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The changing nature of graduate work and employment

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degree of doctor of philosophy**

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ABSTRACT

Successive governments have facilitated the expansion of higher education in order to create a knowledge economy, increasing the supply of graduates entering the labour market (DfES 2003b; FSS 2007). Graduate destinations and employment have consequently become central to evaluating policy and more generally to indicate changes in the nature of work (Green 2006). Yet conceptual and methodological tensions emerge in existing research. On the one hand policymakers resolutely support increasing the supply of graduates (FSS2006). By contrast, mismatch in the graduate labour market has become the orthodox view expressed in a burgeoning literature on the subject. Dependent on perspective, claims of mismatch focus on particular graduate attributes to support or challenge increased supply of graduates.

This thesis proposes that to fully understand the labour market for graduates, a new approach to research is required. Whilst it is accepted that the range of graduate destinations is expanding, without data on graduate work and attention to demand, the drivers of change remain under-developed. Consequently, the thesis explores the role and function of qualifications in order to identify possible mechanisms in demand and the utilisation of graduates. It proposes that demand for graduates involves analysis of strategies employed by the various actors in the relationship between education and work.

Empirical support for the thesis is provided by two cohort surveys and qualitative data from five graduate occupations. The findings reveal a reconfiguration of graduate employment, derived from analysis of graduate work. Multiple matching is evident in the labour market and demand for graduates is governed by “work-readiness”. Yet work-readiness is conceived differently according to occupation and often involves a reduction in occupational training and limited career progression. Overall, expansion in the supply of graduates means that utilisation of qualifications alters and the occupational hierarchy remains stable.

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CHAPTER ONE: SCOPING THE STUDY

1:1 Introduction and rationale

Graduate labour markets have become a central feature of public policy in circumstances where politicians seek to promote economic and social mobility via the expansion of higher education (DfES 2003). Educational policy has subsequently attracted considerable academic scrutiny, prompting debate on how, where, and indeed if, an increased number of graduates is absorbed in the labour market (Bowers-Brown and Harvey 2004, Brown and Smetherham 2005, Elias and Purcell 2003, Wolf 2002). Graduate work and employment is central to evaluation of policy and more generally to indicate trends in the nature of work (Green 2006). The primary purpose of this research is therefore to examine the scope and character of graduate work and employment in light of expansion in graduate numbers.

The expansion of higher education¹ has produced competing perspectives on the graduate labour market (GLM). The dominant policy model assumes that an increased supply of graduates is matched by demand in the labour market. In principle, educational policy is largely based on human capital theory (HCT) (Becker 1963). In its crude form, HCT assumes that those with degree level education will automatically achieve higher level employment and incomes which will benefit themselves, the organisations they work for and consequently the nation's economy. This represents a substantial shift from previous measurement criteria in education. Rather than a consumption or status good, education becomes primarily an investment (Machin and Vignoles 2006). Returns to investment are not direct and are instead measured by employment outcomes. The human capital approach is not, however, without its critics. By contrast, these writers offer a pessimistic view of the efficacy of increasing the supply of graduates, suggesting that mismatch in the GLM is the result. Keep and Mayhew (2004: 299), for example, note that "the idea that there is a simple, clear, linear relationship between the proportion of a particular age cohort entering higher education and that country's economic performance is

¹ A more detailed review of the strategic policy drivers is contained in "Skills at Work" (The Scottish Government 2008)

doubtful". There are thus questions on the relationship between higher education and work. Are there really enough high level jobs to meet the increase in supply? Can we assume that universities necessarily produce the skills and knowledge that employers want? It appears then that there is a general unease about the extent to which the government's desire to create a knowledge economy is fulfilled by expanding the higher education sector.

The research conducted in this thesis is the outcome of a CASE Studentship in collaboration with The Scottish Government (TSG). It aims to generate better academic understanding of graduate work and employment and then to use this intelligence to contribute to policy in the field. The nature of CASE studentships means that an initial design for the project has been formulated in advance by the collaborating partners². They have recognised that there is sufficient debate in existing literature on graduate destinations and more particularly on the type of work that graduates do to warrant further research. The research proposal made two specific recommendations: firstly, a thorough examination of the SOC(HE) model developed by Peter Elias and Kate Purcell, and secondly that both quantitative and qualitative methods should be used with the survey instrument based on the Destinations of Leavers from Higher Education (DLHE) survey. Research based in Scotland is also relevant for two reasons. Firstly, it has direct utility for Scottish policy-makers and provides a means by which to evaluate policy outcomes. Secondly, Scotland has already achieved the government target of 50% of young people entering higher education (Scottish Executive 2004) as opposed to 35% participation rate in England and Wales (DfES 2003). The evidence from this thesis will consequently provide a useful indication of what might occur in the rest of the UK. Notwithstanding the proposal developed prior to this study, the logic of discovery, central to doctoral research, will shape the form and content of the thesis. The remainder of this introductory chapter sets out the intended scope of the study, suggests objectives for the research, and outlines a preliminary research design.

² Partners are the Scottish Centre for Employment Research at the University of Strathclyde and the Analytical Services Division of the Department for Enterprise and Lifelong Learning.

1.2 The logic of enquiry

1.2.1 The graduate labour market: territories of debate

This section outlines the broad boundaries within which the study will be conducted. It begins by examining the territories of debate within the GLM. The model used to categorise graduate destinations in policy-maker discourse (FSS 2006), and in data collected by the Higher Education Statistics Agency (HESA), is the SOC(HE) (Elias and Purcell 2004). The model presents a five-category classification of graduate jobs: Traditional, Modern, New, Niche and Non-graduate (Elias and Purcell 2001, 2003, 2004a, 2004b, Wilton et al 2004, Purcell et al 2004). Accompanying research claims that the range of graduate jobs is expanding. On examination, the labels given to categories of graduate employment seem to imply that some jobs are more definitely graduate than others, based on quantitative and qualitative analysis of knowledge and skills use. Moreover, there are optimistic claims that graduates in the non-graduate category will, given time, move into graduate categories and that the presence of graduates is sufficient for inclusion in the classification.

By contrast, successive studies of the GLM present a pessimistic view of employment outcomes for graduates, concluding that there is a general over-supply in the labour market. Over-supply derives from two distinct perspectives. Sociologists tend to be concerned with inequalities in the labour market and incorporate personal attributes such as social skills and gender in analysis of employment outcomes. Brown and Hesketh (2004), for example, argue that increasing numbers of graduates means that employers default to using selection criteria based on social skills. Smetherham (2006) focuses on gender inequalities and argues that these over-ride more general human capital arguments regarding employment outcomes for graduates.

Economists tend to criticise HCT directly by arguing that substantial proportions of graduates find themselves in jobs where they do not use their knowledge and skills (Dolton and Vignoles 2000). These writers also consider the returns to university education and propose that over-education is a feature of the GLM (Alpin et al 1998; O'Leary and Sloane 2006). An initial exploration of the literatures exposes tensions in existing models of the GLM, in the criteria used to evaluate graduate

destinations and employment outcomes for graduates. The aim of the first literature review chapter is to examine these tensions.

1.2.2 Graduate work and employment

Regardless of the outcome of mapping the GLM, gaps in understanding of graduate work and employment are also apparent. The dynamics of the labour market are not identical to the demands of the labour process (Warhurst and Thompson 2004). A focus on supply-side characteristics and graduate destinations neglects the work content of graduate jobs and mechanisms in demand for graduates. The second stage of the review will address this weakness by considering wider perspectives on connections between education and work. As such, it seeks to explore possible explanations for expansion in the range of graduate destinations. Intuitively, we know that not all graduates are equally qualified for all jobs. Some occupations require specific degrees, particularly in professional work. Others are less concerned with degree subject than qualification level. Yet the reasons for differences at point of entry are unclear. The tension between specific and general degree requirements raises a number of issues that will be addressed in this chapter, particularly regarding the actors and influencing factors that may shape the relationship between education and work. If demand for graduates is rising (Felstead et al 2007), then what types of graduates do employers seek? It has been noted that educational policy is designed to increase graduate numbers to supply a knowledge economy, based on a shift in the means of production from manual to mental labour. According to Bell (1974), this shift generates a general upskilling of occupations and increased demand for high-level “thinking” skills, supplied by graduates. There are, however, alternative perspectives on the relationship between education and work. Notably, Randall Collins (1979) proposes a theory of credentialism so that qualifications are merely a device used to legitimate employer decisions and represent very little that is of use in employment. Credentialism is clearly at odds with the implied meritocratic view contained in educational policy and HCT. This introduces a further tension in the evaluation of graduate work and employment which suggests that mechanisms in demand for graduates require close attention.

Consequently, the third literature chapter will contextualise graduate employment in an area of work where there is established demand for graduates. To this end, literatures on the professions will be considered. A mutually dependent relationship between higher education and professional work is well-established. Indeed Larson (1977) notes that close links between university and profession are integral to the professional project so that the role of higher education is the production of producers. The professions provide an “ideal type” model of graduate employment. Features inherent in the ideal-type model will be examined in this chapter. Despite Collins (1979) scepticism on the use of qualifications in matching people to jobs, it appears that the traditional professions escape claims of mismatch, and may provide a template of “ideal-type” graduate employment.

Limitations suggested in the research proposal, supported by an initial review of the literatures propose that the central theme of this thesis is to reconcile debate on the labour market for graduates by examining the work content of graduate jobs. Although the labour market is an important area of investigation, in order to understand how rising numbers of graduates influences both supply and demand, work content requires attention. It is reasonable to expect that graduate jobs may have some defining features, amenable to empirical investigation. Emphasis on the utilisation of graduates expands the scope of analysis to include notions of job quality (Machin and Vignoles 2006) which will inform current understanding of graduate work and employment.

