial services employment during the 1960s (Leyshon, Thrift and Tommey, 1986: 164-5).

Beginning in the 1980s, there was 'structural adaptation in the economy of the M4 corridor', whereby US foreign direct investment led to the emergence of a high-tech cluster in the Thames Valley region (Breheny, Cheshire and Langridge, 1983). However, as Darren alludes to, the region's transition to a major centre for high-tech employment was gradual and as a result of the simultaneous consolidation and expansion of two separate industries in the local area (insurance and high-tech respectively).

While Darren's career trajectory suggests that the skills required by employers in the financial services sector were transferable to high-tech employers, there is a lack of data to suggest that the cluster emerged solely because of this. What Darren's account does reveal though is the types of work most commonly on offer in the geographic cluster and what motivated respondents to pursue them in the first place. 'I fell into IT' is how Darren describes his entry to the sector. This statement typifies many respondents' recollection of why they first entered high-tech. The majority of respondents (n=43) said that a career working in high-tech was motivated by a variety of circumstances, rather any intrinsic appeal of technical work in the sector – as it is sometimes assumed (e.g. Alvesson, 2001). Illustrating the point, 28 respondents referred to colleagues working in technical jobs as others, distancing themselves from them, with comments such as 'I'm not technical', or describing them as 'techies' for example.

This finding helps to reinforce the notion that the local labour market is centred around administrative and managerial work in high-tech corporations,

rather than technical work per se. Moreover, despite the different accounts of what led respondents to work in high-tech or the cluster, it enabled me to tease out what in their career histories connected them. Namely, prior experience of working in a large corporate environment.

Of the 38 non-recent graduates interviewed, four main groupings stood out. A significant proportion (n=17) began working in the cluster having worked continuously for large business corporations in industries unrelated to high-tech (e.g. automotive, professional services) across South East England:

'I did 23 years at a large airline...after 9/11...people didn't want to fly so they cut back quite a lot...I left there in 2006...I came to [ITProjectCo] as a manager, not doing anything specific'

(Nick, ITProjectCo, General Manager)

'I was working for a US automotive company...the managing director here used to work for Ford...it was one of these strange happenstances of life...he had a need for a salesperson; I was looking to move...so I ended up here [in 2011].'

(Neil, BPOCo, Director)

'I used to work for a big four accountancy firm in London...I've been here for [8 months].'

(Laura, GraphicsCo, Financial Officer)

Another smaller group of respondents (n=9), re-located to the Thames Valley cluster during the early and mid-2000s, having worked in administrative or managerial jobs for large business corporations in the high-tech sector (or related industries such as consumer electronics) in London and South-East England. On the one hand, respondents within this grouping linked their relocation to office decentralisation from London:

'TelCo were based in London, it was a very affluent time...they decided to set up an office out here...my husband and I were living in a crummy flat...we were thinking of starting a family...so it made sense.'

(Debra, TelCo, Finance Officer)

'They were based in West London and then they moved us out here (Reading) about 7 years ago now.'

(Lisa, BPOCo, HR Business Partner)

On the other hand, respondents suggested that the Thames Valley cluster became relatively more attractive to them as jobseekers during this period:

'I was at a large US office equipment manufacturer for about 13 years, then I came here...'

(Janet, BPOCo, Legal Counsel)

'I worked for a Japanese consumer electronics company...they started reorganising things...I did temping and ended up here.'

(Lisa, BPOCo, HR Business Partner)

'This would've been about 2006, it annoyed me so I decided it was time to go...so I joined a vertically integrated Japanese technology firm in Reading...they were recruiting because they'd just won a big frontline public services contract.'

(John, HardwareCo, Business Development Manager)

'I got a job at telecommunications infrastructure firm located in Central London as a dogsbody resource, just doing basic IT support

mice, keyboards that sort of thing just as a temp...I moved into project management, I was living in Lewisham at the commuting in...a friend of my wife worked for [large IT company] got a [public sector transport organisation] contract, so I went there in 2006.'

(Andrew, ITProjectCo, Project Manager)

A further smaller grouping (n=8) migrated to the region from elsewhere in the UK to work during the 1990s:

'I was based in London [for many years]...[but] for the last twenty years, pretty much I've been Thames Valley focused...living and working here.'

(James, IT Consultant, ITProjectCo)

'I'm from the [South East]...I began [working in IT] in 1994...there's so many technology companies here [in the Thames Valley cluster]...so, I've just stayed here.'

(Amy, Marketing Manager, NetworkCo)

In addition, a small number (n=2) of respondents who began working in the Thames Valley cluster in the 1990s (and are still working there) commuted long distances (over 70 miles) between work and home. Lee, a Project Manager at TelCo resident in Coventry said:

'I've always lived in [the West Midlands] but ever since [I was made redundant in the 1990s] I've never worked here...I've worked in Reading...Newbury...I'm well paid...my earnings are very good...I'd never get that in the Midlands.'

Roger a Sales Director at Others resident in Bath explained:

'A friend recommended me...she said to me "it would look fantastic on your CV" ...I said, "Reading is too far to travel [from the South West]" ...she said "do it for a year" ...17 years later I'm still there...they [the company] have always been very good to me... I wouldn't change a thing.'

Both these respondents explained that they had electrical engineering backgrounds and they perceived the availability of jobs in the Thames Valley cluster to have accelerated in the 1990s (Peck and Tickell, 2002).

A number of 'discontinuities' between the concentration of useable labour supply and the changing demands of high-tech firms located within the geographic cluster are suggested in the paragraphs above (Cooke, 1983). Given that a majority (n=43) of the respondents interviewed said that they had migrated from elsewhere in the UK to take up jobs in the geographic cluster - some of whom said it was their first job in the industry - it appears local labour supply and demand have developed unevenly. In other words, 'useable' labour supply within the geographic cluster has emerged over time, reflecting wider patterns of business change within the regionalised service economy of South East England on the one hand (Coe and Townsend, 1998). On the other hand, a majority (n=37) of respondents interviewed had moved there in their early to mid-career, meaning that the Thames Valley cluster could be seen as an 'escalator region' (Savage and Fielding, 1989; Fielding, 1992; Champion, 2012).

The patterns described present a mixed picture of how a useable labour supply came to be present in the Thames Valley cluster. Clearly, inter-regional migration from the wider South East is a key reason why most respondents first entered employment in the cluster. To a lesser extent, the interviewees were either long-distance commuters with engineering backgrounds, or locals with transferable soft skills relevant to the high-tech sector.

Having established broad groupings of non-recent graduate interviewees based on their mobility choices - so as to illustrate the nature of emergence of the local labour market. It is now appropriate to explore interviewees' career histories in a bit more detail to understand how the social

organisation of consciousness has been shaped through 'participation' in context of the geographic cluster (Burawoy, 2012).

One of the most striking aspects in this regard, despite the interviewees diverging career histories, is the lack of outward mobility from the cluster. Of the 35 interviewees in question, who ranged in age from 29-67, 30 of them had spent the majority of their working lives employed in the cluster. Of them, 28 had been continuously employed in the geographic cluster, whereas 2 had worked for high-tech firms in other locations. The remaining 5 interviewees, who had not spent the majority of their working lives in the cluster were in their late careers, had each spent 10 years or more working there continuously. The career histories of interviewees, then, suggests an attachment to the geographic that has persisted over time. The nature of this attachment is worth exploring in a little more detail through examples.

Janet, a qualified solicitor working in commercial law, described how labour market intermediaries and human capital derived from her career history had effectively bounded her to working in high-tech firms in the cluster, despite not necessarily planning it to be that way:

'When you go through recruitment some people *do* look for [experience working for a high-tech company]; I actually think that legal skills are pretty transportable, but I do seem to have always worked for tech companies, again I'm here [working for a high-tech firm], perhaps it's just what was around.'

In this statement, Janet seems to suggest that certain habits, social and personality attributes associated with a career background in the industry are looked upon favourably, meaning that her career mobility had been effectively 'bounded' to the geographic cluster (King, Burke and Pemberton, 2005).

Amy told a similar story, having worked in marketing for 7 high-tech firms in the cluster over a 20-year period:

'I've never had to consider [an alternative] because there's so many technology companies here, all of my roles have been [located in the geographic cluster].

Reflecting on why - apart from the apparent availability of local job opportunities - her career had been 'bounded' to the geographic cluster Amy said:

'I think it's really hard...once you have around 10 years' experience to change industries - even though I personally believe it's a good thing (to change) - because I think your marketing skills are transferrable, companies don't see it like that.'

Janet and Amy's stories chime with previous research by King, Burke and Pemberton (2005), which emphasises the role of the recruitment process in effecting local labour market outcomes. Companies in the cluster appear to value previous experience working in the high-tech industry highly when hiring candidates. This is reflected on the surface by Janet and Amy's descriptions, but also in the local labour market outcomes described on page 96.

Respondents' descriptions of bounded careers reinforce the notion that the local labour market is central to the geographic cluster as a social world. As discussed at the beginning of this chapter, the very existence of the cluster was contingent upon the emergence of a local labour market. The clustering of high-tech firms drove inter-regional migration and labour agglomeration (or 'labour capture') which means there is now a social world to speak of (Smith, 2006). Through participation in the local labour market, the career mobility of some respondents appears to have become 'bounded'. That is to say that judging by the career histories of, and conversations with respondents, most are to an extent bounded to the geographic cluster.

Against this background, the local labour market can be described as a 'socially real' entity insofar as it has a conditioning effect on labour in terms of mobility (Fleetwood, 2005: 201). However, the significance of these surface observations regarding mobility must be tested by exploring the psychological nature of attachment to the geographic cluster, which is described as stickiness (Markusen, 1996). Applying theoretical insights from Burawoy

(2012), it is therefore necessary understand what agency respondents derived from both participation and interaction with the local labour market.

4.2 The social organisation of consciousness in the geographic cluster

In the previous section, the circumstances behind respondents' entry into the local labour market - i.e. by entering into a contract of employment with a co-located high-tech firm – was discussed as underpinning agency. Moreover, broad chronological groupings of these sets of circumstances were identified as characterising particular periodisations in the geographic cluster's development from the late-1980s onwards. What follows, then, due to the emergent nature of the Thames Valley cluster as a social world, is a chronological analysis that charts the (re)production of forms of meaningful agency over this period until today. Upon which basis, a broad picture of the sets of work orientations present within the Thames Valley cluster will be developed as a platform to addressing the link between organisational restructuring, job insecurities and work intensification.

By and large across these periodisations, a main motivating factor for interviewees taking their first role and/or relocating to the cluster was to better their material circumstances. Across the dataset, around three quarters of respondents said that they did so to quickly further career progression, increase their salary or to better their standard of living (n=33). Among their number, the majority stated that they happened upon a career in IT (n=28), that they had relatively little specialist 'technical' knowledge (n=30) and that working with technology had low symbolic appeal when compared to the aspirational pull of the large corporate business environments (n=23) (Alvesson, 2001). In contrast, the remaining respondents - most of whom began working for high-tech firms in the cluster within the last five years and were of all ages and career stages - remarked upon the symbolic appeal of working for well-known technology brands. Yet, they were also less inclined to talk up the material benefits of working for a high-tech firm in the cluster, although none were particularly negative or dismissive. Painted in broad strokes, what this finding suggests is that on balance the main source of meaningful agency among respondents has transitioned from material to symbolic factors over time.

Interviews with respondents who first began working for a high-tech firm in the cluster in the period spanning the late 1980s and early 1990s (n=11) tended to cite both the material and symbolic benefits of local labour market participation. Judith - who at the time of interview was taking a short career break - having worked in the cluster continuously for thirty years - described her entry into the high-tech industry before she relocated to the cluster:

'I was one of the first people I know of in my generation to go into computing straight from school. It was always thought that I would go to university but I never did. I ended up doing an operators job at the county council in [the North East]'

Judith's first foray into the high-tech industry reflects how the majority of jobs in computing for school leavers during the 1970s were in the public sector (Agar, 2003). Moreover, in this passage she touches on the personal symbolic appeal of computing as a career path that set her apart from her peers, identity wise. She later commented that she 'got bored at sixth form' and 'couldn't be bothered with applying to university', before describing how she was one of a small handful of young women who applied for the civil service's trainee computer programming scheme that year, only to be turned down in favour of a rival male candidate who as she put it: 'couldn't handle the pressure and left within a year.' She continued: 'they wouldn't take girls on then, even though in hindsight they're probably kicking themselves seeing how it all turned out.'

Originally from the North East, Judith first moved to the Thames Valley in the 1980s:

'I was having a look at what [job opportunities were] around what [type of programming skills] were current (in demand). I got a call from a recruiter telling me that a US network computing company was setting up a Reading and asked me if I was available. I moved there, got trained up and after that I was one of only a few people in the world who could do my job.'

Again, learning technical computer programming skills - before the emergence and wide-scale diffusion of digital technologies - had a symbolic appeal to Judith because: 'Not many other people had the knowledge' Furthermore, because a scarcity of skills similar to hers meant that her work was: 'quite lucrative.'

A balance of material and symbolic aspects of working in high-tech similarly appeal to Linda, now a Marketing Director at ConCo, began working as a technical writer for a British hardware manufacturer in Bracknell. She stated:

'I did English Literature at university - but it is slightly relevant [to high-tech] I guess. I was very interested in language – and we're going back to the early 1980s here – so I've had a long career in IT, I've been IT all my life. The reason I went from English to IT was because I was interested in language and it was the early days and I started getting interested in programming languages and how they related to natural languages...I found a job as a writer, a technical writer...I wanted to do something that would earn me something, where I will earn something reasonable and I thought yep I can combine my interest in language by working in IT [as a technical writer].'

When Linda was asked to go into more detail about the balance of material and symbolic factors motivating her chosen career path and relocation to the cluster she stated:

'I'm from London and I moved out to Bracknell. For the first 6 months, I hated it and I was going back home to London every weekend...then I moved to Reading, which was still a bit of a dead town back then, and I was still going back to London a lot because my friends were there. But work was around here and I could see the line I had chosen at that time, and that it was likely to be focused around the Thames Valley...for a while it funded my *life* in London...[before] I gradually started gravitating here.'

Linda was clear that working in IT during this period was a relatively lucrative career decision and that she thought her material options would be enhanced by re-locating to the Thames Valley as the high-tech industry began to agglomerate in this region, despite the cost to her lifestyle. And although she felt that this came at a cost to her lifestyle, the general scarcity of expertise in computer technologies at the time, in addition to her degree level education, meant that she received a wage premium:

'I was acting as an interpreter between 'highly technical' detail and the level of 'quite technical' detail, all the way down to the level of, say, a till operator in a supermarket. You can imagine how long ago this is, seeing as how in those days I was even down to the level of having to explain how to use a mouse, so it's quite different to nowadays!'

It was a similar story for Roger, Sales Director, who having studied electrical engineering at university, was first employed in a role requiring a technical skillset. He first began commuting from his home in the South West to the headquarters of a multinational high-tech firm in Reading to support his young family:

'I got into [IT] by accident. After years living out of a suitcase doing contract [electrical repair] work I thought it was time to settle down...I found a job at a small computer company pre-PC days...just setting up computers...suddenly I was in the right place at the right time. It became apparent that [IT] was the place to be then I started got bigger and better jobs and ended up at [high-tech firm in Reading].'