In essence this study seeks to explore the nature of graduate work and employment and recognises that there is at least a possibility that the nature of graduate employment may be changing. Secondly, it seeks to evaluate the type and nature of work that graduates enter. The final objective is to consider the policy implications of the study. The objectives are therefore:

- Explore and evaluate existing models of the graduate labour market (GLM)
- To incorporate work content in analysis of graduate employment

- To contribute to academic and policymaker knowledge of graduate employment

1.3 Research Design

Given the foregoing, this section outlines a preliminary rationale for the empirical element of this research. Successive studies have argued that demand for graduates does not match supply and yet there is also evidence that demand for graduates is on the increase (Elias and Purcell 2004; Felstead et al 2007). In order to fulfil the third research objective, empirical evidence that holds up in a Scottish context is required. It is therefore proposed that two cohort surveys will be distributed to universities in Glasgow³. These will ascertain the distribution of graduates and assess contributing factors in graduate employment. From the surveys, a number of occupational sub-samples will be identified. These will allow an in-depth rich analysis of features within work and examine the actors involved in demand for graduates. To an extent, the use of occupational case studies represents a novel approach to analysis of graduate work and employment and measurement of its utility will provide a useful template for future research. This thesis proposes that it is perhaps time to start asking new and different questions about graduate employment. Instead of reformulating questions designed to look at mismatched graduates, research should gather evidence on the utilisation of graduates and proceed from there. The scope, objectives and design of the research indicate that the purpose of research is to offer at least the possibility of some kind of social improvement which necessitates thorough description and explanation of the phenomenon in question (Danermark et al 2001). This fits well with the third research objective which seeks to inform public policy in education. The thesis is organised according to the logic of discovery, central to doctoral research. This introductory chapter is followed by review of salient literatures in order to scope the field and to formulate appropriate research questions. The fifth chapter presents an argument for adopting a critical

³ The form and content of the surveys has been agreed in advance by collaborating partners.

realist approach to social science research and explains its application in this study. Three chapters explore the empirical findings, followed by an interpretation chapter. The concluding chapter revisits the research objectives, discusses the key contributions of the thesis and reflects on limitations and opportunities for further research.

CHAPTER TWO: MAPPING THE GRADUATE LABOUR MARKET

2:1 Boundaries in the graduate labour market

In circumstances where educational policy is designed to increase numbers of graduates, this chapter explores contrasting views on the labour market outcomes for graduates. It evaluates where boundaries should be set in the GLM and the criteria used to measure graduate employment. Teichler (2000:82) provides a useful overview of the debates associated with expansion in higher education. He states,

“[t]aken as a whole, views vary considerably as to whether the expansion of higher education is desirable or undesirable under current financial conditions and alternative options for utilising resources, whether the supply of graduates is currently detrimental, absorbed without major consequences or beneficial for the world of work or for graduates themselves, and how the expansion of higher education might be assessed in the light of long-term economic and social developments.”

This quote indicates conceptual and relational problems in assessing the scope and character of the GLM. Mapping the GLM may be influenced by comparator groups, the jobs that graduates do and the wider impact on the economy and society. The chapter firstly considers the policy model which assumes that increasing the supply of graduates is matched by demand. It then moves on to consider alternative and less optimistic models which largely conclude that there is an oversupply of graduates, albeit by adopting different explanations. The final section evaluates the utility of these models for this study. Although the focus of this study is graduate work and employment, in preparation for the review, the chapter makes some brief observations on expansion of higher education to provide a background for the discussion which follows.

2:2 Higher education policy

This section discusses the policy initiatives which drive the expansion of higher education. According to the 2003 White Paper, *The Future of Higher Education*,

“Higher Education is a great national asset. Its contribution to the economic and social well-being of the nation is of vital importance. Wide access to higher education makes for a more enlightened and socially just society” (DfES 2003: 10)

This quote clearly states the two fundamental propositions underpinning expansion of higher education. Firstly, more highly-skilled workers are needed to effect a transformation of economic performance thereby creating a knowledge economy in the UK. Secondly, in the interests of social justice, widening access to higher education increases opportunities for groups who have previously been excluded such as lower socio-economic groups (Keep and Mayhew 2004), mature and ethnic-minority entrants. A meritocratic view of the labour market is implied in educational policy: increasing the supply of graduates is the answer to existing economic and social problems. Education, and qualifications, provide a just and fair way to structure society. Consequently, qualifications are legitimated as the major method of allocating people to jobs.

Government policy, it appears, is based on human capital theory (HCT) (Becker 1963) and assumes that those with degree level education will automatically achieve higher incomes which will benefit themselves, their employers and the economy. HCT represented a substantial break from previous conceptions of the measurement of education. Rather than a consumption or status good, education is seen primarily as an investment (Machin and Vignoles 2006). Investment in education is measured in the time taken to complete a degree but also involves substantial financial contribution. Government funding, however, is restricted to the education sector although in Scotland it pays for tuition fees. Subsistence costs are covered by students and/or their families. The measurement of returns to investment shifts to economic awards accruing to the individual from employment, rather than on any

intrinsic qualities within work. Amongst others, Borghans et al (2001) point out the deficiencies of HCT, arguing that equal investments in education can lead to different quantities of skills or to skills that differ in their market value and further that the labour market does not always fully utilise available skills (Mayhew et al 2004). Whilst HCT may hold at an individual level (in comparison with less qualified peers) it can be criticised at an aggregate level. Hirsch (1977), for example, introduces positional competition as a factor in the labour market, suggesting that the more graduates there are, so the value of degrees in general terms reduces.

The human capital approach raises some interesting issues worthy of further investigation. Notably, the relationship between supply/demand and productivity is not necessarily as clear cut as HCT assumes. The assumption that demand will automatically follow from increasing supply of graduates is arguable (Keep and Mayhew 2004). Moreover, according to Keep and Mayhew (2004: 299), “the idea that there is a simple, clear, linear relationship between the proportion of a particular national age cohort entering higher education and that country’s economic performance is doubtful”. Unfortunately, predictions of a knowledge economy made by Daniel Bell (Bell 1999; Burton-Jones 1999) present a contradiction between desire and reality. Graduate numbers are used as a proxy for knowledge-intensity and yet the extent to which graduates necessarily become knowledge workers is debatable. Warhurst (2008), for example, notes that part of the problem with the knowledge economy rests with measurement: government tend to exaggerate numbers of knowledge workers by equating them with managerial, professional and technical occupations (see also Thompson 2005). Although the principles of HCT can work in circumstances where graduates achieve graduate jobs, they are dependent on the type of work and occupations deemed graduate level.

Utilisation of skills and knowledge is also problematic, empirically and conceptually (Sloane 2002). Can we necessarily assume that universities will produce the skills and knowledge that employers want? Given that it takes four years to complete a degree in Scotland, in effect a personal investment in higher education becomes a

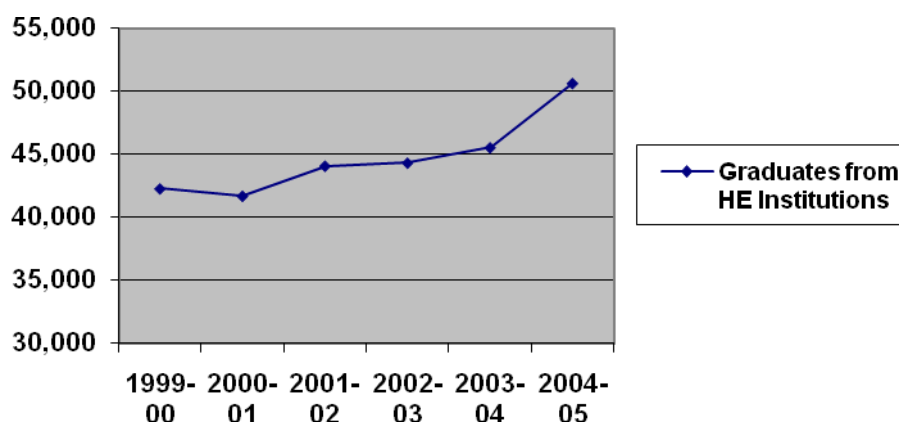
gamble on future labour market opportunities. Although government policy encourages participation in education, it relies on market forces to regulate who wins and loses. Rewards do not accrue directly to education, rather they are dependent on an individual's success in gaining employment. Mayhew and Fernandez (2003) also point out that a major weakness of HCT is that it fails to recognise that higher education also performs a screening function which may be unrelated to knowledge and skills.

The social justice strand of educational policy also deserves some attention and demonstrates a further disconnection between desire and reality. Galindo-Rueda et al (2004) point to a widening socio-economic gap within higher education (see also Breen 2003; Brown 2003; Johnston and Little 2007). These writers argue that increasing numbers of graduates has not necessarily been across socio-economic classes, rather disproportionately drawn from the middle classes. Moreover, the literature also appears to suggest differences in employment outcomes unrelated to education. Gender, class and race all contribute to claims of mismatch indicating that policy designed to erase other forms of stratification and exclusion in society in favour of an education-based meritocracy may be less than successful in practice. Consequently a tension emerges between potential and success, with the labour market as an intervening mechanism.

In general terms, there is sufficient doubt that supply-side policy interventions may not necessarily produce desired outcomes. More specifically, expansion of higher education produces more universities and graduates which in turn results in diversification within the system. A hierarchy of universities, based on longevity, emerges with Russell-group universities at the top through to post-1992 institutions. More able or socially-advantaged students tend to enter prestigious universities and subsequently achieve better jobs than their peers at lower ranked institutions (Goldthorpe 2003). Political concerns to effect a meritocracy are thwarted within a differentiated higher education system whose social role becomes one of "elite reproduction" (Brown and Scase 1994).

With regard to Scotland, changes in the Higher Education sector during the latter half of the 20th century have seen increasing numbers of institutions entering the sector and a concomitant rise in the number of graduates. Between 1993/95 and 2001/2003 the number of graduates in Scotland grew by approximately 43%, from 340,000 to 485,000 (FSS 2006). In addition in the 25-34 age group, almost one-quarter are graduates, reflecting expansion of higher education in the late 1980s and early 1990s. Currently Scotland has 20 higher education institutions¹. Figure 2:1 shows recent trends in the number of graduates from higher education institutions in Scotland.

Figure 2:1 Graduates from Scottish Higher Education Institutions



(Source: (www.scotland.gov.uk/Publications/2006/09/29153542/2))

Although there was a slight drop between 2000 and 2001, numbers have been increasing steadily throughout the period. In tandem with the increase in institutions, there has been a marked increase in the number and diversity of degree subjects on offer. Degree subjects are generally included in studies of the GLM to indicate differences in returns to education amongst graduates, so that, for example, Arts and Humanities graduates on the whole experience greater difficulties in securing employment and a lower graduate premium than those with vocational

¹ The research presented in this thesis will focus on the higher education sector and excludes graduates from FE colleges.

qualifications (O’Leary and Sloane 2002). The extent to which higher education is experiencing a shift towards occupational training is worthy of further investigation. Keep and Mayhew (2004), for example, argue that universities are not necessarily the most appropriate location for providing vocational training. Clearly the scope of graduate jobs may be affected by the addition of vocationally-oriented subjects that now have degree status. Significantly, newer universities have been quicker than Russell-group institutions to diversify in provision of such degrees. This may be partially because new institutions in their previous incarnation as technical colleges, already provided such subjects. When the university sector as a whole is considered, tensions emerge between the status of the degree-awarding institution and the type of degrees provided. Analysis of graduate employment must therefore recognise the tension between what universities produce and what employers want and require from their graduate employees, particularly at the point of entry to the labour market. (Hesketh 2000, Mason 2002) This, it is accepted, is not a new tension. However it must be considered with reference to the new conditions present in expansion and diversification within higher education.

2:3 Setting boundaries in the graduate labour market

Once variation in the types of graduates that universities produce and in subsequent employment outcomes has been established, this section examines where boundaries might be set in the GLM. The first consideration is the extent to which the GLM is distinct from wider labour market(s)². The consensus in the literature appears to be that the preface graduate indicates that a degree is required for access and subsequently to perform in the job (Elias and Purcell 2004b). Consequently questions are raised on the distinctive nature of graduate jobs. Keep and Mayhew (2004) argue, for example, that graduate jobs have been replaced by the jobs that graduates do, an assertion also made by the Association of Graduate Recruiters and Harvey (2000) amongst others. However the reasons given for abandoning a distinctive definition of graduate employment are somewhat different. Keep and

² Fevre (1992) suggests that labour markets are a complex inter-relationship amongst factors such as occupation, gender, location, race and indeed organisation, all of which can be constructed as separate labour markets and all of which could be sub-sections pertinent to the GLM.

Mayhew argue that disconnections between qualifications and skills utilisation means that any job that a graduate is in becomes a graduate job by default. The distinctive character of graduate employment has been diluted because the range of jobs that graduates enter has expanded to such an extent. Harvey gives a more positive spin, suggesting that graduate jobs no longer exist because of the propensity for graduates “to grow jobs” that they enter. It does not matter what the job title is, graduates will assume more responsibility quicker than non-graduates, although this claim is disputed (Mason 2002). According to Teichler (2000) as the supply of graduates expands, graduate employment is bound to become on average less privileged. Interpretation of graduate level employment is consequently dependent upon whether expansion of higher education is seen as a social good or an erosion of the high status employment traditionally enjoyed by graduates. Boundaries within the GLM therefore rest on pre-conceived notions of appropriate employment for graduates and the emphasis placed on graduate or job characteristics. In any event, it appears that the range of graduate jobs is expanding, creating confusion in definitions of graduate employment.

The issue of timescale is also important in establishing boundaries in the GLM. In other words, at what career point does the influence of qualifications fade and work experience become more important in the labour market? It could be argued that paid employment is increasingly part of the undergraduate experience. That aside, at the point of entry to the labour market, qualifications are the major currency on which graduates trade, giving them heightened significance. The Higher Education Statistics Agency (HESA) sends out its first survey six months after graduation which provides initial data on the GLM and tends to show mixed results. After that opinion is divided over the length of time it takes for graduates to achieve appropriate employment and the extent to which the first job influences later careers (Dolton and Silles 2001; Elias and Purcell 2004). Dolton and Silles (2001), for example maintain that entry level employment influences later careers so that graduates who initially enter low-level employment tend to remain there. Elias and Purcell (2004), by contrast, argue that qualifications extend their influence for a

much longer period. They appear to believe that the career paths of graduates are forever related to initial degree education.

2.4 Territories of debate

The foregoing begins to identify territories of debate within which to examine the GLM. It reveals that the supply of graduates is increasingly differentiated. Factors such as awarding institution, degree subject, gender and class position may affect the type of employment that graduates achieve. Moreover, HCT has substantial weaknesses. This indicates that this study requires to consider alternative theories of the relationship between education and work which may have more explanatory power. It also appears that defining graduate-level employment is problematic, particularly in newer graduate jobs. This section begins with a broad overview of contrasting models of the GLM.

The optimistic view of the GLM where it is claimed that demand is increasing apace with supply is most notably espoused in the work of Perter Elias and Kate Purcell. Their research is articulated in a categorisation of graduate jobs known as the SOC(HE) (Elias and Purcell (2003, 2004, Wilton et al 2004). Recent research³, based on a comparison of European labour markets, also supports a widening of graduate level employment. Teichler (2007) notes that links between occupations at lower levels in the occupational hierarchy and supplying degrees establish that these occupations should now be seen as graduate level.

In contrast, critical writers argue that many graduates are not achieving appropriate employment, proceeding from different methodological and theoretical perspectives. Educational policy is challenged by focusing on employment outcomes. Significantly, such writers do not argue that matching by qualifications is flawed, rather the line is that there are not enough graduate jobs to meet the increase in supply. In general terms, mismatch derives from two perspectives. Firstly, from

³ The CHEERS study analyses data from 40,000 graduates in 11 European countries and Japan. Data was collected four years after graduation (Teichler 2007).

the field of economics, many argue that over-education is endemic and that the wage premium for graduates is falling (Chevalier 2003). Alternatively, and from a sociological perspective, mismatches are found to accrue disproportionately to certain groups of graduates. Contributing factors include gender, social class, class of degree or a “weight of numbers” argument (Johnston and Little 2007; Smetherham 2006; Wolf 2002). Yet these writers avoid an explicit definition of graduate jobs and claims appear to be based on a traditional view of graduate employment as high status. In order to evaluate such claims, it would therefore seem appropriate to consider available models for categorising graduate employment.

2.5 Models of graduate employment

2.5.1 Standard Occupational Classification (SOC)

The first of these is the Standard Occupational Classification (SOC) (ONS2000). According to the SOC descriptors, the conceptual basis of the classification is derived from the skill level and skill content of the occupation, resulting in nine major employment groups.

“Within the context of the classification, “skill” is defined in terms of the nature and duration of the qualifications, training and work experience required to become competent to perform the associated tasks in a particular job.” (ONS 2000).

It is apparent from this quote that there is an implicit assumption that qualifications signal the skills required in occupations. This assumption can be contested on the basis that competency to perform is often measured in terms of personal attributes rather than occupational skills (Grugulis et al 2004; Warhurst and Thompson 2006). In the GLM, however, it must be assumed that qualifications are the major currency for achieving employment. Moreover the conceptual basis of the SOC also includes work experience, suggesting that the locus of skill formation is not necessarily always within education. The SOC categorisation is based on fixed and arbitrary job requirements and wedded to a technical division of labour.

The SOC then sub-divides skills into four levels associated with categories and job families, stating,

“Skill levels are approximated by the length of time deemed necessary for a person to become fully competent in the performance of the tasks associated with a job. This in turn is a function of the time taken to gain necessary formal qualifications or the required amount of work-based training.”

Level 4 contains corporate managers and administrators and the professions and is normally defined by degree education or an equivalent period of relevant work experience. The third skills level applies to occupations that normally require a body of knowledge associated with a period of post-compulsory education but not to degree level. The nature of qualifications, training and work experience in the three major groups of the SOC where graduates may be found is shown in Table 2:1.

Table 2:1: Standard Occupational Classification

SOC Major Group⁴	Nature of Qualifications, Training and Experience
Managers and Senior Officials	A significant amount of knowledge and experience of the production processes and service requirements associated with the efficient functioning of organisations and businesses.
Professions	A degree or equivalent qualification, with some occupations requiring postgraduate qualifications and/or a formal period of experience related training.
Associate Professional and Technical	An associated high-level vocational qualification, often involving a substantial period of full-time training or further study. Some additional task-related training is usually provided through a formal period of induction.

(Adapted from ONS2000)

Table 2:1 confirms that the SOC combines qualifications, tasks, occupational training and work experience. According to Elias et al (1999) in order to explain revisions to the SOC90 contained in the SOC2000, ranking occupations according to the level of qualifications held by typical job-holders produces some undesirable results. Results are skewed by the dramatic increase in qualifications held by

⁴ The other Major groups (4-9), are Administrative and Secretarial Occupations, Skilled Trades, Sales and Customer Service Occupations, Process, Plant and Machine Operatives and Elementary Occupations. For the purposes of this study, deemed to be non-graduate.

younger age cohorts and the fact that, for example, sizeable proportions of undergraduates work in bar jobs. Their solution is to compare the educational scores of different age cohorts within the same occupation. This point will be discussed further in the section on the SOC(HE) which also employs this methodology. It is raised here to emphasise the possibility that increases in the qualifications held by job incumbents do not necessarily signal any change in the nature of work.

The way in which occupations are categorised in the SOC presents some problems for the present study. Table 2:1 clearly suggests that practical work experience is integral to skill level and content and qualifications are assumed to play an important role in demonstrating required occupational skills. It seems to indicate that relevant training results from education, particularly in the Professional and Associate Professional categories. This raises questions about the locus of skill formation and the nature of qualifications. Although the Associate Professional and Technical category specifically notes that degree level education is not required, it specifies the requirement for task-related training. Significantly within the category, several occupations stipulate degree education for entry and also membership of professional associations. This requirement is most apparent in health-related Associate Professions but is also seen in the Business category. Rodgers and Waters (2001) conducted an extensive review of Business and Public Service Associate Professionals for government. They admit that the group is extremely heterogeneous but conclude that, “graduates are increasingly recruited into associate professional occupations although employers rarely stipulate a degree as an entry requirement” (ibid:3)

Colonisation by graduates in the Associate Professional category is explained by weaknesses in intermediate skills training and also the availability of graduates (Rodger and Waters 2001). It is then reasonable to assume that connections between education and work in the Associate Professional category are influenced by whether or not a related degree is available. In the Business and Public Service category, degrees may not be required, yet the connected education may make

graduates more attractive to employers. The entire category may also contain occupations who have shifted skill formation from the workplace to higher education. Reliance on contextual knowledge rather than qualifications in the Manager category may indicate that management knowledge is applied rather than theoretically-based (D Brown 1995). The Manager category also contains an implicit hierarchical structure so that, for example, Police Officers above Inspector grade are placed within the Manager category whereas lower ranked police officers are in the Associate Professional category. This is presumably because of the length of time it takes to become an Inspector but indicates different methods of skill acquisition, unconnected with formal education. Managerial occupations incorporate supervision of subordinates rather than explicit occupational knowledge and skills. A major revision of managerial occupations was conducted between the SOC 1990 and SOC 2000, partly to rectify inflation of the “manager” title and also to bring the UK in line with other European countries (Elias et al 1999). Although the revision reduced occupations in the manager category, it is perhaps the most disparate category within the SOC, containing CEOs of large organisations and a range of lower level functional managers such as Customer Care Managers.