He joined in the mid-1990s as a support technician and remarked:

'I remember being amazed when we were given a laptop and a mobile phone for the very first time...you wouldn't get that

anywhere else at the time...they were always very good in terms of salaries and all the rest of it.'

Roger's response resembles Linda's insofar as he was positive as regards the material rewards and symbolic aspects of work, but also in terms of material options stating that the high-tech industry was 'the place to be' and that the best jobs were in the cluster. He continued to suggest that these subjective factors have outweighed the downsides of work in terms of work-life balance over the course of his career in the cluster:

'It's amazing what becomes the norm and what you can cope with. Getting up at 6, on the road by 7, in the office by 9, back home at 7 and I've been there 17 years, I don't know if that says more about them or more about me! They've always been very good to me.'

Roger went on to discuss how he felt that the firm had been very supportive when he had suffered ill health. Furthermore, he suggested that his compensation was equitable in comparison to the high level of work effort demanded by the firm given that they provided a competitive salary, subsidised private medical insurance and other benefits and perks such as a company car.

Judith, Linda and Roger have each had long and seemingly successful careers in the Thames Valley cluster over a period of twenty to thirty years. Each had acquired a certain degree of specialist technical knowledge and skills, and as a result appeared to have fared well in the local labour market due, in part, to a scarcity of competition. As such the key actions and experiences constituting stickiness, i.e. remaining employed in the cluster and developing a degree of dependency upon, or, attachment to the local labour market, stemmed from the positive material and symbolic options associated with their work (Phelps, Lovering and Morgan, 1998). Reflective of this positive association, Linda's next career move came some twenty years later, during the time when large foreign owned multinational high-tech firms from the US became more established employers in the area (Boddy, Lovering and Bassett, 1986).

However, as the organisational the make of up the cluster began to change - spurred by transformations in enterprise hardware and software computing products and services markets in the 1990s - the competencies, skills and abilities that were in-demand locally also changed according to James (IT Consultant at ITProjectCo). Whereas previously the cluster hosted a large pool of job opportunities that required semi-technical skillsets and certifications, such as IT service desk roles (frontline technical support), all the way up to highly-skilled computer programming and software engineering jobs. As US multinationals began to consolidate their position as some of the most prominent and prolific employers in the local area, demand for labour began to shift away from job with technical role requirements and toward sales, marketing and general management. James had a similar career background to Roger, and began working in the cluster as a computer technician before moving into consultancy (NACE 6202) in the 1990s. On his entry into a career path in computing:

'I was lucky enough to have a PC, I started tinkering around with it and I thought they're relatively straightforward these things (actually); I don't know what all the fuss is about!'

As a result of his background James recounted that he felt well placed in the local labour market to take advantage of the new opportunities, and said of his transition to consultancy in 1995:

'It was quite prestigious.... it was more money which is quite nice and more opportunities in terms of personal development and change, so it was a no-brainer really.'

The broadening scope for sales and marketing skills over more technical skillsets was echoed across the cluster during this period - as it emerged as a centre for sales and marketing for US multinationals in Europe. To this end they became some of the more prominent employers in the cluster, and redolent of Roger's account of working for a large US multinational, Amy's description of re-locating to the Thames Valley cluster were positive:

'It was 1994...management always had time for you, they invested in me to go to business school...I was well rewarded...the IT industry then was the place to be, people could just print money'

As is clear from her statements, Amy derived 'meaningful agency' from material rewards and agreeable working arrangements, in addition to the extensive material options she derived from labour market participation within the geographic cluster.

After 5 years working at her first firm in the cluster, Amy secured a new role at a time when firms began to offer employees greater material rewards for their work effort. She suggested that this had led to increased internal competition among and between sales personnel and marketing teams and to the emergence of a more 'entrepreneurial' work orientation in high-tech generally:

'It was in the height of the good times, you know, you could spend whatever you wanted, you would see a new car outside the front every week, [and management would say] you can win it this week if you make this much on a deal, it was the absolute boom times...It was a happy environment then, everyone was making money, everyone was winning, people were investing in technology...I still had to work hard, it was a very challenging job, but yeah we were rewarded. We went on nice kick off meetings and stuff like that but for me it was about the environment and the culture it created whilst sales are good.'

Respondents working for other firms during this period reported similar experiences. Debra, Financial Officer, Telco, recalled:

'I once got a £7,000 bonus around the time when I first started (emphasis in the original). When you joined you used to get shares, you were part owner of the company...we used to go on big piss ups...all paid for by the company...it was all very affluent.'

She also described how cash rich firms began to pursue growth through acquisition, with some establishing operations in the cluster in order to house their increasingly expanding workforces:

'We acquired [three competitors in the space of a year]...this building was built - we used to [occupy] the whole of this building - I mean it's quite nicely done... [it's] a benefit from the good times.'

A clear connective thread in Amy and Debra's accounts is their effusive description of the time period under question as 'the place to be' and 'the good times'. These and similar phrases were used repeatedly by respondents with fifteen years or more experience to refer to the period of sustained growth that the high-tech industry experienced from the 1990s to the 2000s. As is established in the statements above, employees were highly rewarded and it was a time of growth for the cluster, which, in turn, led to a number of search efficiencies in the local labour market, particularly for those in sales and marketing roles.

Reflecting this, Amy commented: 'I always felt that I had somewhere to go to [work in the cluster], I never felt threatened.' This sense of confidence as regards job security as a result of being based in the cluster was brought up by a number of respondents who had worked there at the time. For example, Katherine, a Business Development Manager for GraphicsCo, who has worked in the cluster in a variety of sales and marketing roles since the 1990s stated: 'Thinking back...I can't say I was ever worried...if I ever found myself out of work I'd think oh well I'll just find another job.'

In these statements, it is clear that while the 'good times' contributed to a sense of job security at the level of the cluster, for the first time respondents in interviews began to have concerns regarding their job insecurity at the level of the firm. Hitherto each of respondents in question had worked for one employer, or a maximum of two employers, over the course of careers spanning between 5-10 years, but that quickly began to change.

Respondents said they were faced with a situation where although employment in the high-tech cluster provided material rewards and potential

future job opportunities, it also carried a number of downsides and risks, as this period of growth was identified as a turning point in the industry in which companies were becoming more and more 'aggressive'. Their description of this period correlates with Ho's (2009: 210) account of a sea change in management and organisational history that occurred in the late 1990s, which she describes as the transition from 'managerial capitalism' to 'shareholder capitalism'. Shareholder capitalism describes how the disloyalty of shareholders became an influential organising principle in which business corporations were '[turned] into vehicles for short-term financial gain' (ibid.). In turn, this led to more 'conservative' and compassionate forms of people management to be viewed as out of fashion and largely fall by the way side among large business corporations (ibid.)

4.3 Organisational restructuring and the high effort workplace

Reflective of these changes, Amy lamented how: 'managers used to have more time for their teams...culturally it became very much about what *you* can do for the organisation (emphasis in the original).' In practical terms, this increased managerial scrutiny of individual performance led to the emergence of a 'long hours culture' and work orientation among colleagues according to respondents. Many described how they and their colleagues would overcompensate by working longer hours in order meet firms ever increasing demands. For example, Clive, an IT Consultant at ITProjectCo recalled:

'It was noted on the very first project that I ran for the company that everything was to be delivered on time, on budget...back then I was clocking just under 60 hours a week each [in order to cope with the demands].'

Darren, who took his first position at a multinational high-tech firm in 1998, told a similar story. He remembered being shocked at the contrast between working in high-tech sales and his previous sales job, recalling that the stress was 'unbelievable' and concluding that in terms of required work effort US multinationals were a 'different world'.

Coinciding with this 'long hours' work orientation, firms became more and more 'cut throat' in terms of hiring and firing decisions. Sarah, Project Manager, ITProjectCo, said of the period: 'the way that [firms] treated staff was completely outrageous...people just disappeared overnight.' Whereas Gary, Marketing Manager, SecurityCo suggested that an increasing focus on performance gave firms legitimate discursive means to pursue downsizing and delayering for example as long-term rationalisation strategies. As he put it: 'levels of management [were] ripped out...decisions about the workforce centred on how much they contribute to the bottom line', remarking that if employees did not match expectations they would be 'managed out of the organisation'.

Although, a handful (n=7) of respondents said that their initial response to the raft of changes were positive. For example, of the more 'aggressive' approach to people management Amy said: 'I was totally on-board with it at the time. I saw the changes as an opportunity.' Whereas Roger complained that after years of acquisitions and growth, firms had become 'bloated' and that there was a lot of 'dead wood'.

It is during this period that respondents first recall the work effort-mobility bargain (at the level of the cluster and the level of the firm) coming into conflict with their sense of job security and priorities in their personal lives (Smith, 2006). That is to say that whereas previously respondents were largely satisfied with living and working in the cluster, when work demands increased with no improvement to job security they first began to seriously question strategic rationale of their future careers in the cluster, particularly around the turn of the millennium, when respondents said that they started to go through redundancy with increasing regularity.

At this time, an economic recession in the US combined with growing commoditisation of high-tech markets and dotcom bubble conspired to pose significant challenges to the industry. Workforces worldwide were culled though the Thames Valley cluster bore a significant brunt of it:

'In [the late 1990s] when we got taken over it got very iffy...then we got taken over again [in 2000] and they [started] laying people off...eventually I was a casualty of the layoffs in 2001.'

(Judith, IT Consultant, Others)

'[In the] year 2000 [organisational and economic] crisis hit...we went from 120,000 employees to 20,000 in three months...[then] I was made redundant.'

(Jane, Business Development Manager, GraphicsCo)

The pervasive sense of unease among employees engendered by these developments, led them to increasingly assess their material and symbolic options in relation to the work effort-mobility bargain. This was well summarised by Debra who suggested: 'a business analyst will do as much analysis of their own company and their own job safety, as they will for their clients.'

The question of: 'why stickiness should pervade in these circumstances?' was partly down to the fact that local labour market remained buoyant. That is to say that the concentration of material job opportunities provided a material and symbolic safety net against the increasingly short-term nature of employment (Fallick, Fleischmann and Rebitzer, 2006; Brenner, 2003). Moreover, the various material and symbolic benefits and 'perks' that firms offered, such as generous expense allowances, were discussed as being gratefully received by the respondents.

However, by far and away the most positively discussed 'perk' of them all was the adoption of flexible working practices by firms. Respondents recalled how firms around this time were issuing them with laptop computers and a VPN (Virtual Private Network) connection allowing them to work from home. Part of the reason for this was that high-tech firms were keen to demonstrate the business benefits of technological enabled homeworking to other large business corporations who were their customers. Furthermore, it helped employees to maintain a sense of work-life balance, and over time 'work from home Fridays' became commonplace among firms in the cluster.

In addition to flexible working, a number of other perks that were sources of 'symbolic compensation' motivated some respondents to stay in

the cluster (Endrissat, Kärreman and Noppeney, 2016). For example, opportunities for global business travel were discussed as having strong appeal. Clive, IT Consultant, ITProjectCo, was one of them, and he remembered that particular period in his twenty-year career in high-tech very fondly as a result:

'In the early-2000s, for various reasons I had to keep track of what I was doing, if I say that in 2001: I took 42 long-haul flights – I didn't count a short-haul flight - and I spent 140 nights away working everywhere from Singapore in the East and New York in the West. At that time, it wasn't an unusual lifestyle for me...One time I was doing some work in Beijing and I met with a Chief Financial Officer of a multinational insurance company and he asked me if I could meet him again next week in New York and it wasn't problem. You wouldn't get the sign off from finance for it *now* (emphasis in the original).'

As is evidenced by the quotations above, respondent's assessments of the work effort-mobility bargain amid creeping work intensification became more pronounced over time (Smith, 2006). In the early phases of the cluster's emergence, worker's strategically rational assessments of the quality of work offered by high-tech firms scored highly according to both its material and symbolic elements (Burawoy and Wright, 1990). Later on, as firms began to demand a stronger work orientation - due to changing people management practices - the work effort-mobility bargain featured more heavily in respondent's accounts. Nevertheless, despite a general scaling down of the job quality previously offered by firms, given that a good number of the respondents remained 'sticky' over this duration, overall it must have constituted subjectively 'good work', for them to remain in the cluster (Ezzy, 1997).

The presence of multiple subject positions, of course, means that any number of individual reasons can account for why respondents followed the career path that they did in the geographic cluster. However, what is clear is from the various quotations on previous pages that express somewhat

ambivalently how the high-tech industry 'not a 9 to 5'; it can be assumed that the emergence of a 'long hours culture' during the 1990s did not prove to be significant detractor from the general appeal of working there. The fact that this type of work culture was not identified as being a particularly strong feature of organisational life prior to this time period either, would suggest that a soft form of institutionalisation took hold shifting respondent's work orientations. In other words, the introduction of workplace schema and practices that demanded higher work effort and a strong work orientation appear, to a greater or lesser degree, to have normalised by the respondents I spoke to relatively quickly.

Additional to this 'soft' form of institutionalisation, local labour market structures also played a role in orienting respondents to the working culture. Whereas stickiness was explained as a result of local labour market structures that created job search efficiencies between respondents and recruiters, there is evidence to suggest that inter-firm recruitment patterns were motivated by this hard work orientation and culture. According to Amy, Marketing Manager, NetworkCo, employees who had previously worked for companies which are renowned for having the most aggressive and target focused organisational cultures tended to fare better in terms of their job prospects in the cluster. Speaking of her experience at ones such firm she said:

'Day in day out, month in month out, it's constant pressure. It's a burnout company, that's what they do. If you can thrive in that environment you can make lots of money...[however] no matter how much I did it was never enough...the pressure was always coming down.'

She continued:

'What attracted me was the big brand name and its culture...on paper it all stacked up...at first you feel important because you've got lots to do but then eventually you sit around a table in meetings and see that everyone else is under the same pressure...and then

comes the day when you don't want to get out of bed in the morning.'

When asked to reflect on her experiences she suggested that she thought it had made her 'a stronger person' and more able to cope with demanding work. Furthermore, she stated that it worked to her an advantage in the jobs market due to the perception recruiting firms have of candidates who had previously worked for the firm in question: 'There are certain names to have on your CV...I get approached a lot [having worked there].'

In sum, it can be concluded that a culture of long hours became common place among firms in the cluster, at least partly due to individual and local processes of institutionalisation. As foreign owned corporate headquarters, however, the source of this was seen as flowing from the organisational core, rather than decision-making on a local level. For example:

'Culture filters down from the top. The CEO is very aggressive and would say 'we're going to beat the crap out of [competitors], we'll go kill that competition.' he has a very aggressive manner and it just filters down ultimately...he doesn't want anyone to feel comfortable in the company...you're there to make money for him.'

(Amy, Marketing Manager, NetworkCo)

'We're a US company everything flows from there, they have the balance of power for sure.'

(Thomas, Marketing Officer, GraphicsCo)

The quotations align with previous work which observed how 'workism eclipses the lives of individuals' in US high-tech companies (English-Lueck, 2000: 760). Hence, in a sense, although the work culture is imposed centrally through corporate-wide policies and practices, it has causal efficacy at a local

level in terms of producing agency insofar given that the implicit demands of working in the cluster are clear among respondents.