The conceptual framework used in the SOC exposes contradictions in the use of, and requirement for, degree level education. The Professional category which is explicit in its requirement for degree education contains ideal typical graduate jobs. The Manager and Associate professional categories are, however, less straightforward in possible connections between education and work, noted as an area for further investigation in this study. However, for the purposes of this chapter, examination of the SOC perhaps reveals why boundaries in the GLM are contested and exposes methodological problems in the criteria used to define graduate-level employment.

2.5.2 SOC(HE)

In order to provide an explicit model of graduate employment, the SOC(HE) model has been generated from the SOC. Notably, it is most often used in government rather than academic literatures (DfES 2003b, FSS 2006). FutureskillsScotland, for example, rely on this model in their report on the GLM in Scotland (2006), which

found “in 2001/03 84% of graduates in Scotland were in a graduate job”. The model has therefore proved useful as a justification for policy.

In order to fully understand the SOC(HE), it is worth examining the methodology employed. The model was developed using three sources of information: The Labour Force Survey (LFS), text descriptions of the nature of work and qualifications required, and thirdly cross-institution survey evidence from the 1995 cohort across 33 institutions. Two different age groups (21-35 year olds and 40 – 54 year olds) were matched against the SOC and the model developed an occupational classification of graduate employment (Elias and Purcell 2004b). Classification is based on the percentage of those holding a degree in each of the two age groups, matched with the 353 unit groups of the SOC and then allocated to “graduate” or “non-graduate” categories. In addition to the presence of graduates in occupations, LFS evidence was used to check whether a degree was required for entry, confirming the classification.

This does not mean that the model is exclusively based on secondary data: Elias and Purcell also carried out empirical testing using survey evidence and interviews to corroborate the model. The SOC(HE), it appears, is derived from an assumption that the presence of graduates in occupations necessarily makes them graduate jobs. Validation of the model is carried out post hoc and relies on graduates’ self-perception of skills and knowledge use, which is notoriously subjective and imprecise (Stasz 2002; Teichler 2007). A weakness of the model is that skills use is not anchored to particular occupations and rather to the classification structure. Job quality is also implied in the hierarchy of jobs rather than explicitly examined in the research which is surprising, given that it forms a substantial element of occupational analysis more generally (Green 2006).

Notwithstanding these criticisms, to an extent, by drawing on the SOC as a basis for their model Elias and Purcell have used data that does take into account other features of work. Furthermore, it is admitted that graduates and employers may use job titles for graduate jobs that do not reflect changes in the nature and organisation

of associated tasks but justify this with their additional qualitative data on skills and knowledge use.

Much of Elias and Purcell's research is based on data collected seven years after graduation. How valid degrees are after seven years in the workplace is arguable and may imply an extended transition from university to employment. According to Elias and Purcell (2003:8) "three-and-a-half years after finishing their degree course, career paths of graduates were still evolving". In part then, mismatch in early careers is dismissed as a transition effect. If this is the case, then it is doubtful whether after a period of seven years in the labour market, success can be attributed or connected solely to possession of degree education. Nevertheless, the transition effect is worthy of further investigation and suggests that movement in early careers may be a key factor in analysing the GLM.

Whilst the methodology employed in the model's development has been questioned, discussion now turns to the differences between and within categories. Core assumptions will be extrapolated from the model, given that a theoretical framework is not explicitly discussed in the research. There are two clear objectives in Elias and Purcell's work: firstly to "provide a more comprehensive picture of the changing dynamics of the GLM" (Elias and Purcell 2003) given the increase in the number of graduates, and secondly, to "construct an heuristic model of the GLM" (Elias and Purcell 2004b). Thus the model attempts to codify graduate jobs and suggests absorption of graduates into appropriate employment. Whilst the rationale for the model, "that a measure of the utilisation of highly qualified labour within the UK is required" (ibid 2004b) is accepted, scrutiny of the model (reproduced in Table 2:2) presents some specific problems.

Table 2:2 SOC(HE): a classification of occupations for GLM analysis

SOC(HE) category	Description	Examples
Traditional	Established professions, for which, historically, the normal route has been via an undergraduate degree programme.	Solicitors, Medical practitioners, HE and Secondary education teachers, biological scientists, Management consultants
Modern	New professions, particularly in management, IT and creative vocational areas, which graduates have been entering since educational expansion in the 1960s.	Directors, chief executives, software professionals, primary school teachers, authors, writers, journalists
New graduate occupations	Areas of employment, many in new or expanding occupations, where the route into the professional area has recently changed such that it has increasingly become via an undergraduate degree programme	Marketing and sales managers, physiotherapists, occupational therapists, management accountants, welfare, housing, probation officers, countryside /park rangers
Niche graduate occupations	Occupations where the majority of incumbents are not graduates but within which there are stable or growing specialist niches which require higher education skills and knowledge	Leisure and sports managers, Hotel, accommodation managers, nurses, midwives, retail managers
Non-graduate occupations	Occupations that are likely to constitute under-utilisation of higher education skills and knowledge	Sales assistants, Filing and record clerks, routine laboratory testers, debt, rent and cash collectors.

(Source: Elias and Purcell 2004b)

The model assumes a hierarchy in graduate jobs that is an important departure from traditional views of a clear distinction between graduate and non-graduate jobs. Category labels suggest extension and widening of graduate occupations based on an historical pattern of graduatisation in employment. The hierarchy ranges from 95% of jobs requiring a degree in the Traditional category, to 33% in the non-graduate category which indicates a significant proportion of new occupations that now

require graduates. The SOC contains nine categories and only the Professional category is said to be exclusively graduate.

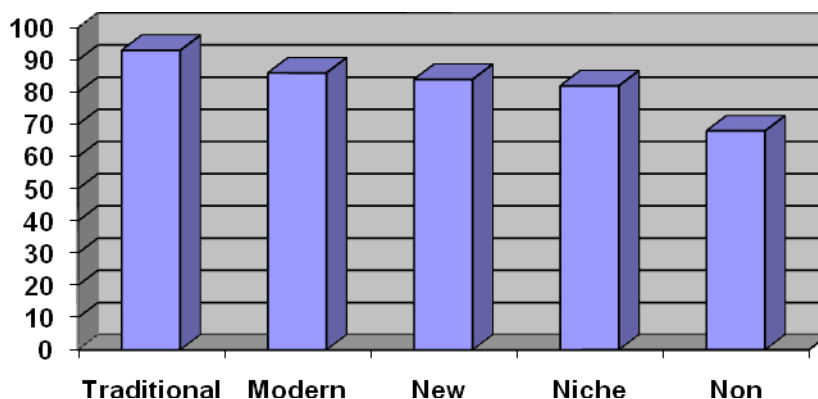
Traditional and Modern categories largely contain what can be described as “the professions” where, it is argued, there is little contention that graduates are appropriately employed. However the New and Niche categories which contain occupations that have relatively recently been accessed by degree education appear to be less definitely “graduate”. Elias and Purcell suggest that these are categories where a significant proportion of jobs are appropriate for, and make use of, high level qualifications (Elias and Purcell 2004b). They qualify this claim by suggesting that in non-graduate occupations “this title is not meant to imply that an incumbent is inappropriately placed”. It becomes clear that there is an underlying “positive spin” on the GLM, or in other words that graduates *are* likely to achieve appropriate jobs and furthermore that if a proportion of graduates enter occupations, then that in itself is enough to change the occupation. The model therefore becomes self-fulfilling.

The SOC(HE) also presents some internal contradictions between and within categories which are difficult to explain and do not appear to take account of job characteristics. For example, differences between a secondary teacher (Traditional) and primary teacher (Modern) are less than those between CEOs of organisations and primary teachers (both Modern). Elias and Purcell (2004b) categorise Chartered Accountants as “New” graduates whereas elsewhere in the literature they would be considered as traditional professionals (MacDonald 1995). Categories contained in the model imply that it charts the graduatisation of occupations rather than addressing the qualities within jobs that would make them distinctively graduate.

There is an implicit assumption in the model that the presence of graduates necessarily means that skills and knowledge are used. To illustrate this point, Figure 2:2 shows the percentage of graduates stating that they use the skills

developed on their degree course in their current/last job, bearing in mind that this evidence is gathered seven years after graduation.

Figure 2:2 Skills Use in SOC(HE)



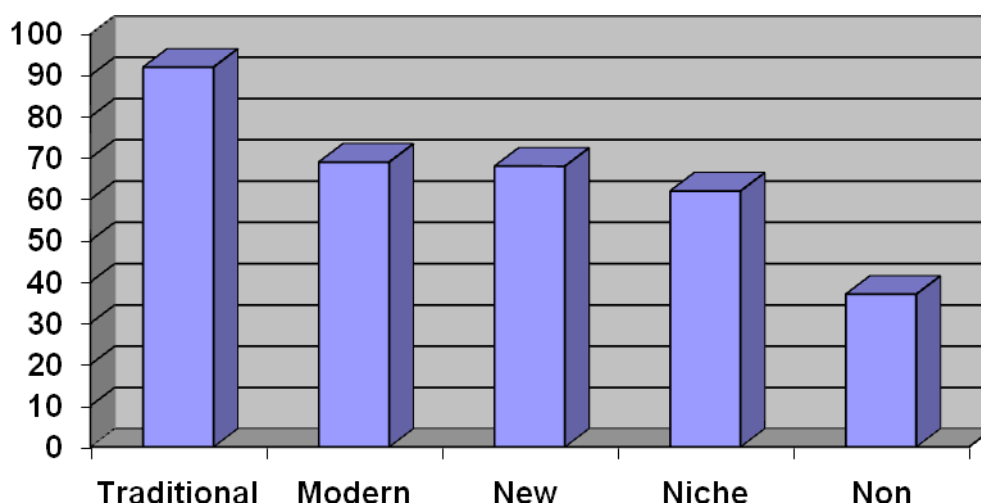
(Source:adapted from Elias and Purcell 2004b)

There is an obvious difference between the four graduate categories and the non-graduate category. However the data showing that almost 70% of graduates in the non-graduate category reported that they were using the skills developed on their course is somewhat confusing. It could be that some non-graduate occupations use skills that could be derived from degree education but at a lower level. For example, classroom assistants are categorised as non-graduates and it could be argued that this occupation uses many of the same skills as teachers (EOC 2007). There is then a potential confusion between the type and level of skills use producing an over-optimistic picture. This has implications for this, and other, studies of the GLM which rely on self-report of skills use. Levels of IT skills use, for example, vary considerably, yet it could be argued that IT skills have been transferred from university.