The salience of this section for an analysis of work intensification is twofold. On the one hand, the hard work culture demonstrates how a baseline acceptability of work effort is present in the cluster anyway and, as such, to report work intensification as a phenomenon that occurs in itself requires making such a distinction. On the other hand, the durability of the work effort-mobility bargain and stickiness evidences how in spite of a potential frustration of options due to the high work effort required and potential job insecurity, meaningful agency was still derived by labour (Coe and Lier, 2011). Various material and symbolic factors account for this, but perhaps the most prominent is the fact of how roles were generally well paid and the cluster permitted certain job search efficiencies.

Yet, of course, this labour agency only applies as far as the period under discussion extends. The resources and strategies that firms have mobilised within the context of the geographic cluster since have produced new worker subjectivities (ibid.). As such, labour agency has been 're-embedded' over time (ibid.). Hence, to bring us to the current time, it is important to explore the subjectivities of respondents who joined the cluster later, in addition to change among incumbents.

4.4 Summary

This chapter's aim was to 'set the scene' for analysis through identifying contextual factors that might 'constrain choice and guide action(s)' of employees (Barley and Kunda, 2004: 35). What emerged as significant was the role that the local labour market plays in the social world of the geographic cluster. On the one hand, the very existence of the cluster appears to have been contingent upon the emergence of a local labour market. Such a finding is of importance because it sheds light on the potential logic for agglomeration, which appears less to do with largely US-based IT firms capturing pre-existing resources than fixing resources (labour) in a particular place to pursue internationalisation strategies. On the other hand, the working conditions afforded to employees - as a result of a fluid local labour market - explained the psychological attachment many respondents had toward

employment there. The sense of good pay and good working conditions, occupational prestige and sociability came into view as a 'loose but identifiable story', explaining why the local labour market expanded and the cluster grew (Barley and Kunda, 2004: 35).

Having set the scene, section 4.3 describes the real first stress test to labour's 'stickiness' to the cluster (Markusen, 1996). The conditions of work began to wane for many respondents, however, stickiness pervaded due to the fact that the local labour market was buoyant. Although work became generally less secure, the concertation of material job opportunities in the cluster provided a material and symbolic safety said respondents (Fallick, Fleischmann and Rebitzer, 2006; Brenner, 2003). Hence, what emerged was a sense of 'flexicurity' in which restructuring and job insecurity became a part of working life, but job opportunities remained plentiful (Storper and Scott, 1989; Peck, 1992). To a lesser extent, the first signs of endemic pressure and strain in the workplace began to emerge.

Chapter 5 – Findings – part II

The previous chapter discussed the role of the local labour market in the social world of the geographic cluster and described the nature of interviewees' attachments to it, before describing the first wave of organisational structuring there. This chapter details how following waves of restructuring, redundancies and outsourcing led to the creation of a fearful labour market, excessive working hours, burnout and work pressures associated with work intensification. The chapter sits in contrast to chapter 4, insofar as it brings into sharper focus the degradation of working conditions in the geographic cluster. The chapter details the shift from what one respondent labels as the 'good times' (see pages 108-109) in chapter 4 to the excessive working hours and fearful work situation respondents find themselves in and examines to what extent this has eroded their attachment to the cluster.

5.1 Cognitive and affective job insecurities and the work effort-mobility bargain

In the early to mid-2000s, following the dot com crash, global enterprise IT markets underwent a number of significant changes, bringing about increased job insecurity according to interviewees. On the one hand, technology change saw the growing commoditisation of erstwhile profitable hardware products, which badly affected so-called 'legacy vendors', or in other words, high-tech firms that concentrate mainly on hardware products and services (Ranganathan and Jouppi, 2005). In addition, the increased availability of high-speed broadband across key markets in Europe and the Middle East, meant that customers were increasingly able to implement 'virtualised' IT infrastructures that were cheaper to run and required less physical hardware. Hence, whereas the profits of hardware firms generally suffered, software and services firms generally fared much better.

As a result of this, a number of multinational hardware firms with operations located in the geographic cluster began to embark on restructuring programs in order to reduce their costs in light of falling profits. Respondents working in business units such as marketing, HR and finance were particularly affected by the changes, and reported that they experienced increased

cognitive and affective job insecurity during this time due to the ubiquity of redundancy programmes.

Moreover, the industry began to consolidate, and the more resilient firms took over failing competitors (Lüthje, Hürtgen and Pawlicki, 2013: 33-68). As a means to eradicating duplication of human resources, it is typical for firms to try and reduce their headcount, and it was an interesting semantic feature of interviews that respondents who had worked for a firm at the time it was acquired by a competitor referred to themselves and their colleagues as 'legacy' staff. This stemmed from the assumption that post-acquisition, staff from the acquired firm generally fared less well in terms of their long-term futures. Affective job insecurities were heightened due to the visibility of redundancy among fellow 'legacy' colleagues or if they were 'benched', which meant that they were no longer part of a specific team or had a particular role. Given that these factors operated when redundancies were perceived to be commonplace, there is reason to suggest that cognitive insecurity acted as a determinant of affective insecurity (Anderson and Pontusson, 2007).

Respondents reported that these and other developments at the time had a lasting effect on their perception of affective job insecurity in the cluster ongoing. The issue was illustrated by a number of accounts that described the failure of a prominent local telecoms firm. Four of the respondents interviewed were working there at the time of its collapse. For example, Debra commented:

'It happened overnight. They'd over done it. The share prices they said were *this much*, but they weren't and it collapsed the whole thing. It was bloody awful (emphasis in the original). Do you know what pissed me off? I woke up in the morning and heard on Radio 4 that my company had gone bust and we weren't told it was a nightmare. So, I came into work and said 'what's going on? What's going on?'

She continued:

'A guy I worked with was saying 'it's fine, it's fine', and he ended up being one of the first to go – made redundant.' Into the future she said: 'I constantly rank myself where I'd be on the list of people to go...you don't know when it might happen.'

Similarly, Katherine described how, 'at the time I don't suppose you do know what's going to happen', which later on she said made her 'weary' regarding her job security.

Broader examples of this show the feeling to be common among respondents. Amy for example stated:

'I was told that I was under consultation and then suddenly - it's very rare you know it's coming. You know there's obviously rumours and speculation there might be layoffs. Literally a manager in the office one day called us in one by one. If there were ten people in a team nine would be told they're going.'

Respondents identified this period as launching a 'climate of fear' around redundancy. As mentioned, this was partly due to a lack of transparency around the process and the health of firms, but also because respondents said they were typically out of work for longer periods.

Accordingly, then, the Thames Valley cluster became distinguished by structural job insecurity, insofar as there were fewer jobs to go around due to frequent downsizing and restructuring. Furthermore, there was a demand for high work effort and a strong work orientation among respondents. While in theory this might put strain on the work effort-mobility bargain at the level of firm due to decreased job quality, and moreover, at the cluster level given the perception of lesser alternative material options. Respondents reported that they remained in the cluster as most firms had a 'core' (full-time and permanent) workforce staffing model in place, meaning that the formal employment relationship was strong, and, material and symbolic compensation remained relatively high to other sectors. Hence, the fact that 'stickiness' pervaded locally, actively began to undermine labour's interest's

due to these factors, was broadly down to securing consent through a system of high rewards (Burawoy and Wright, 1999).

5.2 Organisational restructuring after the financial crisis

The high-tech sector is no stranger to periodic crises (e.g. 1999-2001 bursting of the dot-com bubble). However, the recent global economic crisis has hit the sector particularly hard, due to its strong reliance upon the financial community as a customer (Sassen, 2005) and as a key source of investment (Audretsch and Lehmann, 2004). As large financial institutions collapsed, tech firms lost some of their most lucrative contacts and accounts, in addition to having to scale back investment in research and development activities as capital and credit markets tightened (Chor and Manova, 2012). Austerity policies in Europe, prompted by the failings of banks, also meant that public sector spending on ICT fell (National Audit Office, 2013), with the government making it a priority to shift away from using larger suppliers (Cabinet Office, 2012).

The response of many large high-tech firms, as during the dot-com bubble (Benner, 2002: 49-75), was to embark upon wholesale global restructuring programs, involving the streamlining of product portfolios and the culling of global workforces. The regionalisation of high-tech MNCs into SI clusters has meant that certain regions, particularly in higher wage economies, such as countries the EU and the US were particularly badly affected. For example, by the end of 2009 job losses in Silicon Valley totalled around 90,000 (Joint Venture, 2010: 17).

As a result of this more respondents were on short-term contracts at the time of interview than they were in the early and mid-2000s (n=9). In addition, most of the respondents who had joined the cluster within the last five years did so as temporary staff or contractors, which was less common previously. In itself, this reflects the general precarisation of white-collar work that affects the numerous industries and occupational groups around the world (Kalleberg, 2009). At a local level, however, this could also be related to the changing nature of sales and marketing work in the sector (Darr, 2006).

Part of the reason for this transformation has been a greater focus on measurement and 'trackable ROI' (return on investment) among firms enabled by technology. Oliver started working for SoftCo, a longstanding firm in the cluster, shortly after graduating university in 2011 and described how firms are increasingly putting emphasis on digital marketing over 'offline marketing' due to its 'trackability'. He comments:

'Because of how cost-efficient and how high the ROI is relative to media spend, PR, that sort of stuff companies are investing more and more in digital [marketing].'

He continued:

'They know they need to find people with the right amount of knowledge in digital as opposed to people who have been working in marketing for the company for twenty years and say 'oh, go and work out the web thing'. I'm in a team of contractors managed by an FTE who knows how to do company and stuff and we're all experts in our area, so it's a good way to do it.'

The transformations that Oliver describes, then, relate to how more and more of the companies' sales and marketing activities are now carried out over the internet, and as such firms have a need to buy in external expertise.

An interesting feature of firms' approach to staffing digital marketing functions is how they appear to draw almost exclusively on the expertise of so-called 'digital natives':

'There's an age gap at the moment where companies have old fashioned marketing people trying to manage digital without fully knowing how it works, here lots of people are under 40 (years of age).'

Moreover, how far this appears to have penetrated throughout the company:

‘For the last two years there’s been an on-site contract manager from the agency and I’m supplied to here through them. All PAYE, invoicing and that stuff is paid through the agency.’

Oliver’s suggestion that the workforce at SoftCo was gradually getting younger and that contracting arrangements are more and more common is interesting for three reasons. First, it is interesting to note how the cluster would no longer conform to the ‘escalator’ model, which was the case previously. Second, and from a people management perspective, it would appear that the latter is being seized upon by firms as an opportunity to create a more flexible workforce into the future. The establishment of new business units and specialist skills concentrations offers a clear opportunity for implementing and expanding internal contractor teams, which are overseen by an experienced company manager as a means to enhancing flexibility. Third and finally, it reflects not only the broader precarisation of white-collar work, but also, I would suggest, the deepening governmentality of precarious work among the population of large (Kalleberg, 2009).

While the recruitment of younger staff may or may not be related to their relative skills in the labour market, when compared to more senior marketing professionals. Generally, there are a number of cost savings associated with recruiting younger staff (Thom and Blum, 1998). Nevertheless, interviews with respondents at other firms confirmed a similar emphasis on hiring younger staff. Lisa a HR Business Partner for BPOCo echoed the sentiments of other hiring managers in her interview in stressing the need for ‘young blood’ and ‘fresh ideas’. In a subsequent interview, Lisa’s colleague Ellen, HR Officer, suggested how effects of this had left her feeling slightly alienated in terms of the social aspects of work: ‘We don’t go out as much...it’s because of the demographics, everyone is a different age to [now].’

Assessing these developments in relation to broader socioeconomic transformations, Lucy, a HR Business Partner at ITProjectCo who graduated in 2011, described how the prevalence of youth unemployment made her anxious to secure a job. Furthermore, that she felt that she occupied a weak position in the labour market, in addition to a weak bargaining position to

negotiate salary and terms: 'Ultimately I was prepared to go anywhere for a job. Especially when I graduated you couldn't be picky.'

Although a scarcity of job opportunities open to university graduates has been a problem for many years in the UK, hiring freezes in the aftermath of the financial crisis made the problem worse (Faggian and McCann, 2009). While the material options have been reduced, putting a downward pressure on starting salaries that graduates could expect, the financial crisis also acted to limit symbolic options when at work (Jackson and Wilton, 2016).

For example, Robert, a Sales Executive at WiFiCo, who moved to the UK from France shortly after he graduated stated: 'There is pressure, you have to work hard.' He continued: 'Security? Security? Security in England, no! There is no security. But I know from LinkedIn there is more (flexicurity) here than in France.' Whereas Oliver described the precarity of his situation: '[we] contractors work harder...you don't have the job security, of course, but in a couple of years there might be a full-time job available, if you put the hours in.' Hence, the feeling of affective job insecurity was very much present among the respondents and it was tied in symbolic terms to voluntary extra work effort and a strong work orientation at the individual level. Furthermore, it was reflected in the attitudes and expectations that recruiting managers held about younger Respondents, as Nick put it: 'we get them in young and hungry'

In comparison to previous periods in the clusters development, the local labour market now conforms much more to a 'flexicurity' type mode of social regulation (Storper and Scott, 1989; Peck, 1992). For example, Oliver suggested that in his experience there is a degree of triangulation between job insecurity and job opportunities within the recruitment process. He stated: 'Experiences are more valued than experience.' Less optimistically, Mark, Marketing Officer, SecurityCo said that he felt employers would 'drop you whenever they want', but nevertheless felt that his long-term career was in the cluster. Mark's evaluation was somewhat similar to Damien's, a Junior Technical Support Officer, who had experienced multiple redundancies. He remarked that: 'IT jobs are easy to get but they aren't so easy to keep'.

This demonstrates that affective job insecurities - as well as being structurally and cognitively induced, as a result of factors such as non-

standard employment contracts – have become an accepted part of the psychological contract (King, 2000; Smithson and Lewis, 2000). Generally speaking, of course, employability discourses have put the ‘onus’ on individuals to take responsibility for their careers by continually improving their knowledge and skillsets and to become more flexible and adaptable, as a way of ‘strengthening their position’ in the labour market (McQuaid and Lindsay, 2005: 201). As a result, employer’s obligations have lessened and the durability of the employment relationship has weakened, in turn, heightening career uncertainty, and as such respondents said they accept insecure or uncertain careers as a given. Hence, the Thames Valley cluster in relation could be said to merely be shoring a pervasive, discursive form of political and economic domination, which already plays on these fears. At the level of the cluster specifically, in view of the institutionalised organisational demand and requirement for high intensity work and a strong work orientation, respondents identified a causal relation between affective job insecurities and demonstrations of organisational commitment, as a proxy of these factors.

The most common and seemingly ubiquitous way of expressing commitment to senior managers was presenteeism. For example, Craig Business Development Manager, Others said:

‘I very rarely take lunch. I feel incredibly guilty if I leave at 5.30pm. No one wants to be the first one to leave.’

(Craig, Business Development Manager, Others)

Whereas Tim, a Sales Manager at WiFiCo, who had previously worked as personal trainer before he began working in the cluster, said how he wanted to show that he was ‘always on’ even when away from the office:

‘Checking my emails is the first thing I do when I wake up...I have phone calls on the way home from work in the car, things like that [are common]...my manager called me at 11pm last night.’

Continuing: 'At the end of the day I'm here to sell and if I don't hit my targets I'm out the door.'

The requirement of a strong work orientation, as has been established, stems from the 'good times' when firms became increasingly competitive. This entailed high material rewards for respondents willing to put in the work effort, or in other words, work intensification was in many respects positive. However, as Craig and Tim's statements demonstrate, there is an increasing interrelationship between affective job insecurity and consent to work intensification increases. Notwithstanding the fact that Craig and Tim were in the early stages of their career, and as a result are more likely to be required to adopt flexible orientations in order to manage their careers effectively (Jackson and Wilton, 2016: 7-8). Angela, Marketing Manager, NetworkCo, who had worked in the cluster since 1995, identified similar connections and suggested that the increased measurement and quantification of sales and marketing work had helped crystallise this firms. As she put it: '[You] live or die by the number...[that is what] job security is based on at the end of the day.' In other words, the implementation of expanded and more fastidious performance management practices and systems in firms amid local labour market uncertainty, meant that respondents suffered affective job insecurities which had motivated them to overcompensate in terms of work effort.

As regards the production of meaningful agency under these circumstances. While many of the respondents who joined the cluster in the late 2000s had restricted material and symbolic options because of the recession, many also identified how they were attracted to working in the high-tech industry for symbolic reasons. At one end of a spectrum, respondents such as Oliver described how the cultural 'image work' that high-tech companies such as Apple had propagated over the course of the last decade or so had created some of the 'the world's most recognised brands' to work for (Alvesson, 2001). At the other end, respondents such as Mark and Paul, Sales Manager, ITProjectCo suggested that they strongly identified with the ethical and moral purpose of technological development (Giannella, 2015). For both of these reasons the institutionalised requirement of high work effort and job insecurity - in addition to the local labour market structure - were not detrimental to worker consent at a firm level.

The work effort-mobility bargain was also viewed as favourable and again, the geographic cluster proved to be an interesting dimension of the interviews in this regard. All but two of the respondents were daily commuters or had permanently migrated to the region in order to work there. While many of the respondents in question were of course younger (21-26 years of age), the cluster proved to be a large 'travel to work' or 'functional labour market' area in this regard (Papps and Newell, 2002; Mitchell and Watts, 2010; Morrison and Clark, 2011). Whereas the first wave of inter-regional migration during the 1980s, 1990s and 2000s was driven by local demand for experienced hires, nowadays there is a supply-side push that is driven by the cognitive job insecurities that stem from uneven geographies of local and national job creation (Fielding, 1992). As Lucy put it 'there's not many options up north...I wouldn't have moved here for a mediocre job.' Though there is an element of inter-urban competition for 'talent' engendered in these statements (Peck and Tickell, 2002), in reputational terms, given how the cluster's local labour market is viewed offering a particular type of job opportunity that is unrivalled on a national scale, it assumes a symbolic status that demonstrates it to be a socially real entity as regards labour power stickiness (Markusen, 1996).

For incumbents, the reasons why stickiness pervades amid declining job quality are of course slightly different. The social regulation of work and employment is such that changing attitudes and expectations have re-embedded agency (Hudson, 2002a). That is to say that the institutionalisation of hard work and job insecurity have interacted with the local labour market structure so that the worker's orientation to the work effort-mobility bargain have changed. Of course, personal factors come into it: 'I wouldn't be able to take a job anywhere else now because of the kids.' (Debra, Finance Officer, TelCo). Moreover, the recruitment process is such that the options of Respondents are locked into their career path to an extent. However, the paradigmatic industrial and organisational change of this period, which some referred to colloquially as the 'tech crunch' had normalised workplace schemas connecting work effort and job insecurity.

In sum, two main local labour market segments are presented, which differ by virtue of their conditions for meaningful agency. The

rationalisation of the work effort-mobility bargain on this basis has led to 'spatial entrapment' allowing for organisational restructuring, job insecurities and work intensification in recent years (Hanson and Pratt, 1988).

5.3 Organisational restructuring, job insecurities and work intensification at the empirical level

In light of these transformations in the global high-tech industry after the financial crisis, various instances of organisational restructuring have led to 'imposed' work intensification among firms in the cluster (Kelliher and Anderson, 2010: 92-93). That is to say that the augmentation of the labour process, by virtue of organisational restructuring, has led to work intensification, which stems from functional changes in firms' work effort requirements (Smith and Thompson, 1998). For example, offshoring and outsourcing have led to 'imposed' work intensification increases:

'We've recently taken on 20-30 people in India who report directly to me...it's bizarre because I've never met them...it makes getting stuff done harder without face-to-face contact, but they all speak perfect English, so that's not a problem.'

(Roger, Sales Director, Others)

Furthermore, as large financial institutions collapsed during the crisis, tech firms lost some of their most lucrative customers. Moreover, government austerity policies in Europe, prompted by the failings of said banks, also meant that public sector spending on ICT fell sharply. A combination of these factors meant that firms in the cluster were hit particularly hard at a local level. Gary, Marketing Manager, SecurityCo, summed up these changes: 'there's been a change in buying patterns...people aren't spending money.'

Sales revenue at WiFiCo, for example, was particularly badly affected by austerity, given how a large percentage of their yearly revenues are drawn from the public sector. In order to strengthen their market position, they merged with a fellow US competitor who also had an office located in the

Thames Valley cluster. After the merger was completed, the second office location was closed and sales teams began to be consolidated:

'We had an office in Newbury, for the first three months of the merger we were still based in the Newbury office, and it all started when the country manager of WiFi Company X lost out to the country manager of WiFi Company Y. As soon as the country manager of WiFi Company X left we were introduced to the new manager one-by-one and we became based out of his office. Some people lost out but you know you get used to people, they're all doing the same thing as you are.'

When asked if this had led to work intensification, Darren conceded that on a personal level it had. Because WiFi Company Y's operating model had effectively 'won out' over WiFi Company X's, he had to adapt to a higher pressure working environment, something which he described by contrasting the level of job security offered by the two firms:

'The guy with the shortest tenure had been there about 6 years, I came here and the guy with longest tenure is 3 years - it just shows you what it's like.'

In addition to the downsizing of sales teams post-merger, Darren described how the firm used it as an opportunity to reassign responsibilities. Whereas Darren used to be an area manager selling to firms in any industry located across the South-East region, he now became responsible for the entertainment and local government sectors across the UK. Apart from the fact that smaller teams meant more travelling:

'In a week, I could be anywhere...the other day I had a return trip in the car to Sunderland, I left at three in the morning, went there then drove back, 10 hours in total. I was knackered.'

He said that despite being more focused in terms of market segments, workloads had increased by 'stealth' as a result of the low penetration the firm had in the entertainment sector he was now responsible for, commenting that: 'we don't do enough in the UK, it's very much up and coming...the pressure is unbelievable.'

Apart from the fact of the merger and changing sales priorities, Darren was asked to describe the job security associated with high-tech sales pre-and-post the financial crisis. Having been made redundant on a number of previous occasions in the 2000s he carried some of the affective anxieties inspired by the experience of job loss (and generalised job insecurity) into his daily routine:

'My stress is caused by the workload and fear of not meeting targets...but it helps you grow...I will work a stupid number of hours to get the workload down knowing that I will feel better in myself if I can get that down.'

When asked if how this has been affected by the financial crisis he said:

'Would I go to my boss and say that I just can't cope? No, I wouldn't...In the past I could've gone to somebody...I prefer to be under the stress than admit defeat and say I can't cope with it because everyone's in the same position.'

Nevertheless, he was unperturbed from his career path in sales in the cluster, and of the work effort-mobility bargain he stated: 'If I'm made redundant anywhere I'd prefer to be made redundant here.'

In addition to the fall in sales revenue from the public sector, a number of firms sold extensively to banks and financial institutions in the City of London. As said firms began to experience difficulties, their IT spend dropped significantly and firms in the cluster lost some of their most lucrative contacts and accounts. At SecurityCo, Mark described how in the wake of the financial crisis senior management in the US 'realised they were haemorrhaging money' and became 'desperate to find new ways of marketing.' in order to

compensate for falling revenues. He continued to describe how this led to the company implementing various attempts at organisational restructuring:

'There was always something new, the amount of times their marketing strategy changed was mind blowing...first it was 'team individuality', then teamwork, then 'individuals', then they changed the region, they changed the finance structure, then the modelling structure, then they had a flat management scheme.'

Mark said that this led to role expansion for him and colleagues:

'You're constantly having to fight with the changes...the changes come and its: 'you've got act like this, talk like this, sell like this 'you're always battling the changes...it was the same shit day in day out, people putting more and more shit on you all the time.'

He continued to suggest that as a result of the increased responsibilities, peer surveillance had also heightened, as colleagues began to monitor each other's work effort, describing one such incident:

'Everyone seemed to have something to say about my work...if you leave at 5.30pm people are like 'haven't you got work to do?' So, I would turn around and say, 'I couldn't give a shit, just because you give me too much work to do that's not my problem.'

Mark was made redundant shortly after and said that while 'some people could hack' the increased performance scrutiny and workloads but he felt that he could not.

Explaining why he was laid off after a period of intensive organisational restructuring, Mark described how the UK was becoming less and less lucrative to SecurityCo and staffing levels became untenable:

'South Africa is a huge market, massive growth at the moment, on the sales calls and stuff, we used to have 'blitz days', where each

area would try and sell the most. It always struck me as a bit difficult because Turkey literally makes like \$2m a day, South Africa makes \$3-4m a day, England you'd be lucky to make five or six grand it just the nature of thing and on the sales calls and stuff Turkey were 'like 'South Africa; England we're gonna kick your ass!' And all the English guys were like 'you probably are, actually'.

To this end he described how salespeople that he knew appeared to experience affective job insecurities:

'They'd come in at 8am and you'd see them still in the office at 8pm, because they're all shitting themselves.'

Amy also worked at SecurityCo during the same period as Mark, and described how senior management communicated the rationale of restructuring and the layoffs.

'People managers would get a directive and they would have to get their team together and give them the corporate message. The communications focus would always be on different businesses. The strategy was always to focus on a higher growth area of the business. Suddenly they will say we weren't putting enough effort on the higher margin, higher volume product. There was always a *reason* (emphasis in the original).'

Despite how well firms appeared to manage the flow of information to employees and the sympathies that respondents said they had with them, Amy later decided to resign, which was the first time she had done so in her career. The reason that she gave was related to the increased pressure associated with wide scale layoffs, stating that the company had 'spiralled' and that she 'was under constant pressure, with no appreciation at the end of it.' Ultimately, she realised that she could not continue when she: 'couldn't get out of bed in a morning, it was then I knew I had a problem.'

Despite Amy's experience, only two other respondents reported that they resigned or took voluntary redundancy since the financial crisis. Most said that they were thankful for 'surviving' multiple rounds of lay-offs, and in some cases, they were actually supportive of senior management's decisions, as Gary put it 'companies are fighting to keep the lights switched on.' However, most respondents were also acutely aware of the consequences of surviving redundancy. As Clive discussed, what with fewer human, financial and technical resources the onus was on employees, in a phrase, to compensate and pick up the slack: 'there's been five or six rounds of redundancy...not once has [my team] been considered...the problem we have now is that we have a bench of zero.'

Any abasement in the factors of production, such as human resources due to delayering for example, by necessity brings transformation to the core of the labour process vis-à-vis required application and intensity of work effort. Such an issue was reflected at a team, group and individual level:

'As a manager, I was under pressure to produce more with less people [in my team] and to scrutinise everything they did more closely.'

(Katherine, Business Development Manager, GraphicsCo)

'Everyone [at this organisation became] "head down I just want to keep my job."'

(Debra, Finance Officer, TelCo)

'I had a lot of extra stuff on my plate...I was working until 2 in the morning...because we were under resourced.'

(Gary, Marketing Manager, SecurityCo)

In response, most respondents said that they tried to cope with heavy workloads the best they could, but that also meant that the boundaries

between work and social life were increasingly blurry (Epstein and Kalleberg, 2001). However, perhaps the most ubiquitous set of organisational behaviours indicating work intensification stemmed from the cultural and symbolic weight that ostensibly carried among firms (Barley, Meyerson and Grodal, 2011). The literal and metaphorical state of being 'always on' was a prerequisite of protecting job security, which in turn led to work intensification:

'I come in early and get my emails out of the way...I hate having emails sat in my inbox...you have to be organised...I hate saying no.'

(Tina, Marketing Manager, GraphicsCo)

'I'm answerable to the sales pipeline number, which is why I looked stressed and grey...my day is consumed [by meetings]...a lot of my *actual* work gets done in the evening rightly or wrongly.'

(Angela, Marketing Manager, NetworkCo)

'Checking my emails is the first thing I do when I wake up...I have phone calls on the way home from work in the car, things like that [are common]...my manager called me at 11pm last night.'

(Tim, Sales Manager, WiFiCo)

The quotes above are broadly characteristic of the worry that many respondents said they had. They said they felt constantly at risk of job loss if they did not comply with ever increasing performance demands. As Debra put it: 'I always wonder if I'm doing enough...I constantly rank myself as to where I'd be on the list of people to go.' This was followed by the statement: 'I probably deal with far more work now because I know how to do it quicker'. In this statement Debra demonstrates not only the link between job insecurities and consent to work intensification, but also how the social reproduction of

labour power has an institutionalised a strong work orientation among respondents.

Reflecting the problematic effects that this had on a personal level, a number of respondents described how their continued decision to engage in over work had caused problem for their health and their relationships:

‘Two years ago, I had a nervous breakdown completely. I was sent home for four weeks and the company doctor came out to see me and said, “on your timesheet it looks as though you’re clocking about 70 odd hours a week, we’ve checked and you’re actually averaging more than 95 hours week in, week out.”’

(Clive, IT Consultant, ITProjectCo)

‘Me and my wife have very different views on [company] she begrudges it because of the time that has been sucked out of our lives.’

(Roger, Sales Director, Others)

In light of these negative experiences and some of the very significant sacrifices that some of the respondents have had to make during their careers, it is worth exploring the nature of compliance to work intensification increases in more detail. Without exception compliance to work intensification was as a result of pervasive feeling of (cognitive and affective) job insecurity prevailed due to restructuring (Anderson and Pontusson, 2007). A number of respondents identified how there are a number of visible reminders of the layoffs that played on their fears of job insecurity. Offices vacated by high-tech firms, which downsized, outsourced or eradicated their workforce in the cluster entirely served as a visual reminder of respondents’ affective insecurity:

‘Offices are totally empty because no one can afford to move into them, it’s just dead. It’s eerie at night...it makes you wonder if it’s catching.’

(Mark, Marketing Officer, SecurityCo)

'If you drive down the M4 today its dead compared to how it used to be, it's because nobody's around...you have to wonder where all the companies have gone off to.'