Alternatively, it could be that the question was wrongly worded so that had the respondents been asked whether they used the *knowledge* gained on their degree course, a different picture would emerge. This is borne out in the data (Elias and

Purcell 2003) where respondents were asked whether they were using the subject/discipline knowledge acquired on their degree course, the results of which are shown in Figure 2:3.

Figure 2:3 Subject/discipline use in SOC(HE)



(source:adapted from Elias and Purcell 2003)

The gradient across categories is more pronounced than in Figure 2:2. Again, however, it demonstrates that almost 40% of graduates in the non-graduate category report that they use subject knowledge. Given the type of low-level occupations in this category, this evidence is surprising. It also contrasts with claims made by educational research (Brennan and McGeevor 1988; Teichler 2007) that the UK higher education system generally shows a loose connection between degree and occupational knowledge. It may be that graduates interpret knowledge use in a fairly wide sense. For example, business graduates in any occupation may think that they are using subject knowledge merely because they work in a business environment.

Comparing Figures 2:2 and 2:3 show differences in knowledge use and skills use suggesting an anomaly in the data. Conflation of knowledge and skills may be a flaw in this model and important in evaluating its potential use (Warhurst and Thompson 2006). It cannot necessarily be assumed that the level of skills use

reported in the non-graduate category indicates that these occupations are using graduate level skills. Self-report evidence derived from large-scale surveys may not be adequate to categorise occupations and use of a skill, insufficient without some kind of occupational reference point. Returning to the classroom assistant example, clearly there may be different responses according to whether graduates have an education or a business qualification. The former might be more inclined to report knowledge use. Yet both are graduates and both are in the same occupation. This suggests that disaggregation of skills and knowledge is important in analysing graduate employment. Moreover connections between degree and occupational knowledge may be an important differentiating factor in self-report evidence and in evaluating graduate employment. Graduates in the Traditional category who are likely to have connected degrees may not be using their knowledge *more* than in other categories, rather their degree knowledge is perhaps more closely connected to occupational knowledge.

With regard to Elias and Purcell's intention to measure change in the GLM, their findings are on the whole positive. They state that, "to a large extent, we believe that ... the nature of work has changed in ways that have accommodated the huge rise in the number of graduates" (Elias and Purcell 2006:14). However this evidence is not across categories: they point out that the most significant area of UK employment growth has been amongst New graduate occupations but in a sort of "chicken and egg" scenario it is not clear which came first: more graduates with "new" degrees or "new" jobs requiring degree level skills. For example, regarding physiotherapists, in the older age group 28% had degrees and in the younger age group this rose to 79%, reflecting the graduatisation of physiotherapy but not necessarily an increase in skills required to do the job. Brown and Lauder (2003) note that these categories are an example of "constructed demand" for graduates. However, the argument requires to be completed by further evidence on transfer of skills in such occupations.

Elias and Purcell pay particular attention to gender and earnings in their research and a major contribution of their work is to highlight gender differences in graduates'

earnings (Elias and Purcell 2004c). Broadly speaking their findings support HCT and indicate that earnings in the graduate categories offer significant personal returns to education in comparison to the non-graduate category, with the proviso that if this does not happen immediately, it will over time. However, it could also be that the earnings of non-graduates are declining thus enhancing the relative earnings of graduates. Alternatively, gendered occupations such as nursing and primary teaching may attract lower rewards, irrespective of whether a degree is required for access. Despite this caveat, these features are noted as important in analysis of graduate employment.

Two core assumptions can be abstracted from Elias and Purcell's work: that an externally derived classification of the GLM is both possible and valid, and, secondly that demand for graduates is increasing in line with supply. These assumptions will be discussed and critiqued in turn with a view to evaluating the utility of the SOC(HE). The first assumption presents some difficulties and raises questions on the extent to which the SOC(HE) develops knowledge of graduate work and employment. It has already been noted that there are debates over defining graduate jobs and the SOC(HE) does not appear to resolve the debate. This returns to the previous discussion on methodology and the process of defining graduate jobs prior to validating skills utilisation. The countervailing evidence that graduates may not be achieving jobs that use their skills and knowledge (Warhurst et al 2004) must also be considered in critiquing the model, particularly with reference to demand for graduates. If demand is artificially produced by the availability of graduates, then without analysis of what graduates do, and irrespective of whether graduates are in occupations, then post hoc validation can be challenged. Moreover the difficulty of measuring and comparing skills across occupations is evident (Borghans et al 2001; Stasz 2002). The argument that qualifications can be used as proxies for skill and are imperfect indicators of job performance (Warhurst and Thompson 2006, Grugulis et al 2004) is largely ignored by Elias and Purcell. Elias and Purcell categorise the skills required in graduate jobs as expertise, strategic and managerial and interactive (Elias and Purcell 2004b). Yet such categories are so broad that they do not appear to be of much use in analysing employment. Interactive skills are

particularly imprecise as an indicator of high level employment and could be applied to all jobs that involve communication at any level. So for the purposes of this chapter, the first core assumption is questioned, that it is possible to define a graduate job from self-report of skills and knowledge use without considering the qualities within jobs and the level of utilisation.

Confusion also emerges between specific degree-related knowledge and skills that may be applicable to all degree courses. For graduates with vocational degrees, job opportunities will be related to the specific knowledge gained in the degree course. However, with more general degrees in, for example, Arts and Humanities, the graduate may be much more likely to rely on generic skills such as problem-solving and written communication. This distinction is absent from the initial formulation of the SOC(HE) model, but appears in later work (Elias and Purcell 2006). Nevertheless it is not incorporated in the SOC(HE) and makes the data presented in Figures 2:2 and 2:3 appear inflated. The SOC(HE) may therefore represent an increase in vocational degrees rather than more occupations of graduate level.

The tension between specific and generic knowledge and skills creates an important differentiator for analysis of the GLM and will be considered further in the next chapter. An important aspect is evaluation of whether greater specialisation in degree subjects means significant change in levels of occupational skills and knowledge. In professional work, specialist knowledge at degree level is an accepted feature of the education of future professionals. Yet by contrast, in labour process theory, specialization is a force for de-skilling, usually discussed in relation to employer/worker relationships (Braverman 1998; Littler 1982). In other words, there is a disconnection within specialisation that is related to where the occupation is placed in the occupational hierarchy. The significance of this disconnection will be explored further in later chapters of this thesis.

The second core assumption, that demand for graduates is increasing implies a general upskilling of work and also that the labour market is an effective sorting mechanism. This assumption neglects constraints such as debt, mobility and

extrinsic motivation which may influence graduates' occupational choice. For example, high levels of debt may mean that graduates have to remain at home with their parents, preventing them from moving to areas where jobs are available. Moreover, there is also an implicit assumption in the SOC(HE) that because degrees are required for access, they are necessarily required in work, ignoring the screening function of qualifications. Finally graduatisation, implied in the SOC(HE), does not necessarily indicate upskilling in occupations or increased complexity in jobs (Green 2006). Instead it might only signify a change in the locus of initial training from the workplace to the university.

In summary, the utility of the SOC(HE) is that it provides a base from which to explore the GLM. Critique of the model rests firstly on the methods employed to develop it and secondly on what is absent from the research. Analysis is restricted to graduates' self-report of skills and knowledge utilisation unrelated to occupation, much of which is conducted seven years after graduation. That said, the model does present an explicit categorisation of graduate jobs which makes a genuine attempt to explore change in graduate employment. It identifies new occupations where graduates are employed. The model's value is that it recognises that the GLM may be changing, the implication being that as the higher education system becomes more diversified, new graduate occupations are created.

Although anomalies between and within graduate categories were discussed, it is accepted that any attempt to categorise the entire GLM may produce such anomalies. The model represents a wider definition of graduate jobs that requires further evidence to support its efficacy, addressed in the present study. Perhaps the major weakness of the model is that it assumes that if an occupation requires a degree for entry, then that automatically makes that occupation graduate level. Elias and Purcell state,

“it is possible to identify jobs for which particular levels of education, or types of education, are required – and jobs that cannot be accessed without prior completion of an undergraduate degree, regardless of whether the

subject knowledge or the discipline-specific skills developed on the degree are required in order to do the job well” (2007:4)

This quote admits that the qualifications required to get a job and do the job may not coincide, supporting the idea of qualification inflation in the GLM. Furthermore there is no attempt to consider qualities within work. To an extent Elias and Purcell do consider the relationship between acquired and required knowledge and skills, but this is inferred and not specifically related to the graduate and job opportunity. In this way the Modern, New and Niche categories all appear to contain occupations requiring specialist degree level education, for example, physiotherapists and nurses. Elias and Purcell argue that the focus of research should shift from a definition of graduate jobs to the jobs that graduates do (Purcell et al 2003a). Ironically, having developed an explicit categorisation of graduate jobs, the typology suggests that more evidence is required on the work that graduates do in their jobs. Despite these reservations, the SOC(HE) identifies that a process of graduatisation may be underway in the GLM. Yet it is difficult to accept that upskilling is the only reason for this process and so requires further research. The next sections of this chapter will consider less optimistic models of the GLM.

2.6 Mismatch in the Graduate Labour Market

This section considers less optimistic perspectives on employment outcomes for graduates: it describes and evaluates the factors and explanations said to cause mismatch. In addition to qualifications and knowledge and skills links between university and employment, personal characteristics such as age, gender and ethnicity are introduced as factors in matching people to jobs (Reay et al 2001). These factors indicate that qualifications are not the sole currency on which graduates trade and that degrees cannot be separated from their holders in evaluating graduate employment. The first part of this section will explore economic literatures that focus on substantive elements of education to indicate a mismatch between qualifications and/or skills and knowledge, followed by sociological literatures that are more often concerned with inequalities in the GLM.

2.6.1 The over-education perspective

The literature on over-education largely adopts an econometric perspective. Green and Mackintosh (2006) prefer the term “under-employment”, noting that studies in this area do not seek to argue that too much education is a problem, rather that the level of employment does not require degree education. There are two major objectives for research in this area. The first is to relate levels of skills and qualifications to those required in occupations. Studies may treat graduates as a homogenous group, disaggregate by degree level or occasionally drill deeper to include degree subject⁵ (Chevalier 2003, Allen and Van der Velden 2001, Walker and Zhu 2005). Secondly and relatedly, over-education is quantified in returns to education in the form of earnings. The underlying hypotheses of studies on over-education tend to challenge the crude version of HCT and can be separated into two broad streams within the literature. Some writers focus on required education to argue that a qualifications mismatch arises where degree education is not required in the job: the educational mismatch (Dolton and Vignoles 2000). Others are more concerned with transfer of knowledge and skills between higher education and work. They argue that over-education can be identified where knowledge and skills, but more often skills, are not used in work.