(James, IT Consultant, ITProjectCo)

On the other hand, respondents were also worried by the increased visibility of empty desks and vacant spaces in their workplaces. Due to large-scale layoffs, TelCo had closed half of the building according to Debra. It was a similar story ITProjectCo and HardwareCo respondents said.

While the environmental visibility of cost cutting measures did serve as a worrying reminder to respondents, they also coincided with a greater push by management on homeworking in order to reduce facilities costs:

'Over the past 4 years I've worked at home more and more...the organisation gets a longer working day from people working at home, so they encourage it.'

(Sarah, Project Manager, ITProjectCo)

While this was beneficial in material and symbolic terms, given that respondents were able to forgo the stress of the daily commute etc. Again, working from home on Fridays was seen as particularly advantageous: 'If you've been slogging around the South East on motorways all week, why come in on a Friday?'

For some, working at home merely enabled work tasks to be completed quicker due to fewer of the distractions associated with working in an office environment, however, this was also acknowledged as sometimes leading to work intensification (Kelliher and Anderson, 2010). Adam and Clive said respectively:

'7.30am the family leave the house so I start work then and just nail what I've got to do in the short-term...I usually fade out about 4.30pm, but I still keep nudging off emails until about 7pm.'

'Because all you need to do in a morning is throw on a pair of jeans, I can easily sit and work at the dining table without having a drink or something to eat all day.'

Greater emphasis on home working marries with Kelliher and Anderson's (2010) research, which found that as a set of practices it can lead to forms of work intensification. However, among firms in the Thames Valley cluster, home-working was reflective of a broader culture change in which workplaces had become more individualistic and there was closer scrutiny of individual performance. How this culture change has manifested in practice in relation to job insecurities and work intensification was summed up by Debra:

'The fun's gone out of it...it's got far more serious than it used to be...in team meetings everybody is like look at me, look at me, and what I've done...everybody's worried.'

A general sense of being a lone individual in the workplace, and/or being unwanted by employers, pervaded respondent's interviews as a result of a lack of 'passive face time' (Elsbach, Cable and Sherman, 2010). For example, Andrew said: 'When you work remotely, you're on your own.' Before describing how when he worked on site in the Reading office, he: '[doesn't] feel like an outsider but I *do* feel like a visitor...you feel like you're encroaching on some one's territory (emphasis in the original).'

Similarly, Victoria suggested that she adopted a strong work orientation with little recourse to building inter-personal relationships:

'At the end of the day you've got a job to do, you're not there to make friends. You get on, do it and go home and that's what my boss is looking for...it would be nice to make friends along the way but it doesn't really happen.'

Such a feeling was a catalyst to work intensification because a pervasive culture of workism emerged based on fear and mistrust, which workplace behaviours are characterised as being, as Debra put it 'head down I just want to keep my job.'

In some instances, individualism and mistrust led very directly to work intensification. Adam said: 'Sales guys promise things to customers that we can't possibly deliver, which means we have to work crazy hours.' What is clear from Adam's description is that a lack of communication and the absence of inter-personal accountability meant that bids were put forward for IT projects by salespeople to customers without the prior consultation of project managers, who are accountable for delivering them. A number of respondents described similar situations in which they othered sales personnel by labelling them as 'the sales guys', and criticised a lack of accountability and communication with them, and this was salient to analysis for two reasons.

First, this raised a point about how firms had become, as Katherine put it: 'all about sales'. This describes how due to falling sales revenue in the years since the financial crisis, the typical response of firms was to prioritise sales activities, in terms of discursive emphasis and resources, over and above support functions. While such a transformation was in keeping with the emergence of a more individualistic culture respondents said it was also a harbinger of it. Whereas the second aspect of Adam's statement, which was also highlighted by many other respondents, pointed to a general politicisation of recruitment and staffing process by firms, in the form of increased competition for resources and budgetary controls imposed from corporate headquarters (Kunda, 1992; English-Lueck, 2010; Lane, 2011). In turn, a lack of human resources as a result of layoffs and the various barriers in place that prevent the recruitment of new staff meant that imposed work intensification was inevitable, if respondents were to deliver the IT projects they had been assigned to.

An interesting example of just how centralised power and decision-making over resources were - and how adversely this affected cluster firms in terms of staffing - was raised by Neil, Director at BPOCo. As a relatively new

entrant to the high-tech sector due to the 'digitisation' of a previously labour-intensive business services market the organisation rebranded as a high-tech company. At the time Neil recounts being advised to: 'send a message to the stock market that we are a tech company now'. This was intended to prompt senior managers to consider making layoffs, however, the interviewee said that in reality it just created more work insofar as the managers were then mostly required to prepare reports and so on outlining a 'business case' justifying their staffing levels.

As is suggested from the experience of BPOCo, a post-crisis notion of what a high-tech firm should act like culturally among managers was derived from the feeling of stock market pressures. Given how this was reflected in decision-making and how a lack of communication played on fears, there were frequent rumours of redundancy, which were catalyst to job insecurities and work intensification. For example, Debra expressly said: 'Every day you're thinking '[am I] next?'...you just have to keep plugging away'

Of course, in these circumstances performance scrutiny heightens; however, respondents were not always made aware of the specific criteria that they were being judged upon, leading them to increase work effort across tasks indiscriminately. One example of this was particularly revealing in terms of demonstrating the broader logic behind many organisation's redundancy programs. An interviewee said of a former colleague: 'they produced excellent work but that was their problem. The managers decided that they didn't want excellent work, they wanted eighty percent good enough so that we could get more out of that person.' After the colleague in question was eventually dismissed, the interviewee felt gradually less secure in their role and became increasingly anxious to meet new performance demands. Andrew said:

'Before Christmas some of my colleagues were actually forced into redundancy, compulsory redundancy. After that I thought hmm, the writing was on the wall...it was almost like just decimation, they just went through [Respondents] and went 'that one, that one, that one' there was no rhyme or reason to it. Possible there was but I don't know...it was like being shown the door by your wife.'

Further to the restructuring in organisations, co-ordinated 'time-space reciprocities between production, work, consumption and labour reproduction' emerge and are embedded post redundancy (Jonas, 1996: 325). That is to say that the patterns of restructuring among cluster firms, as discussed above, engenders local conditions of reciprocity that alter the affective labour market position of respondents by, among other means, conditioning the buying and selling of labour power vis-à-vis expected work effort intensity and application (ibid.).

In the interview material, there were a number of examples illustrating these reciprocities to be highly immediate, particularly in the aftermath of redundancy. Steve, for example, said that he became increasingly exasperated by the job search because of the competition he faced in the local labour market, and, as a result, carried some of the affective anxieties inspired by the experience of job loss (and generalised job insecurity) into his daily routine once he had secured reemployment:

'I put in more hours than maybe [sic] is healthy to set the expectation that I'm a deliverer.'

It was a similar story for John (Business Development Manager, HardwareCo), albeit in somewhat different circumstances. Unlike Steve, John was an 'internal re-deployee', who upon being 'shunted' to a new role after his previous department was closed down, remarked that his approach to work became 'ultra-proactive.' Revealing that this was in order to, 'get [his] reputation set out', and that he has elected to 'stay [this] way', which, as he put it, sees him regularly working 'nutty' sixteen-hour days. Lamenting the fact, he continued: 'it's part of the reason why my wife left me...once you set the expectation [of managers and colleagues]...it's extremely hard to get out of.'

From these examples, it is clear that restructuring had altered respondents' subjective perceptions of cognitive and affective job insecurities that, in turn, lead to increased work effort intensity and application. Further corroborative examples of this included Amy, who having resigned from her previous job at firm that had 'spiralled' due to repeated restructuring, said that

she had to take seven months off because she felt 'burned' and so that she could handle 'the challenge' of workload and pressures that she knew she would experience upon reemployment. Again, while the particular work and employment outcomes are very different, a common thread is present here, whereby 'time-as-process' in terms of subjectivities are conditioned through restructuring, ultimately leading to work intensification (Coe and Lier, 2011: 33).

In isolation, of course, these examples do not explain how a collective 're-embedding' of labour agency occurs in respect of neutralising the mobility-effort bargain. For this reason, it is important to address how, on an ongoing basis, the subjectivities of *all* employees are altered, reflecting change in individual work schemas and organisations leading to work intensification. A number of corroborative examples were highlighted which suggested that respondents safeguarded their job security by signalling commitment through increasing work effort intensity and application.

Besides these examples of how work intensification is platform to further organisational and workplace changes. One particular example offered by Kevin (IT Consultant, SoftCo), were highly revealing in this regard, and are therefore worth quoting at length:

'The whole austerity drive actually changed the way I worked quite a lot...that's how I got this job...[in the interview process] they pushed very hard [to learn about this experience]...I had seven interviews...four face-to-face interviews, a presentation, two phone interviews and a day on site meeting... so yeah, quite extensive, quite intense, but I got there in the end...apparently its quite normal [now].'

In this interview extract, there is a clear acknowledgement of work intensification stemming from a change in attitudes due to organisational restructuring (culture change) prompted by the financial crisis. This individual internalisation of personal resilience to work intensification came up regularly in interviews. Sarah for example said: 'I get absolutely nothing, not even a pat on the back you do what you need to, it's a mind-set.' In these examples,

there is a strong element of internalisation and normalisation of workplace schema as a result of routinised work and employment practices. Whereas Angela put it: 'Insecurity comes into it, you feel under constant pressure, with no appreciation at the end of it...you get used to it.' Gary said: 'I can't say that [the increased workload] is bad because it develops you as an individual...what do you do? You have to survive.'

In the first part of Kevin's statement (page 137), it demonstrates how on a personal level maintaining high levels of work intensity is closely entwined with employability – in itself a source of work intensification (Green, 2011). Furthermore, on an ongoing basis, there is the suggestion that the recruitment practices of firms have changed insofar as evidencing compliance to work intensification, and in terms of the outcome setting the implicit terms of labour power deployment apropos of work intensification increases.

Reflecting this, respondents said they had regular meetings with recruitment consultants at well-known agencies. The obvious motivator here is that jobs in the cluster tend to be advertised through said agencies. However, some Respondents also viewed this as an 'insurance policy' of sorts. Developing personal relationships with a network of recruitment consultants was seen as useful in terms of being recommended for new vacancies and so on. Additionally, in light of the increasingly convoluted recruitment processes adopted by cluster firms (and by firms in general) recruitment consultants were seen as useful sources of interview coaching. Hence, the competitive nature of job seeking in the cluster is broadly suggestive of work intensification locally.

How these trends affected the work effort-mobility bargain was presented in a number of statements as regards its material and symbolic dimension (Smith, 2006). A large proportion of respondents were generally confident that the recent developments were a 'blip', and many felt that the material options offered by the cluster in the future would improve:

'I think Reading has got massive potential to grow and attract more and more high-tech firms simply because London is so expensive now.'

(James, IT Consultant, ITProjectCo)

Furthermore, the material benefits that respondents received remained largely undiminished. Amy suggested this a result of fewer human resources:

'I think you probably get paid more in relation but I think you have to work a damn lot harder for it, teams are a lot leaner than they used to be.'

HR Business Partner Lyn at BPOCo suggested a set of conditions, in describing her firm's recruitment strategies:

'In the old days, we used to recruit candidates at ABCD level [in terms of skills and competencies]...now we only recruit A's & B's.'

Moreover, a number of respondents based their personal assessments of the work effort-mobility bargain on a comparison to working in London. For example, James said: 'working in London you're effectively taking a 5 percent pay cut, which is fine if you're getting a 5 percent pay rise, but that's unlikely.'

Finally, in symbolic terms, where respondents were resigned to the fact that this represented a 'new normal' for the culture of working in high-tech. A factor demonstrated most explicitly by the growing acquiescence of respondents to organisational restructuring and redundancy programmes. It presents an interesting parallel with Kunda's (1992: 229) description of culture change in a high-tech organisation. Whereas in his description respondents mourned the death of 'tech culture' as it gave way to managerialism. The 'soft' managerialism that respondents experienced in previous was looked upon fondly in comparison to the transformations of recent years. In other words, even though labour agency had been re-embedded in the cluster, as far as the various orientations and dispositions that factor into consent are concerned. Respondents were well aware that corporate interests had won out over those of labour, generally speaking.

5.4 Summary

The empirical material covered in this chapter described the personal consequences of excessive working hours stemming from the fearful work situation in the geographic cluster. Having described the emergence of the cluster as a social world in chapter 4, this chapter outlined how organisational restructuring led to creeping job insecurities and work intensification. As discussed in section 2.1, work intensification is by its very nature an iterative process and one that is dependent on employees' ongoing assessments of the work effort-mobility bargain in order to come to fruition. The material presented was therefore historical in nature insofar as it sought to take account of the shifting working practices and employees responses to the over time. By way of a contrast, the responses of more senior employees and younger entrants into the labour market under changed circumstances arguably helped to underline this. Presented with these findings, attention now turns to assessing the role that the geographic cluster played in terms of structuring labour market choices and working conditions over the period covered.

Chapter 6 – Discussion

The empirical material described in chapters 4 and 5 covered three interrelated aspects of working life in the geographic cluster. First, in chapter 4, I described the significance of the local labour market to the emergence of the geographic cluster and its role in shaping the social organisation of consciousness. Second, in chapters 4 and 5, examples of downsizing and organisational restructuring and the job insecurities they produced were explored in relation to the transformation of consciousness among respondents. Finally, in chapter 5, respondent's rationalisation of, and methods for coping with, work intensification stemming from downsizing and organisational structuring was described. In this chapter, these aspects of working life in the geographic cluster will be discussed and evaluated in relation to the literature covered in chapter 2 and research questions in section 1.5.

The primary research aim of this thesis was to study work intensification in a novel context - specifically a 'meso-level' one i.e. the geographic cluster. As discussed in section 2.1, work intensification has, up until now, largely been explored at the macro-economic and micro-organisational levels. The purpose of this case study was to begin to explore work intensification in an appropriate context that - for want of a better word - sits between these two levels of social activity. Furthermore, it was my intention, as noted in section 2.3, to gather empirical material that is meaningful in terms of conceptual development. The empirical material presented in chapters 4 and 5 arguably fulfils these aims through a) exploring an empirically rich meso-level geographical context and b) presenting an exegesis that relates the contextually driven social organisation of consciousness to the process of work intensification. That being so, it also applied the conceptual framework developed in the literature review.

What this arguably contributes to the wider literature on work intensification – beyond the mere novelty of context – relates to Green's (2004) emphasis on the sources of work intensification. As established in section 2.1, Green (ibid.) conceives of the task of work intensification research as identifying sources – be they structures, practices or relational

mechanisms for example. The reason for this stems from the fact that work intensification is a generalised trend (ibid). In response, Green (ibid.) suggests that the identification and characterisation of work intensification related phenomenon is required to develop a clearer understanding of work intensification as a trend and process.

On the basis of the material presented in chapters 4 and 5, the geographic cluster could, on the face of it, be described in simple terms as a source of work intensification. For example, the case study provides evidence to suggest that the social organisation of consciousness within the given context, gives rise to orientations toward job insecurity that are the basis for working practices leading to work intensification. That is to say that the geographic cluster is a context that psychologically dampens resistance to work intensification due to the nature of the work effort mobility bargain (Smith, 2006). There is further evidence to suggest that co-located work organisations in the geographic cluster adopted shared or positioned practices that are antecedents of job insecurity or are a direct cause of work intensification (see chapter 5). Specifically, I am referring to the seemingly coordinated waves of organisational restructuring and downsizing that respondents described.

While both of these observations could be described as factors engendering work intensification in the given context, it would be too simplistic to describe the geographic cluster as a source of work intensification in and of itself on this basis alone (Green, 2004). Following a critical realist approach to the evaluation of research findings, it is necessary to evaluate the strength of these observations counterfactually (Archer, 1995). In other words, because said observations are an interpretation of the empirical material, it is necessary to critically evaluate them and reach an overarching research explanation. Furthermore, due to the emphasis on identifying the underlying 'source' of work intensification, it is important as part of this process to ascertain whether or not the geographic cluster is the real cause of the observations outlined i.e. the causal mechanism (O'Mahoney and Vincent, 2014).

6.1 Is the geographic cluster a source of work intensification?

According to Archer's (1995) explanatory framework, it is important at this juncture to retroduce the empirical findings into an overarching causal mechanism. In other words, having explored organisational restructuring, job insecurities and work intensification relationally and in context of the geographic cluster (Smith, 2006), the overarching research explanation needs to be tested (Fleetwood, 2005: 201). In other words, if the cluster is to be substantively identified as the underlying cause or source of work intensification on the basis of the action sequence described then it needs to be scrutinised, in order to test whether the explanation could still be reached if the cluster simply did not exist. If it is the case that the patterns of organisational restructuring, job insecurities and work intensification described, simply could not occur in the same way independently of context then the geographic cluster would be identified as the causal mechanism.

A key factor that suggests the geographic cluster is the causal mechanism behind work intensification is the capacity for inter-organisational co-ordination and social organisation of consciousness it appears to entail. The conditions for labour power agency in relative terms are constrained by the 'order' of the geographic cluster as a social formation (Schatzki, 2002: 18). That is to say that while the presence of work organisations in a geographic cluster has a bearing on local employment structures, a variety of contextual factors are also responsible (Schatzki, 2002: 18).

For instance, while localised discourses in the geographic cluster may be part of broader families of discourse and have an ordering effect (Valette and Culie, 2015). Inter-organisational relations within the site are the only obvious 'deep' causal mechanism by which the cluster might be ordered. This is because although actions within the social world can be influenced by external factors, a mesh of un/initiated relations is the only unique or main context sensitive feature of the geographic cluster that constitutes it as a site.

Order in the geographic cluster is based on the structuring of aggregate labour power via inter-organisational co-ordination (Ouchi, 1980). Inter-organisational co-ordination refers to the sum of actions that individual organisations take and by which commodified labour power is brought within

the site's sphere of influence. The first element of this sphere is locational and stems from cluster emergence, because within any locality or proximity to a locality there is labour with the capacity to work. Order in this sense, as in attracting labour power, is as a result of the location of a firm's (or a collection of firms) active demand for labour within a particular site (see section 4.1). This is co-ordination in the loosest possible sense because it can be applied to any individual site where aggregate labour demand arises.

The ordering of labour power beyond mere demand creation, however, is more sophisticated and refers to the deepening of a sphere of influence to realise a variety of shared economic imperatives. This form of co-ordination is a result of organisations' common institutional practices (such as drives to efficiency) and a shared dependency upon aggregate labour power, which is a conduit for achieving said practices (see pages 110-113).

The specific apparatus that allows for a variety of individual and shared imperatives to be achieved actively through co-ordination is the local labour market. Although individual actions taken by organisations and their members (such as the act of a manager firing an employee for example) are discrete events occurring largely irrespective of one another. The local labour market (which is present by virtue of local aggregate labour demand) is an institutional environment where organisations sharing similar ideas and practices engage in sets of actions governed by this logic (see page 111). Naturally, these actions are also supply and demand interactions because supply and demand can be affected through hiring and firing decisions. Local labour market actions, then, exhibit the semblance of co-ordination, insofar as the orientation of organisations, their members and commodified labour power can partly be determined through intermedial structures or events.

For example, interpersonal networks are an example of how information about local labour market actions might travel in the geographic cluster. The extent to which this is routinely possible and formatively causative of action in a world of imperfect information is highly questionable. Such a contestation is arguably particularly apt given that in global high-tech clusters actors of various kinds are generally considered 'neither friends nor strangers' (Lorenz, 1991). Hence, the most possible way in which the local labour market can act

as a form of inter-organisational co-ordination is through institutionalised rather than circumstantial patterns of action.

At one level this describes how shared institutional practices mean that there is a degree of interchangeability between labour power within the clusters sphere of influence (available aggregate supply). The adoption of broadly similar corporate cultures, structures and working practices etc. reduces on boarding risks and timescales for new employees, as well as enhancing the potential (transfactual) active purchasability of all labour power (subject to personal preferences, organisational standing, career objectives and so on). While a 'thick' local labour market may exist because of these factors, co-ordinated interactions within the local labour market results in the socialisation of expected employment outcomes as well (see pages 114-116).

In other words, if it is common for organisations to offer short-term contracts for example then employees will accept this as an employment outcome upon entering a firm and plan their next career move accordingly. Moreover, shared staffing practices among organisations determines sets of supply and demand structures that foster market conditions that are in theory broadly compatible with all organisations' shared requirements. However, such a state of affairs does not represent either an equilibrium between the interests of labour and organisations, nor does it mean that the market structure exists in a state of stasis.

With regard to the former, conflict exists between labour power and organisations because the terms of employment (contract length, role expectations etc.) are dictated under subordination. This is a feature of capitalist employment generally but it is enhanced in a high-tech cluster as a result of homogenising aggregate labour power, which reduces the bargaining power of employees. Of course, the issue of reduced bargaining power does not apply universally to all employees equally, and is dependent upon human relations governed by subjective/objective elements of competition, dependency and so on. Nevertheless, this asymmetry of bargaining power between labour and organisations lays the foundations for the emergence of future local labour market actions and institutional practices.

Active and future/nascent employment relationships under this model replicate the causal mechanism by which patterns of labour market action and new institutional practices can emerge. The specific interaction that this involves, it is argued, is a bargaining process. That is to say that the employment relationship (both active and nascent) is a structured antagonism that undergoes constant renegotiation through a process governed by an ongoing set of current circumstances. The local labour market is ascribed social causality in this regard because the co-ordinated regulation of supply and demand structures transforms the institutional basis of renegotiation. Equally, institutional processes of renegotiation have the potential, transfactually speaking, to alter the rationale of future patterns of co-ordinated action, thereby continuing the cycle. Regarding the dynamics of the employment relationship within this cycle, processes of reproduction are a central corollary.

At the level of the cluster, aggregate labour power is reproduced. In other words, supply/demand interactions at the point of labour purchase, such as standard terms of employment and salary level, are governed by demand/supply structures that have been subjected to market co-ordination. On an institutional level, work and employment practices may be reproduced in accordance with these interactions; insofar organisations' expectations of employees are in/formally codified as part of these market exchanges. However, the inverse is also true, whereby employees' institutional expectations of organisations are articulated in labour market interactions and subsequently through the emergence of practices in the workplace (see section 5.2). Such overlap in institutional practices and market co-ordination opens up the possibility (capacity) of bringing employees expectations into greater alignment with those of organisations through the labour process. That is to say that institutional work and employment practices combined with co-ordinated local labour market actions are an 'antecedent condition' of organisations harnessing control over the employment relationship (Vincent, 2008).

Hence, it is argued that the cluster provides a framework for inter-organisational market co-ordination that gradually weakens the relative power of labour compared to employees through ongoing restructuring (Leflaive,

1996). It is described in this way because organisations and employees collectively reproduce it as a social system through their situated actions in relation to one another. This means that the sovereignty of organisations is contingent upon the adherence of labour to particular patterns of facilitative action. Hence, there is an operational ambiguity that needs to be addressed, scilicet: why labour complies with a system that actively undermines it.

In terms of an explanation for this, I argue, in short, that 'strategic rationality' is at play (Burawoy and Wright, 1990: 252). That is to say that the logical appeal of compliance, or in other words the motivation for repeatedly exchanging one's labour in the cluster (despite the drawbacks) is based on an ongoing assessment of the perceived security of employment there (see section 5.1). However, because patterns of local labour market action normalise feelings of uncertainty, demonstrated most explicitly by the growing acquiescence of employees to relentless organisational restructuring and redundancy programs, the extent to which 'rationality' can operate is bounded by labour's growing tolerance for its subject position. Therefore, although compliance as a social action entails 'cost benefit/assessments' said assessments are continually being remade by local labour market action in context (ibid.). Arguably, in the Thames Valley this is reflected by how rationality has become bounded by labour's growing tolerance for its subject position through localised intensification, which over time is remade as organisations become functionally tougher places to work (Burawoy and Wright, 1990). In other words, as an inter-organisational elaboration that is situated in relation to the local labour market.

In accordance with these findings, it is concluded that a collective and relational inter-organisational power is generated in the geographic cluster, whereby forms of control are exercised over labour power. How, and, to what end control is sought and articulated in my view follows the labour process version of the capitalist employment, which has it that a 'control imperative' flows from the need to transform labour power transformation and extract surplus value (Thompson, 1990). When all is said and done, it is in the overriding interest of capitalist employers to pursue 'job performance' as a means to 'productivity, profit, and efficiency' (Walsh and Weber, 2002: 406 cited in Brewis and Wray-Bliss, 2008: 1259), which in the context of the

geographic cluster, ostensibly rests upon solving the double indeterminacy of labour.

6.2 Clusters as systems of work intensification

Against this background it would appear that the geographic cluster is nominally a 'source' of work intensification, insofar as the conditions of work there seem to encourage it as a process (Green, 2004). However, the label arguably does not do justice to the nexus of activities observable in said context that produce these effects. In light of this, I argue that 'site' or 'system' of work intensification would be a much more appropriate description (Schatzki, 2002).

In the case study, the conditions under which labour power is bought and sold is governed by respondents' orientations toward the work effort-mobility bargain (Smith, 2006). As far as employers are concerned, successful negotiation of this bargain is dependent upon the creation of cognitive and affective job insecurities (Fleetwood, 2005). To gain the upper hand and seize control of the employment relationship, employers effectively needed to convince employees that their options for resisting work intensification were limited. Organisational restructuring and downsizing were the means by which employers achieved this. Furthermore, over time, respondents appear to have become socialised into accepting insecure work and high pressure working environments. In this description, there is arguably no single identifiable 'source' of work intensification per se, rather organisational patterns of action and underlying logics that produce affects within the context.

Against this background, emphasis on finding the 'sources' of work intensification, as championed by Green (2004), is somewhat restrictive in terms of the scope of research. Emphasis on identifying the 'sources' of work intensification by extension conveys a misplaced focus on the root causes of the phenomenon, when in reality it may be usefully studied without this baggage. While in this study such an emphasis was useful in terms of identifying the main contribution to the literature, it arguably encourages and reinforces an already narrow set of orientations to exploring the phenomenon in the social world. As discussed in section 2.1, work intensification research has focussed largely on analysing particular working practices, production

processes, organisational case studies and cultures. Each of these could be described as reflecting the more concrete, formal elements of work organisation, downplaying the more abstract factors influencing work intensification, including geographic space.

By the same token, quantitative analyses of large scale data sets engender a similar sort of narrowness of scope. In this literature there is, as has been discussed (see chapter 2), a tendency to focus on particular workforce trends - emphasising their newness - when there is argument to suggest work intensification has always been a factor in wage labour (Thompson, 2010). The indeterminacy of labour is such that the ongoing rationalisation of the employment relationship leads to work intensification. Viewed in this way, work intensification does not have a defined source as such, rather it resides within a broad logic of capitalist organising (ibid.). Consequently, framing the research agenda in terms of identifying causes of work intensification arguably overlooks the more abstract elements of the social world that defy interpretation in this way.

Relating this back to the case study, it would be useful for future research to be able to settle on a heuristic that best describes the work intensification process as observed in the geographic cluster. In light of the complexities involved in interpreting the various nexus of activity overlap in a particular context and the underlying logics of capitalist organising, then system would perhaps be a more fitting description than source. Clusters have been shown to operate as inter-organisational power systems, insofar it facilitates inter-organisational 'coordination' (Ouchi, 1980), whereby authority over labour is harnessed. That being so, the geographic cluster might be accurately described as a system of power that produces work intensification, rather than a source per se.

Shifting the research emphasis away from identifying the sources of work intensification and toward a more holistic approach that takes account of more complex forms of the phenomenon would arguably be fruitful for the work intensification debate. Greater emphasis on the conditions of work intensification, rather than discrete forms of production for example, would add conceptual depth to the literature. Moreover, widening the scope of research would potentially broaden the types of research questions commonly

asked by researchers. At present these are relatively narrow as discussed in section 2.1

6.3 The intentionality of power and work intensification in geographic clusters

As with all scholarly work in the critical tradition this research has embodied an emancipatory intent, which has acted as a core guiding and axiological principle throughout. In view of this, the form and content of inquiry has been based on the principle of developing immanent critique, which I understand broadly as a methodological approach to social analysis that attempts to identify barriers to emancipatory change. In the widest possible sense, this has involved interrogating possessions, positions and articulations of power that help maintain capitalism through its economic-geographic remakings, apropos of a broadly humanist-Marxist ethical and political frame.

Working within this rubric, my specific focus has been the distortion and 'frustration' of human interests and preferences, which stem from instances of capitalist organising present within the Thames Valley high-tech cluster (Geuss, 1982: 16). The rationale for this project was guided partly by a quest to uncover the hidden social relations of production, which are engendered by discursive constructions of high-tech work and high-tech clusters. Furthermore, it was based on the closeness of the subject matter to my own workplace experiences. However, when assessed in relation to the principle of immanent critique, the broader significance of the research is best conceived in terms of its relation to historical processes of capitalist development under globalisation. Particularly, I argue, in relation to corporate governance and power (Cowling and Tomlinson, 2005; Coffey and Tomlinson, 2006).

Illustrating the point, the discussion has hitherto provided an exegesis of the productivity of corporate power, in other words what organisational restructuring, job insecurities and work intensification achieves for the general interests of high-tech employers, but not its 'intentionality' or the consequences for social critique (Krause and Kearney, 2006). The knowledge claim established by the research covers the antagonistic connection between the reproductive activities of firms and transformative capacities of labour

power in a particular context, and why, in short, these led to negative outcomes for employees (Joseph, 1998: 83). However, in order to develop it as a historically specific and substantive social critique, which concerns the geographical development of capitalism more broadly, the findings need to be assessed in relation to the 'intentionality' of the sociocultural interaction and the arrangement of work relations, and its ongoing consequences for corporate governance structures and the organisation of high-tech production and labour globally.