There are three main methods to measure over-education: objective, subjective and empirical. Each has strengths and weaknesses but differ according to whether required education is a feature of work (objective), whether it is best assessed by individuals who carry out the work (subjective), or by using an aggregate measure of the mean (or mode) education within the occupation (empirical). Subsequently, over-education is quantified at different levels (Sloane 2002).

⁵ Most of the literature refers to a “skills mismatch” and does not consider field of study. An exception to this is the work of Allen and De Weert (2007) using data from five countries. They asked graduates questions on the correspondence between field of study and employment. Data for the UK showed that 15.8% were in a job where a higher level of education would be more appropriate (i.e. undereducated), 40.8% showed a match between job level and field of study, 18.6% had jobs at their own level of education but in a different field of study, 15.4% were at a lower tertiary level and 9.4% were in jobs below tertiary level (see also Robst 2007 who presents US data and finds that majors such as English, social sciences and liberal arts show highest prevalence of mismatch).

Significantly, Battu et al (2000) apply the three different measurement techniques to the same data set and find that the scale of over-education differs according to measurement technique and consequently identifies different individuals as being over-educated. Chevalier (2000) recognises a weakness in measurement and makes a distinction between apparent and genuine over-education. Apparent over-education is where a degree is not required but degree skills are used, and the genuine version is where qualifications are neither used nor required. This distinction, he argues, may reflect that graduates do not necessarily have the same skills and knowledge, or that employers look for different qualities in graduate employees.

Where graduate jobs are defined, these are usually taken from the Manager and Professional SOC categories with only the Computer Analyst from the Associate Professional category included (Alpin et al 1998). This may in itself reveal why over-education is portrayed as widespread. The educational mismatch excludes many of the more recently graduatised occupations in the Associate Professional and Technical occupations such as Nursing and other professions allied to Medicine.

Allen and Van der Velden (2001) argue that educational and skills mismatches should be made distinct suggesting that the former does not necessary lead to the latter. Their explanation is that graduates cannot be treated as a homogenous group and that over-education simply reflects differences in the quality of graduate skills. Evidence is derived from skills and knowledge use in matched and mismatched graduates and they find that many graduates in matched jobs report skill mismatches and conversely many apparently over-educated graduates report high levels of skill use and few skill shortages. Findings such as these lead Sloane (2002) to argue that over-education only shows that a degree is an imperfect indicator of ability to be productive. Sloane (2002) also suggests that the labour market sorts graduates according to utility for occupations and that less able, or less desirable, graduates will inevitably be sorted into lower level occupations. Although they derive from different conceptualisations of matching, studies on over-education conclude that

there is insufficient demand for highly skilled workers to meet an increased supply of graduates (Felstead et al 2007)

Earnings is a sub-set of literatures on over-education, the rationale being that a graduate job may be distinguished from a non-graduate job by an increased level of reward. Elias and Purcell (2004) also examine earnings and find that the difference between graduates and non-graduates in each of their categories is significant, indicating a graduate premium. However they also find a “significant gradient in earnings” across categories with graduates in the New and Niche categories earning less than those in the Traditional and Modern categories. They do not offer an explanation for this difference, referring rather to evidence of skills and knowledge use. The difference could be explained by the higher proportion of non-graduates in the New and Niche categories, given that the data is averaged. It could also be that the relative value of a degree is reducing as graduates increasingly enter occupations previously occupied by non-graduates (Brynin 2002). This is supported by Walker and Zhu (2005) who disaggregate Labour Force Survey (LFS) data and find a marked fall in returns to higher education, confined to the lower SOC categories, and an increase in the proportion of maths and engineering graduates acquiring graduate jobs, consistent with falling numbers of such graduates. This data suggests that earnings differentials are related to the value placed on certain occupations and also that the relative scarcity of some degrees means that they attract a premium in the labour market (Weeden 2002). There is a distinction to be made between the value of a degree *per se* and that placed on constituent knowledge and skills.

In general terms, there is broad agreement that differentials between graduates and non-graduates exist although the picture amongst graduates is less clear. How work and occupations are valued is, it could be argued, socially constructed. Weeden (2002:62), for example, argues that educational credentialing, creates “social and legal boundaries around occupations and thus drives up rewards to those occupations”. He further suggests that there are two ways in which credentialing restricts the labour supply. Firstly, credentials certify the acquisition of skills and these specialised skills shrink the pool of candidates able to perform an occupation’s

tasks. Secondly credentials serve as a largely arbitrary currency that buys membership to a particular club, restricting membership to those with the correct credentials. Restrictive practices only become possible according to the relative scarcity of degrees in the labour market, typical in traditional professions. As a trend, however, this raises some questions worthy of further investigation in this study.

O’Leary and Sloane (2005) incorporate gender in their analysis of graduate earnings and estimate returns to first degrees, masters and PhDs in different subject areas using data from the LFS. Interestingly they find that returns to education are higher for women than for men as a consequence of the lower comparator group earnings for women. They state that “women tend to select those disciplines which lead to lower lifetime earnings, for example, arts and humanities” (O’Leary and Sloane 2005:19). This does not challenge that there is a pay gap between male and female earnings, rather it suggests that different research questions may produce different statistical evidence depending on comparator groups and the focus of analysis.

Evidence from studies on graduate earnings indicates that research on the GLM is beginning to focus on heterogeneity amongst graduates rather than aggregate data. The consensus regarding government policy is that, in terms of future earnings, charging students for the cost of education may be to the disadvantage of certain groups within the GLM (Smith et al 2000). The evidence presented on earnings challenges HCT as a crude measure which masks differences in returns within the graduate population.

The literature on over-education suggests that qualifications should be made distinct from skills and knowledge in analysis of graduate employment. Yet some issues remain unanswered. The educational mismatch is arbitrarily assumed when graduates are in jobs that do not require degrees. This is said to produce a skills and/or knowledge mismatch, dependent on the connections between educational and occupational skills. Both are said to have adverse effects on productivity and earnings. Yet explanation is limited. More sensitive studies (Allen and de Weert

2007) recognise that some ostensibly matched graduates do not use their knowledge and skills and in line with Elias and Purcell, graduates in jobs where degrees are not required, nevertheless report that they use their degree education in work. Clearly this may be a methodological problem, derived from using large scale survey evidence. However it may also be that there is an imperfect relationship between supply and demand in the GLM. Correspondence between education and work is more complex than match/mismatch according to qualifications and/or knowledge and skills. Employers and occupations value different attributes in graduate employees, some of which may be unrelated to substantive elements of education. It may be that for graduates there is a mismatch between acquired and required knowledge and skills or that the nature of work in some jobs where graduates are present prevents the use of knowledge and skills. The literatures on over-education do, however, point to the possibility that demand for graduates may vary. The next section explores the sociological approach to the GLM.

2.6.2 The employability perspective

Whilst sociologists also concern themselves with mismatch, and often use the same territories as economists, they are less concerned with quantifying over-education. The focus of these studies tends to be on demonstrating inequalities in the GLM. The challenge to policy is broadly understood by arguing that graduates have varying levels of employability and claims are made that HCT is inadequate to explain the realities of the GLM. There are numerous definitions of employability (Brown et al 2003, McQuaid and Lindsay 2005) but for the purposes of this chapter Brown et al's (2003: 111) is most relevant to research in the GLM, given that it is specifically designed for that purpose. It suggests that there may be within-group differences amongst graduates: employability is therefore defined as "the relative chances of acquiring and maintaining different kinds of employment", based on a combination of hard and soft currencies. This definition recognises that although employability may have arbitrary components, upon entering the labour market positional competition governs success (Hirsch 1977).

The key difference between the economic and sociological perspectives on graduate work and employment is that sociology adopts a broader focus, implicitly or explicitly relying on variation in types and levels of capital to explain how the GLM operates. In preparation for this section of the chapter, it is worth briefly explaining how the concept of capital, derived from the work of Bourdieu⁶, can add value to studies of the GLM and more specifically to this thesis. In Bourdieu's theory of practice, human action is represented as a relationship between habitus and field (Grenfell and James 1998). Habitus is essentially a set of cultural dispositions which inform how agents operate within bounded structures (or fields). Education is a field made up of principles such as purpose and equality of access and higher education is a sub-field which has its own orthodoxy in terms of rules, assumptions and norms. Cultural dispositions possessed by actors translate into a set of group characteristics which have a value (or capital) for social activity enacted within the field. Bourdieu identifies three types of capital: economic, social and cultural. The first two correspond to wealth and networks of social relations and the third is the product of education. Cultural capital comprises the personal attributes of the educated, the qualifications they hold and the institutions that award qualifications. Of particular interest to this study is that, in this case graduates, do not enter, nor leave the field with equal amounts or configurations of capital. Yet it would be a mistake to suggest that cultural capital is an objectively quantifiable resource. It can, however, be used as an heuristic device to constitute common group characteristics which in turn influence entry to the field of work and employment which has its own structure, rules and norms of activity, governed by economic and social capital. Employability, in this sense, represents a link between two fields of social activity and is articulated according to the extent to which cultural capital translates into economic capital.

Features within employability comprise factors such as access to university, institution attended, degree subject, employment choice as well as personal attributes

⁶ It is not the intention of this section to explore or critique Bourdieu's philosophy of practice, rather to indicate how the terms are used within the thesis. More specific reference to Bourdieu and Passeron's (1977) work on education will be made in Chapter Three.

unrelated to education such as class, gender and parental education (Schomberg 2007). As with the SOC(HE) model, the GLM becomes hierarchical. However the hierarchy is based on supply-side characteristics that disadvantage certain groups of graduates. Moreau and Leathwood (2006) argue, for example, that middle-class graduates are more successful than their socially-disadvantaged peers. Moreover, it is said that graduates of Russell-group universities have a distinct advantage in the labour market (Breen 2003). These arguments are at a polar extreme from the meritocratic drivers implied in government policy and suggest that higher education is incidental to maintaining original class position.