In this context, the intentionality of power describes the extent to which the findings presented can be said to represent first and foremost a systematic co-ordination of power within the morphogenetic cycle, and to what extent is it done on purpose and by whom. Clusters permit systematic organisational restructuring that is of a functional benefit to employers, in terms of the immediate cost reduction that results from a lower headcount/wage bill, and as a means to transforming the attitudes and expectations of employees (Hudson, 2002: 46). However, whether or not the action sequence that ultimately leads to work intensification represents a) an emergent process of social structuring or b) a strategic programme reflecting the will of corporate power is important to identify in order to develop a historically specific and substantive organisational critique of clustering (Hyman, 1987). Essentially what I am referring to here is the exercise of determining whether substantive critique is best framed as a criticism of ongoing states of organisational affairs, or, as a clear instrumentally rational and programmatic corporate decision-making.

The relation of this to the political consequences of power concerns a futurology of the ongoing organisation of the global high-tech industry in terms of its capacities and liabilities. In other words, as a set of relations and states of affairs, the various conceptions and positions of agency necessary for positive change to occur out of the liabilities of corporate power contained within the cluster as an example. Thematically speaking, then, the intentionality and political consequences of corporate power are interrelated, in terms of where all this might lead. Moreover, they are also a direct reflection of the extent to which critique can be said to be meaningful in its own terms and to the critical tradition in business, management and

organisation studies. To this end, each will be considered in tandem and discussed in a narrative fashion as the overall nature of substantive critique is formulated.

Whereas the 'internal logic of the labour process' described by Peck (1990 cited in Thompson, 2010: 12) refers to the control imperative incorporated by the internal employment relation. The external 'logic' of the labour process would, by extension, describe how 'broader conditions of competition' condition workplace relations in the conduct of said labour process (Thompson and Vincent, 2010: 11). The intentionality of power that links organisational restructuring, job insecurities and work intensification to the internal logic of the labour process is quite clear. There is constant pressure to revolutionise and reorganise production methods in order to generate surplus value, and work intensification increases the role and contribution of human input as a proxy to cheapening the costs of labour in material and symbolic senses (Thompson, 2010: 10). However, for the same level of intentionality to be applied to the interface with the external logic of labour process it would be contingent upon the extent that centralised elements of learning and strategising (Huzzard, 2004) can be said flow from management in the Thames Valley cluster (Bahrami and Evans, 1989).

Despite outward appearances suggesting that the cluster is a strategic apparatus for rationalising the GPN and GVCs and harnessing control over labour, considering how work and employment change has generally benefitted firms in the Thames Valley high-tech cluster. The interface between external and internal logic of the labour process under the 'bi-modal' model of corporate governance is such that the intentionality of power underlying managerial decision-making can flow horizontally, upwards from the local work regime, downwards from locational orientations, or indeed not all.

To address this aspect interpretively by situating the findings in relation to the relevant literatures, it is arguable that although globalisation might appear to be a compelling HRM 'tactic' for MNCs (Sharpe, 2001), there are equal difficulties in co-ordinating operations across national boundaries (Boxall and Purcell, 2015: 262). In other words, there are limitations to the intentionality of power and imperfections to that information flow that would facilitate the exercise of power absolutely. Although this issue was not the

specific focus of the data collection, a telling example that gives an insight into it is a statement by Neil of BPOCo, who was instructed to 'send a message' to the stock market and downsize his office by senior management in the US. Neil's response could be described a sort of processual filibustering, in which he delayed making job cuts and tried to justify staffing levels in the hope that the issue would eventually be forgotten by senior management. Though the degree of global integration or decentralisation of power among the case organisations was not uniform, it nonetheless raises the point that managers in clusters who are charged with administering restructuring programmes do not operate outside of the interpersonal dynamics that are engendered by working in an office environment. Regardless, they may not always do what senior decision-makers tell them to, neither are they immune from the regulation and reproduction processes engendered by 'participation' in the local labour market themselves (Burawoy, 2012).

In addition to this, it is perhaps a telling feature of the intentionality of power that firms in the cluster have begun to upgrade their workforces, while simultaneously transforming corporate governance structures. The example that Oliver gave on pages 117-119 regarding the transition from traditional forms of marketing to digital marketing at SoftCo is a case in point. He described how SoftCo had expanded their specialist workforce in digital marketing somewhat opportunistically by employing contractors and assigning senior managers to oversee their work. Broadening this out, there is a suggestion in Kevin's account of the interview process at SoftCo on page 137, that their recruitment strategy placed strong emphasis on the personal resilience of new management. For example, interview questions focused on whether or not Kevin could bootstrap and work effectively in a lean organisational environment, which, considering Oliver's experience at the company, it is arguable that there is a degree of strategic crossover between the two. SoftCo's commitment to a renewal of its workforce is given discursive legitimacy by technological developments in the field of marketing practice, but it also signals a co-ordinated effort to reproduce the orientations of senior management and the employment relationship in subsidiary teams.

For a reading of the intentionality of power, while the decision-making power of the local subsidiaries is generally low (Hymer, 1976), and the role of

the cluster is to shore up different forms of discipline, the exercise of power at a local level such as the above aids learning the at centre. Nevertheless, from appearances any such decision-making would appear to be transitory and concentrated within few hands, given how senior managers themselves are being replaced. In short, decision-making we can assume is largely contingent upon downward command from the centre (Bahrami and Evans, 1989).

So, what then does this largely centralised intentionality of power mean for the cluster form? Clearly on this evidence, the Thames Valley cluster appears as a form of domination over labour, insofar it provides co-located firms the collective means to weaken the relative position of labour power (Leflaive, 1996). Historically speaking, the relative sovereignty of organisations has been contingent upon the adherence of labour to particular inter-organisational patterns of action that have facilitated a reduction of material and symbolic interests and options. That is to say that in spite of the risk of resistances, through a combination of localised actions and broader shifts in and high-tech work, firms have managed to strengthen their position over labour power.

However, it remains to be seen what the long-term future of the cluster may be assuming that firms will gravitate toward better 'solutions' to solving the double indeterminacy of labour. Because, of course, although the Thames Valley cluster would appear to be a systematic consolidation of corporate power and governance structures at local level, it is not perhaps the best option available to firms on an ongoing basis. The connections between organisational restructuring, job insecurities and work intensification may in a sense represent an attempt at managed decline (Manning, Sydow and Windeler, 2012).

That is to say that while the industrial and organisational change in the Thames Valley cluster has renewed the competitive advantages of being located there (Christopherson and Clark, 2007). Specifically, in the absence of tangible assets, benefits or resources offered by the location, the only strategic option open to firms is to enhance control over labour, so that it is more productive. It can be assumed that due to the global spread of English more and more regions are open to outsourced and offshored IT service work from the cluster (Bardhan and Kroll, 2003; Crino, 2010). Clusters in high-wage

English speaking nations (where this work has historically been carried out) such as the Thames Valley high-tech cluster, no longer retain the strategic or locational appeal that they used to.

Even so, the shelf life of geographic clusters as a form of business organisation may be limited as there is a question mark over the future role of captive centre cluster offshoring anyway, both in terms of an international division labour, and, as a basis of work re-organisation at a local level. In light of the finding that work intensification is, in a sense, systematic, and, in some cases, pushed to deleterious extremes, it seems doubtful that the model is a long-term possibility in high-wage nations. That being said, it would lack foresight to suggest that high-tech clusters in developing nations will be exempt from comparable forms of work re-organisation as their locational advantages gradually diminish. Indeed, evidence from India suggests that despite the trend toward cluster growth, processes of local work re-organisation carry on anyway as part of the broader spatial re-organisation of the high-tech industry (Feuerstein, 2013).

On that account, it is arguable that clusters may no longer be instrumental to firms' strategies to secure and cheapen labour, in the way that they may have been previously. Research of the automotive industry shows that MNCs, aggressive in their attempts to '[align] local institutional conditions with global offshoring strategies and operational needs', are tending to locate in areas with high rates of unemployment and few large employers (Manning, Sydow and Windeler, 2012: 1205). Indeed, there is already evidence of this being the case in the high-tech industry, what with Intel Corporation's recent relocation to the lower wage economy of Armenia (Sturgeon, 2003).

How, then, against this background could the intentionality of power underlying the patterns of restructuring witnessed in the Thames Valley high-tech cluster be characterised and extended? There is reason to suggest that high-tech firms would reduce their organisational footprint in the Thames Valley cluster almost entirely if it were that simple. The embeddedness of a variety of institutional ties, in addition to 'legacy' costs such as pension liabilities and redundancy pay-outs for example are potentially the main barriers to this (Monk, 2008). Furthermore, although centralised governance structures are such that decision-making power in the US generally holds

sway over Thames Valley counterparts, this is subject to caveats and resistances by senior management, who have been demonstrated a tendency to filibuster. In addition, it is true that due to the concentration of expertise (useable labour) locally there remains value in capturing labour in Thames Valley high-tech cluster, even if it is to head off the competition for talent posed by rivals. However, this is diminished by its position within the value chain one would of thought, particularly given how engineering skills occupy managerial and sales and marketing.

In itself, this scenario presents a number of potentially problematic liabilities for structural adaptation of the regional economy. As a centre of regionalised service work, given how firms are increasingly able to implement cross-border virtual teams - and in a declining UK market - there is potential for similar patterns of restructuring to carry on occurring. In respect of the reorganisation of the global high-tech industry, the connections described here are broadly indicative of the uneven processes by which it continues to be reordered and reorganised (Lüthje et al, 2013).

Chapter 7 – Conclusions

This chapter recaps the thesis' main findings and their significance for future studies. Accordingly, I identify two main areas that the thesis adds potential value to. The first is to the study of work intensification. The geographic cluster is a novel context when compared to macro-level labour market and micro-level organisational research. The thesis has therefore been a useful exercise in terms of working through some of the conceptual issues associated with studying work intensification in a new context. The second aspect that the thesis contributes to is a discussion point related to the concentration of corporate power in regions and what this means in terms for local work and employment structures.

7.1 Directions for future research

7.1.1 Work intensification

Until now work intensification has been studied rather narrowly – either as a result of structural economic forces or acutely as the outcome of particular organisational practices or scenarios. The previous chapters have arguably challenged this orthodoxy by approaching the conditions of work within a particular geographic context as a potential source of work intensification. More broadly, it demonstrates how the 'intermediate level of social structuring', which can apply to a variety of contextual systems, networks and hierarchies, potentially engenders work intensification (Reed, 2005a: 1634).

While focussing on a geographic cluster has provided novelty insofar as work intensification has not been explored through such a lens previously, it has more importantly helped to shine a light on key conceptual underdevelopments regarding the theme. Perhaps the most significant conceptual underdevelopment highlighted in the thesis is the lack of a dynamic and relational account of the work intensification process. Emphasising the changing orientations of respondents over time as a result of organisational restructuring has helped to present a dynamic account of work intensification that was previously lacking I argue.

As mentioned, for much of the last decade, the bulk of research into work intensification has been carried out in the field of labour economics (Green, 2006). More recently, however, the topic has experienced a surge in interest from management and organisation studies scholars, due in part to the various perceived pressures that the global economic downturn has put upon organisations and workers (e.g. Brown, 2012; Stanton et al, 2014; Clark and Thompson, 2015; Granter, McCann and Boyle, 2015). Going somewhat against the tide of postmodern and poststructuralist perspectives, which drives a fecundity of critical scholarship on contemporary workplace issues in these areas (O'Doherty and Willmott, 2001), the burgeoning interest in work intensification has been influenced somewhat by the labour process tradition (e.g. Ogbonna and Harris, 2004; McCann, Morris and Hassard, 2008). This on the back of an ongoing project to 'renew' labour process theory in business, management and organisation studies (Thompson and Smith, 2010).

The basis of the popularity of the labour process approach stems from the analytical parallel between the 'core' of labour process theory (LPT) and the work intensification concept in and of itself (Thompson, 1990). The 'core' of LPT refers to the principle that labour power represents an 'indeterminate' commodity for 'buyers', insofar as it constitutes a capacity to work rather than the guarantee of production or outcome (Thompson, 1990).

It follows that to produce a commodity, labour power is required to undergo a transformation process in which it is adjoined to a conversion 'moment' (i.e. when a good or service acquires value) (Smith, 2015: 206). An imperative within this process (the labour process) is to control the design, distribution and allocation of tasks building up to said conversion 'moment', all the while generating an appropriate level or intensity of work effort, so that production is profitable (Thompson, 2010: 10). The static labour process, then, represents a configuration between forces of production and production inputs, which, in combination, propel the task direction and task effort dimensions of the labour power conversion process.

Conceptually speaking, any transformation to said forces and/or inputs has the potential capacity to make tasks more or less intense by virtue of their objective (e.g. time) or subjective (e.g. achievability) properties. It follows that because task effort intensity is a central indicator of work intensification at an

individual level, these forces and inputs represent elements of the causal process by which labour power extraction is expanded at the point of its consumption. In a term, this is described as the 'production indeterminacy' of labour (Smith, 2006: 390).

A further parallel connects the concept of work intensification and labour process analysis, which opens up space for a key insight associated with the tradition to be employed (McCann, Morris and Hassard, 2008: 347). Due the interplay of competition, markets and the accumulation logic inherent within capitalism a discrete labour process is not static. There is constant pressure to revolutionise and reorganise production methods in order to maintain relative surplus value. Of the main guiding logics that informs this ongoing process to 'cheapen the costs of labour' through a rationalisation of the labour process (Thompson, 2010: 10), deskilling and McDonaldisation are perhaps the most well-known examples (Wood, 1982; Ritzer, 2014). Both cheapen labour (in material and symbolic senses) by reducing and simplifying human input into production. In effect, work intensification represents the achievement of similar ends, however it occurs inversely, through increasing the role and contribution of human input, thereby maximising labour utilisation at a relatively lower, cost to employers.

Accordingly, its empirical forms consist not only of alterations to the 'direct labour process' (Clegg, 1989: 106), or in other words rationalisation of the objective means of production (such as machinery on the production line and so on) as is the case with deskilling. It also engenders a stronger subjective element concerning the durability of perceived job quality relative to the conditions under which labour power is sold, which, on balance generally leads to workers giving more. A scenario illustrating the nature of this dynamic are instances where employees accept an informal promotion or take on extra workplace duties and tasks without an increase in their pay or conditions. In such a scenario, the general level of work effort required by an employer of an employee has risen, given that new duties have to be completed in addition to existing ones. The extent to which this requirement comes into conflict with an employees' perception of job quality, however, is governed by a myriad of social relations. For example, if an organisation is in crisis and jobs are scarce, not accepting added duties could mean that a worker is more likely to

be made redundant and that their chances of reemployment are diminished. In the event, the security element of job quality is likely to suffer in a manner that is unacceptably disproportionate to the trade-off that complying with work effort entails. On the other hand, if the opposite were true, and an employees' prospects of reemployment were perceived to be favourable, extra duties may create a tension in terms of the wage-effort labour mobility bargain, which means that they leave (Smith, 2006).

Exploring work intensification in this vein has arguably helped to underline the theoretical compatibility of the labour process tradition for studies of work intensification. As mentioned briefly on page 39, there has been a recent upsurge of interest in the topic of work intensification, inspired by ideas associated with the labour process tradition. In following suit, the thesis has arguably helped to substantiate the import of ideas from said tradition for future research on work intensification. More broadly, by contributing to this area of interest, it helps to strengthen the clarion call for the 'renewal' of the labour process tradition within business, management and organisation studies, demonstrating it as an increasingly viable alternative to post-structuralist perspectives (Thompson and Smith, 2010).