Perhaps the most influential authors on employability are Philip Brown and colleagues (Brown et al 2003; Brown and Hesketh 2004; Brown and Scase 1994). They claim that educational policy is not achieving its desired outcomes, despite the rhetoric that places responsibility on the education system to dispense employability and on students to acquire it. A useful distinction is made between the absolute and relative dimensions of employability (Brown and Hesketh 2004:25). The absolute, they propose, is the appropriate skills, knowledge, commitment or business acumen to do the job in question. However the relative element depends on the laws of supply and demand in the job market.

There are several strands to the absolute and relative measures of employability, usefully outlined in Brown and Hesketh's (2004) work, *The Mismanagement of Talent*. Referring to Bourdieu, they reconstitute more general notions of cultural capital as the product of university education into personal capital. Personal capital is defined as a combination of hard and soft currencies (ibid:34ff) comprising credentials, work experience and personal attributes and skills. Yet they also include a "narrative of employability" which involves an ability to market hard and soft currencies in a particular way which is attractive to employers. Fred Hirsch's (1977) theory of positional competition is used to explain why ever greater numbers of graduates are not achieving high-status work and employment. This is because, for Brown and his colleagues, "employability is primarily determined by the labour market rather than the capabilities of individuals" (Brown et al 2003:110).

Positional competition also explains why graduate numbers continue to increase. Although there is heightened competition within the GLM, deterioration in the labour market prospects of those without degrees encourages even greater numbers to enrol in higher education, sometimes referred to as the “sheepskin effect” (McGuinness 2003). Yet the value of Brown and Hesketh’s work is that it also recognises that there may be “within-group” competition which produces a nuanced understanding of mismatch and oversupply. For example, “[i]n terms of the middle classes the management of individual employability is largely a question of how similar cultural resources are translated into personal capital in different ways” (Brown and Hesketh 2004:38). Consequently, via the lens of personal capital and positional competition, it may be possible to identify mismatches between graduates and the work they do, based on any of the factors within personal capital. However claims of a general oversupply of graduates, whilst they may be true, also require to take account of the circumstances and conditions that influence the matching process.

Research on employability offers some useful avenues to explore in the present study. Notably, the recruitment and selection process is often overlooked in studies of the GLM. Analysis is more usually restricted to where graduates are employed rather than how they got there. If a general oversupply of graduates obtains, then it is at the recruitment stage where inequalities may be most apparent. Brown and Hesketh (2004) are particularly critical of the selection process for graduate trainees and note that employers tend to use awarding institution to reduce applications, thereafter using the features of personal capital that are unrelated to education in order to differentiate amongst graduates.

The foregoing models are suggestive of an internal dilemma in the workings of the GLM. In studying the GLM what is perhaps salient, is the extent to which each or a combination of the factors within employability takes precedence. That is to say, is it more important to study for any type of degree at prestigious university or should a prospective student choose a degree subject linked to a specific labour market outcome? Yet it is too late to ask these questions of graduates, given that they have

already made subject and university choices. O’Leary and Sloane (2005) refer to league tables of degree subjects related to earnings comparing these with university measurement criteria such as teaching, research assessment. They draw on evidence from HESA to suggest that Arts and Humanities graduates are generally disadvantaged in the labour market, irrespective of the university attended. Smith et al (2000) consider employability in terms of overall university performance indicators. They use the SOC categories to define graduate and non-graduate jobs including what they term “more recently considered graduate jobs” and find that “the problem of unemployment and inactivity six months after graduation is influenced strongly by individual class of degree, by degree subject studied, by prior qualifications, and by social class background.” (ibid:408) Although such evidence is useful, it tends to focus exclusively on supply-side characteristics and implies that the onus is on universities and graduates to become employable. Employability is therefore a useful indicator for comparison within the graduate labour market which requires complementary evidence from occupations and employers.

That said employability is a valuable concept to link the graduate as “raw material” with labour market outcomes and work and employment more generally. A focus on employability also introduces a tension between the fields of higher education institutions and employment. Higher education cannot purely be considered as training for employment and education for education’s sake is being subtly removed as a priority in higher education (Wolf 2002). Adding employability to the research agenda reveals that there are many different strands to the concept, and it advances the HCT approach considerably. Employability is also a reminder that success is not exclusively related to education: elements within personal capital also influence graduate employment and may assume heightened importance as the supply of graduates increases. Whilst employability is used as a way to compare how different constituent factors affect employment outcomes for graduates, it does not explain why occupations and employers make decisions on specific requirements.

2.7 Models of the graduate labour market: continuity and change

Review of the literatures on the GLM has raised some interesting questions for this study. Initial exploration of the literature suggests continuity and change in employment outcomes for graduates. The structure of the GLM is reproduced in traditional degrees leading to traditional areas of employment, typically in the professions or in graduate trainee positions. Change is represented by new areas of employment for graduates, and also in diversity within the higher education system. Questions are raised on the relationship amongst contributory supply-side factors and the possibility that some may assume higher importance with an increasing supply of graduates. Exploring literatures on employability suggests adopting the notion of personal capital as a way of evaluating graduate attributes. The variables within personal capital, identified in the review, are, inter alia, field of study, generic, specific and social skills, awarding institution, level of degree along with age, gender, social class and work experience. Despite educational policy that is designed to create an education-based meritocracy, the review reveals that paradoxically, an increase in the supply of graduates may reinforce inequalities in the GLM. In effect increasing numbers of graduates reproduces a hierarchy that policy intends to eradicate. Competition amongst graduates, emphasised by employability, produces a creeping instrumentalism, so that the value of education is measured almost exclusively in terms of occupational outcomes (Brown and Hesketh 2004; Hirsch 1977; Young 1994).

The literature review suggests that mismatch has two dimensions, the vertical and horizontal (Teichler 2007). The latter looks at links between features of personal capital and occupational requirements. The former rests on the range of jobs that graduates do and a mismatch between supply and demand. More specifically, the review indicated that there are traditional “ideal-type” graduate jobs and new areas of employment. Kalleberg (2007:58) points out that mismatches often result from “structural lag”. Applying this concept to the GLM means that traditional views of graduate level employment may persist, despite changes in institutional realities. Kalleberg then notes that “structural lags are generally assumed to diminish over time, as cultural expectations catch up to institutional realities”. What is as yet

unclear is why new areas of employment occur, a central theme of this research. The literature search suggests mismatch can be sub-divided into different territories:

- Occupational mismatch (graduate-level employment)
- Educational mismatch (acquired and required qualifications)
- Skills and/or knowledge mismatch (acquired and required skills and knowledge)
- Personal attributes mismatch (social skills and employment)

Consequently if the object of enquiry is graduate employment, there are some gaps in current understanding. By focusing on the labour market for graduates, by necessity laws of supply and demand tend to dominate. Literatures are successful in identifying supply-side characteristics that may contribute to mismatch but less so in explaining sources of demand. However, some tentative explanations begin to emerge for increase in the range of employment that graduates undertake. On the one hand, the SOC(HE) assumes that if a degree is required, then that automatically becomes a graduate job and upskilling is inferred by the presence of graduates. On the other, it appears that the hard currencies within personal capital are less important to employers than soft currencies which are often unrelated to education. Graduates who are in occupations where a degree is required may, or may not, use their skills and knowledge suggesting that qualification requirements may not always be related to work. In other words, there may be differences in what is needed to get a job and do a job, creating a mismatch between graduates and graduate work. In addition, skills and knowledge use is difficult to evaluate without an occupational reference point. Although labour market and labour process research are generally held to be separate areas of investigation, it is clear that a weakness of current research on graduate employment is that the work content in graduate jobs is under-developed. Use or non-use of skills and knowledge whilst instructive, offers limited explanation of how employers and occupations make decisions on which type of graduates they require.

This may be due to the dominant methodology in the GLM: large scale surveys do not lend themselves to analysis of what appears to be a wide range of occupations. Yet studies that do seek to make connections between education and work are illuminating. From the supply-side, Wilton (2008) finds that range of jobs that business graduates achieve is diverse and gendered. It is not merely a case of correspondence between degree and job. Adams and Demaiter (2008) note that higher education cannot possibly evolve at the same rate as software design, and therefore degree education is inadequate training for this occupation. Brown and Hesketh (2004) introduce recruitment and selection as an important area of research.

The review of literatures on the GLM suggests that the relationship between education and work requires further research. HCT, it is argued, is a crude conceptualisation of supply and demand which neglects of how the labour market for graduates operates in practice so indicating that alternative theories of the relationship between education and work are required. The review suggests a further literature search on the sources of demand for graduates and the surrounding circumstances, is necessary to augment the mapping process and to satisfy the research objectives. The literatures reviewed in this chapter reveal that research which seeks to explore the GLM in terms of supply and demand is inadequate to understand changes in the utilisation of graduates. If graduate employment is conceived as a spectrum, at one end there are definite graduate jobs, typically in the traditional professions, and at the other, definite non-graduate jobs leaving a range of occupations that could be graduate jobs in between. Moreover, it appears that the process of graduatisation, suggested by the SOC(HE) requires further explanation. The review has revealed that categorising graduates as mismatched is dependent on the territories used to make connections between education and work, often related to particular graduate attributes. These are level of employment, qualification requirements, use of knowledge and skills and a supply-side definition of employability. Yet Bourdieu's notion of cultural capital also suggests a softer component of degree education related to personal development. The next chapter will therefore address these issues in more detail by considering theoretical resources

to explain how employers and occupations may respond to an increased supply of graduates.

CHAPTER THREE: CONNECTIONS BETWEEN EDUCATION AND WORK

3.1 Perspectives on the role and function of qualifications

In order to address the issues raised in Chapter Two, this chapter considers the role and function of qualifications in matching. Mapping the GLM revealed that different territories within research produce variation in the way in which mismatch is defined, including level of employment, required qualifications and utilisation of knowledge and skills. Consequently an increased number of graduates is said to produce mismatch between supply and demand and between acquired and required knowledge and skills. Chapter Two also suggested that the range of jobs that graduates do is expanding so that alongside expansion in supply, graduatisation may be a consequence of increased supply. Yet the underlying causes for this process are, as yet, unclear.