7.1.2 Organisational and regional analysis

The empirical content of the case study benefited from adopting, as a point of departure, a view of the geographic cluster as an 'action-governing' context (Schatzki, 1991: 653). The value that this broadly materialist orientation to the social world offers future work that straddles organisational and regional analysis is twofold. On the one hand, it prevents research from getting too bogged down in the conceptual debate about clusters by offering the researcher a useful heuristic (Benneworth and Henry, 2004). On the other hand, it offers an alternative to post-structuralist theories of organisational spaces, which are ill at ease with research of the meso-level geographical scale.

Regarding the first point, the cluster concept is a highly contested concept, meaning that research that adopts the notion opens itself up to inevitable, if not overblown, criticism. As noted throughout this thesis, scholars such as Martin and Sunley (2003: 29) contest that it is a 'coherent and

carefully defined' notion, arguing that it is best thought of as an 'umbrella' term for a number of interrelated ideas regarding territorial production. Even scholars who appear more receptive to the practical applications of the notion note that the many competing typologies of what constitutes 'a true cluster' has a muddying effect on research development (Malmberg and Power, 2006: 50-68).

The lack of a fixed definition and broad application of the term means clusters are regarded as a fuzzy concept. As a result of this, the concept is a devalued currency in the eyes of its critics (Benneworth and Henry, 2004: 1017). Despite this, however, Benneworth and Henry (*ibid.*) argue, as I have done throughout this thesis, that a 'multiperspectival approach to clusters' (or to view the concept as a heuristic) can be fruitful for research in a fragmented discursive field. In other words, there is value in embracing the fact that the cluster is a fuzzy concept because it creates 'opportunities for shared reflection' from different perspectives (Czarniawska, 1999: 9), shining a light on different aspects of clusters as a 'social situation' (Benneworth and Henry, 2004: 1017).

On account of this, I argue that the broadly materialist interpretation of clusters adopted here, enabled an attentiveness to the structuring qualities of clusters in terms of the conditions of work and employment. Moreover, it did so mindful of the role of agency and change. The value that this offers future research, then, I argue, is a heuristic approach based on broadly materialist foundations, but which retains an open orientation to the complexities of how the conditions of work and employment are produced and resisted in a particular context.

The second conclusion that can be drawn from the thesis in terms of future related research relates to the 'spatial turn' in critical business, management and organisation studies (Warf and Arias, 2008). According to Kornberger and Clegg (2004), the burgeoning interest in space and spatialities of business, management and organisations since the turn of the millennium can be distinguished from classical understandings on the basis of a rejection of two underlying assumptions. First, is classical management theory's largely instrumentalist understanding of organisational spaces, which views them one-dimensionally as a means to business ends. Second, is an

emphasis on the interaction between the material and behavioural aspects of organisational spaces resulting from this restricted purview.

The literature that has since emerged is characterised by an embrace of theoretical diversity and a readiness to apply radical new ideas from philosophy and human geography (Dale and Burrell, 2008). Although there is benefit in the importation of theories and ideas from diverse fields in order to challenge staid and formulaic research agendas, it can lead to highly specialised and abstruse research alienating non-specialists in the field (Alvesson, Gabriel and Paulsen, 2017: 106). This is somewhat true of the 'spatial turn' in business, management and organisation studies. As a literature, it is characterised by philosophically-inspired theoretical debates regarding the nature of organisational spaces (Hernes, 2004; Clegg and Kornberger, 2006; Dale and Burrell, 2008; Van Marrewijk and Yanow, 2010; Beyes and Stayaert, 2012), whereas examples of the empirical application of these debates are relatively thin on the ground (Thanem, 2012).

This readiness to challenge classical understandings of organisational space through reappraisal of philosophical ideas has arguably downplayed the importance of material space to empirical analysis (Müller, 2015). Reappraisal of spatial theories that emphasise the construction of meaning (Lefebvre, 1991) and the experiential (Thrift, 2008) aspects of organisational space in particular have meant that the assumption of material or geographical scale is regarded as essentialist. I acknowledge the validity of the argument that suggests research which adopts the material or geographical scale as its starting point potentially prejudices the construction of meaning that underlies the social production of space (Lefebvre, 1991). However, that is not to say that the assumption of geographical scale as a point of departure will be to the detriment to the aims of a critical project, despite arguably being less reflexive in the eyes of those who have shaped the research agenda (Halford, 2004).

Against this background, it is important to stress that the research agenda that has emerged arguably makes it difficult to justify operationalising organisational space on material grounds or using scale as a lens - even if the research might be meaningful in thematic terms. This is certainly the case with clusters. The approach to operationalising study of the cluster here is

ostensibly at odds with the research agenda, because as Kornberger and Clegg (2004: 1101) argue, in emphasising the structuring nature of the meso-level geographic scale, it treats the cluster as a 'container' of social relations. In their view, this is problematic because it overlooks the complexity of the interplay between social meanings and understandings in the production of space.

This is rejected on conceptual and practical grounds. On the one hand, by adopting a critical realist theoretical framework, the research adopted an open orientation to the research context that was reflexive and conscious of meanings, given that it extensively covers employees' attachments to the cluster. This is despite the point of departure being the meso-level geographical scale.

On the other hand, the wider implication of the research agenda espoused by the likes of Kornberger and Clegg (2004) is that conceptualisations of territorial or regional production can be accused of prejudging the empirical work. The geographical scale is criticised as arbitrarily imposing spatial unity on a social context, prejudicing material space over the social production of space via meaning production (Lefebvre, 1991). It is perhaps for this reason that extent research is largely restricted to organisational case studies (Halford and Leonard, 2006; Shortt, 2015), given that capturing this data across a wider population involves the setting of geographic boundaries. That being so, I argue that a philosophically-driven research agenda has restricted scope for research of the kind demonstrated here, despite being aligned in terms of its critical content. Ultimately, therefore, it is hoped that this thesis adequately demonstrates how meaningful research can result from assumptions regarding organisational spaces that are viewed as unreflexive by the current research agenda. Moreover, that this will lead to a more pluralistic research agenda in terms of approach and to more diverse organisational spaces in time.

7.2 Implications for policymaking

From the exposed brick wall offices of Old Street Roundabout and the research parks of Silicon Valley, to the heavily guarded corporate headquarters of tech industry giants in Bangalore, the various geographies

which make up the world's high-tech clusters are said by many to be the productive engine rooms of the global knowledge economy. Demarcated as regions where similar or complimentary high-tech firms are co-located, clusters have been variously described in favourable terms by scholars as: harbingers of regeneration (Trippi and Otto, 2009), generators of wealth creation (Nonaka and Teece, 2001), symbols of social mobility (Power and Lundmark, 2004), and beacons of urban vitality inter alia (Storper and Venables, 2004).

Despite this, however, a number of recent examples suggest that clusters are not viewed similarly by all. In Silicon Valley for example, activist groups are frustrated with the social and economic inequalities that divide high-tech knowledge workers from the wider population in the region. They are particularly concerned that the large profits generated by co-located firms such as Apple and Google have not been redistributed sufficiently amongst local communities through spending, philanthropic activity, or taxation for example. And a protest movement is mounting which has seen demonstrators barricade employee-only shuttle buses laid on by high-tech firms in an attempt to publicly vocalise these concerns (Carroll, 2013).

Similar tensions are building in Berlin, suggesting that living and working in a high-tech cluster is not a universally positive experience. Amongst a number of criticisms, the city's burgeoning high-tech cluster has been attacked by a local politician for bringing about processes of gentrification. Monika Herrmann argues that not only are rents rising due to the arrival of ICT professionals in the Kreuzberg district of the city where the cluster is located, but also accuses workers of demonstrating an unwillingness to integrate into local cultural and social life (Gris, 2013).

The scholarly literature on clusters has largely failed to address surface conflicts and tensions such as these because it is a stock of knowledge that takes a predominantly 'technical' or normative interest in its subject matter (Habermas, 1972). This means that the conflicts and tensions interesting to critically minded social scientists (such as those described on the overleaf) are seldom addressed in the literature. Considering this, the study has arguably added value in terms of casting a critical eye over working practices

in a high-tech cluster and exploring the extent to which these are shared or propagated as a result of organisational geography.

As far as current debate about clusters is concerned, the study is arguably a cautionary tale that speaks to two conflicting aspects of UK government policymaking. In 2018 the Department for Business, Energy and Industrial Strategy announced its intention to work with England's 39 Local Enterprise Partnerships and 9 newly created combined authorities to develop Local Industrial Strategies for key economic regions. Said bodies have been charged with meeting future economic 'grand challenges' in their regions, which has put emphasis on knowledge-based economic development (specifically high-tech) and has brought clusters back into vogue. The pursuit of economic growth through high-tech development in regions, however, is a commitment potentially at odds with the government's aspiration to improve job quality the thesis suggests (Taylor, 2017).

While good quality jobs and high-tech clusters are by no means incompatible - as many respondents suggested - the negative aspects of working in clusters described in this thesis raises doubts regarding the depth of understanding of these issues in policy making circles, particularly at a regional level. For example, Greater Manchester Combined Authority (GMCA) are effusive regarding the growth of tech industry in the region stating that they wish 'firmly establish our region as the UK's number one digital city' (GMCA, 2018). Yet, in their 'Good Employment Charter' GMCA also states that their mission is to provide 'good jobs, which are well-paid and secure' (GMCA, 2019). On the basis of this thesis it is debatable to what extent high-tech job creation on a regional scale aligns with this aspiration.

A broader policy implication of the research – having described various instances of organisational restructuring and downsizing in the Thames Valley cluster – relates to the declining attractiveness and competitiveness of the UK to global high-tech business corporations. While the UK and Thames Valley region in particular benefited from the first wave of high-tech expansion, offering economies of scope that provided a 'window of locational growth' (Sternberg, 1996). The global spread of English and 'corporate Englishization' (Boussebaa, Sinha and Gabriel, 2014) has opened up more and more regions to outsourced and offshored IT service work (Bardhan and Kroll, 2003; Crino,

2010). This has spurred jobs growth and industrial upgrading in high-tech clusters such as Bangalore for example (Saxenian, 2005). In consequence, English speaking nations (where this work has historically been carried out) no longer appear retain the strategic or locational appeal that they used to.

Although the ability of firms to reduce their organisational footprint in these locations is limited by the embeddedness of a variety of institutional ties, in addition to 'legacy' costs such as pension liabilities and redundancy pay-outs for example (Monk, 2008). Accordingly, onus is placed on firms to renew the competitive advantages of being located in a particular region (Christopherson and Clark, 2007). In the absence of more tangible locational advantages or assets, the case study suggests that harnessing control over labour is a means for firms to achieve at least some degree of strategic benefit. That being said, with a number of large business corporations having announced plans to divest or downsize their UK operations following Brexit, this could prove a tipping point as the competitive advantages of mature clusters such as the Thames Valley are slowly eroded.

7.3 Critical reflections on the PhD process

To reflect critically on the PhD process involves two main aspects. First, to hold a mirror up to the end product and how it was made. Second, to think reflexively about the nature of the social science PhD as it is today.

To achieve these aims, it is worth quoting Gabriel's (2015: 332-333) description of the 'standard qualitative doctoral thesis' (SQDT) at length. According to Gabriel, the 'standard qualitative doctoral thesis' in the social sciences follows a formula. It begins with 'a 'gap' in the literature and a potential for contribution...succeeded by a methodology section which...justifies the use of some 45-50 Interviews...to address the gap...leading to a findings section involving a variety of verbatim quotes from the interview transcripts.' Gabriel continues: 'The standard qualitative doctoral thesis concludes with a discussion and a concluding section, in which claims are made about having filled the gap, having identified some further gaps.'

Clearly this thesis bears likeness to the SQDT. It identifies a gap and a contribution; the case study is based on 46 semi-structured interviews and there is a findings section which is also based on 'a variety of verbatim quotes

from the interview transcripts.’ The thesis similarly ‘concludes with a discussion and a concluding section, in which claims are made about having filled the gap, having identified some further gaps.’

Nevertheless, the thrust of Gabriel’s argument is not intended as a criticism of students. Rather it is intended to reflect the bureaucratic and institutional context of a PhD. The written thesis is a product of a doctoral apprenticeship served in a higher education institution and this infers number of challenges and pressures that arguably explain the prevalence of the SQDT.

On this point, students experience pressure from spouses, supervisors and sponsors to complete the PhD within the allotted timeframe, meaning that bold intellectual choices might be eschewed in favour of the tried and tested SQDT. For example, supervisors willing the successful of completion of a PhD may persuade students to follow the SQDT route as it is perceived as a safer option and more likely to be passed by examiners. Financial considerations associated with funding may also influence a student’s decision to follow the SQDT formula. It is also the case that as a novice researcher, students generally lack the practical experience and resources to deviate from the SQDT. A lack of practical experience can restrict the ability to make more sophisticated choices. Whereas struggles with access and sole responsibility for data collection and analysis means that interviewing a greater number than 50 respondents would be ambitious for most students. Hence, the PhD presented here and its resemblance to the SQDT is a product of most of these factors.

In terms of what the prevalence of the SQDT means for the development of social science, Gabriel (2015) argues that it represents a problematic entry point into an academic career. Having outlined the main characteristics of a SQDT, Gabriel (2015: 333) goes on to comment: ‘All this would not be so important if it were not for the fact that scholars who have served their doctoral apprenticeships in this manner go on to become authors, reviewers of articles and examiners of others doctoral dissertations, expecting them to fit precisely this mould and mercilessly criticising any deviations or omissions.’

The point Gabriel (ibid.) is making here is that doctoral training which positions the SQDT as its end, sends the wrong message about what constitutes quality, meaningful research to early career researchers. Ultimately, this has spawned and perpetuated markers of what is deemed good research and therefore influences what knowledge production academics engage in. Accordingly, it could be argued that by following the SQDT template, this thesis perpetuates the formulaic social science that is the object of Gabriel's critique. To remedy this, Gabriel (2015: 335) suggests that 'creative imagination' should be regarded 'as a sovereign virtue in conducting qualitative research'. However, this would, of course, rely on transforming institutionalised understandings of the role and purpose of a PhD.

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Appendix 1 – Consent statement

About Me

Kye is a Doctoral Researcher and Graduate Teaching Assistant at the University of Bath, School of Management.

Project Overview

The main purpose of the PhD is to learn about the career histories of professionals who work for IT service and/or technology companies in Thames Valley region in order to assess how their work has changed over time.

Research Data

Research data is anonymised meaning that personally identifiable information will be removed from the data set (this includes data which may be linked back to the organisation).

Publications

The data is being collected for the purposes of a PhD. However, this does not preclude reference to part or all of the anonymised data in a published piece of work.

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Appendix 2 – Interview guide

1. What first attracted you to a career working in the high-tech industry?
2. Talk me through your career history
3. Describe the company culture
4. Talk me through a typical day
5. What are the positive/negative aspects of the work that you do?
6. Do you feel secure in your employment?
7. How would you rate your work-life balance?
8. What are your career plans for the future?
9. Give me your thoughts on living and working in the Thames Valley region
10. How has the industry/region changed since you have been employed here?