This chapter examines the interface between education and work more closely by searching for the theoretical resources that may explain different perspectives on matching in the GLM. It proposes that existing research on the GLM tends to adopt a supply-side analysis in order to identify which graduates are mismatched. Whilst this is useful, to fully understand utilisation of graduates, patterns in demand require closer attention. The chapter begins by reviewing perspectives on the relationship between education and work as frames of reference to understand how demand may be constructed. Saunders (2006:3) proposes that relationships between work and education are understood [in theory] to be socially, culturally and economically connected. Consequently, analysis of graduate employment is embedded in the society and/or economy in which an increased supply exists or seeks to create. Approaches to education and work may operate at the micro-level of matching people to jobs but also as theories to understand how the social relations of the workplace (for example authority, hierarchy and divisions of labour) influence patterns of demand (Bills 2004).

The chapter then discusses how matching graduates to jobs is achieved in practice. Conflicting perspectives on ordering in the GLM suggests that qualifications may

signal different attributes in different contexts. The factors within Brown and Hesketh's (2004) concept of personal capital imply that merely relying on the technical aspects of acquired and required knowledge and skills oversimplifies demand for graduates. A focus on particular aspects of personal capital in existing research also makes generalisation across the whole GLM problematic.

3.2 Qualifications within systems of social structuring

The three frames of reference considered are Marxist, Knowledge Economy and Social Closure. The first two, structural, perspectives on the correspondence between work and education offer opposing conceptualisations of social ordering. The Marxist approach identifies the role of schooling as drawing society into conformity with the long term requirements of a capitalist economic system, requiring a docile, compliant workforce (Bowles and Gintis 1976, 2002). In contrast, the Knowledge Economy thesis presents a meritocratic relationship based on educational achievement and driven by a general shift towards knowledge work, in turn requiring increasing numbers of graduates (Bell 1999). Demand for highly-skilled knowledge workers is seen to benefit individuals and the economy as a whole (Burton-Jones 1999; Thurow 2000). Whilst correspondence theories have utility for understanding the drivers of demand at a societal level, they tend to be reductive so that countervailing evidence is rendered trivial to the "grand narrative" employed. Although such theories admit there are agents in the interaction between education and work, they neglect to incorporate the influence of agency to shape and alter relationships between education and work. The third, Weberian, frame considers a sub-set of the theory of social closure, by means of credentials, applied at the level of occupations who act to improve their relative status (Collins 1979). Yet the theory of social closure operates more generally on qualities unrelated to education (Murphy 1988). Analysis of these three frames seeks to identify potential mechanisms in demand for graduates and contribute to understanding the utilisation of graduates .

3.2.1 The Marxist approach

The Marxist approach views demand for graduates and indeed schooling as a function of the capitalist system. Corporate capitalists who control the economic market for production are so powerful that they determine what goes on in other sectors of society, particularly the education system and labour market (D Brown 1995). This approach posits a model of the economic system that is primarily concerned with the maximisation of profit and the extraction of surplus value from workers' labour power, leading to the exploitation of workers by capitalists. The economic system is only secondarily concerned with distribution of resources and employment (Apple 1996). Writers in the Marxist tradition, most notably Bowles and Gintis (1976) in *Schooling in Capitalist America* (see also Apple 1996; Bowles and Gintis 2002; Saunders 2006) argue that as society is fundamentally structured on an unequal basis, the education system consciously or unconsciously aids reproduction of inequalities. They reject an ideology of equal access and achievement, instead believing that modern education systems misrepresent actual class conflicts¹ and therefore legitimate the class structure (D Brown 1995).

Bowles and Gintis (1977) present a correspondence theory, largely based on compulsory-level education. Essentially the requirements of capital, assisted by education systems mould future workers into passive, docile beings who are able and willing to fit into an unequal society. The education system, structured to replicate the workplace and hierarchical authority, attunes students via what is often called the hidden curriculum, to workplace values and norms. The socialisation aspects of education are dominant and function as a form of social control.

Bowles and Gintis (1976: 202) give passing attention to higher education. They claim that, because of increasing numbers in tertiary education, "higher education has been integrated into the wage-labour system", neatly side-stepping the issue of where graduates should be placed in the capital/labour divide. They (ibid:207) argue

¹ Hyman (2006) notes that class, for Marxists, involves a relationship between different economic groups that may be conflictual or consensual. Generally classes are employers, workers and petty bourgeoisie rather than the more familiar upper, middle and working classes. It is not therefore merely a hierarchical categorisation of society. However Bowles and Gintis regularly shift between definitions to fit their central argument.

that integration in the wage labour system is driven by an increase in demand for white-collar workers in tandem with the proletarianization of these workers, supplemented by demand from working-class youth for higher education. The seemingly contradictory forces of increased demand and de-skilling mean that certification is based on its legitimating effects. This allows the further division of labour and continued rationalisation of production (Tyler 1982). Consequently the social relations of production under corporate capitalism represent a major obstacle to meeting aspirations for either rewarding work or status and alienated labour characterises most of the occupational slots available to graduates (Bowles and Gintis 1977:216). The purpose of education is to inculcate the capitalist ideology and credentials at any level are meaningless to the interests of their holders.

The classical Marxist view is that capital manipulates reproduction of inequality that is, by implication, static in nature. Education distributes workers to serve the needs of capital and is constrained from producing knowledge that would challenge the status quo. Under capitalism everything becomes a commodity, including knowledge and skills, appropriated by capitalists for their own purposes. The overall picture of demand is characterised by a relentless deskilling of work. Yet graduates are needed to facilitate deskilling in subordinate categories of workers, simultaneously experiencing constraints on utilisation of their own knowledge and skills. Correspondence works at graduate level because graduates, as agents of capital, may possess skills such as intellectual open-mindedness and problem-solving but these are used solely in the interests of capital (Apple 1993). In addition, graduates are drawn from middle and upper classes reinforcing class-based inequalities. Society is based on class conflict and all empirical phenomena are reducible to the fundamental precepts of Marxism.

Barley (2006:377), for example, examines engineers in the Marxist literature and suggests that this group are portrayed either as “agents of de-skilling or the subjects of de-skilling”. He proposes that “class theorists simply elected to force engineers to one side of the class divide or the other”. Part of the problem, according to Barley, is that Marxists tend to assume they know what workers do and neglect within-group differences. Diversity in the engineering/technician group is not

conducive to the Marxist assertion of overall proletarianisation. Whilst some occupations are de-skilled by new technology, others are upskilled and new occupations are also formed.

Other readings of Marx (Apple 1993; Saunders 2006) develop the classical view, whilst retaining many of the core ideas. Michael Apple in *Education and Power* (1993) focuses on the design of university curricula in order to advance the argument that schooling socialises students to conform to the needs of capital. The correspondence between technical skills and knowledge in education and the workplace, he admits, also requires examination of the labour process in occupations. Apple proposes that ,

“the education system is organised not only to teach the knowledge that, how and to required by society but also organised in such a way that it assists in the production of technical/administrative knowledge required to expand markets, control production, labour and people, engage in basic and applied research needed by industry and create artificial needs amongst the population” (Apple 1993:19).

Although he criticises Bowles and Gintis’s version of correspondence as too straightforward, Apple’s work is, in effect, a diluted version. According to Apple, demand for graduates also originates in the capitalist system of work and extraction of surplus value from workers’ labour power. For example, managerial approaches to controlling labour originate in the workplace, not merely for the efficiency of the organisation but primarily for accumulation and control of technical/administrative knowledge. The perceived legitimacy of managerial techniques means that the technical/administrative knowledge that has been transformed within organisations returns to university where it is disseminated to future managers (Apple 1993:123). Technical knowledge, for Apple, is not necessarily a neutral commodity in the context of a corporate economy. The capital accumulation imperative in the division and control of labour requires capitalists to guarantee a relatively constant supply of economic and cultural capital. Consequently, capitalists exert a greater influence in universities constraining their autonomy.

In the Marxist approach, contra-evidence is couched in terms of contradictions that nevertheless do not detract from the core tenets (Burawoy 1990). Apple identifies a number of contradictions in the relationship between education and work. Firstly, the combination of languages and procedures of capital with the liberal discourse of person rights in education creates a contradiction in the relationship between education and work. Education therefore favours a closer alignment between schooling and the needs of industry. Capitalists themselves become more outspoken in their own moves to use schooling for legitimation and accumulation in the economic sphere.

Secondly, Apple admits that educators do not unequivocally work in the interests of capital. Universities do not only act as distributive institutions, they are also productive in and of themselves. The contention is that information is a productive force which requires autonomy in decision-making and produces a situation entirely contradictory to the discipline capital imposes on workers (ibid: 153). Apple accepts that the critical capacities of graduates are required to keep society dynamic, yet these capacities can challenge capital. However he proposes that unless critical capacities are concealed or used to advance capitalist production, they create a barrier to entry.

Thirdly, capitalism encourages over-production of graduates as a reserve labour force and as a reserve of cultural capital. New knowledge forms are used to create new techniques for production, stimulation of needs and markets and in division and control of labour. The dominance of corporate control, use and ultimate accumulation of technical knowledge sets limits on the forms it will take in society and ultimately on the kinds of knowledge and people selected as legitimate. An excess of graduates is, according to Marxist theory, unsurprising. The research function in universities requires an investment in education which is only profitable in the long-term and therefore contrary to short-term needs of capital. Moulding for Apple is conceived in terms of its de-collectivising nature. For example, (ibid:138) systems of education with their emphasis on individual achievement are ideally suited to reproduce possessive individuals, a vision that lies at the ideological heart of corporate economies. The ideal of moulding is, for Apple, apparent in more

subtle ways (ibid:114) and suggests a model of social relations based on individual calculation and pursuit of self-interest with accommodation and adjustment of interests through competition.

Fourthly, the role of the state in education produces a contradiction between allocation of resources and interventions designed to support capital. The state has been able to facilitate the case for expansion of capitalist social and market relations as a market order which maximises individual freedom of choice. It sustains capital accumulation, provides services, creates new markets, protects old ones, and absorbs a large proportion of surplus workers into public employment (ibid:48). In terms of education, the state assumes more of the costs of production by funding education but does not interfere in the demand side of the labour market. Those who do not succeed in education are labelled “deviant” and consequently receive little state support.

The Marxist approach can be criticised because it overstates capitalist control in education systems. Docility and compliance are the primary determinants of demand and by implication, success in the labour market. However, it appears to be an overly deterministic view of the relationship between higher education and work which neglects the possibility that students learn useful skills and knowledge for their future work roles. It does, however, raise questions on the extent to which demand for graduates may shape and limit educational curricula. Employers may, for example, try to influence what universities produce although it is difficult to accept that this is a capitalist strategy. It is more likely to be driven by occupational or organisational interests.

In the Marxist approach the technical dimensions of work and education do not have strong connections, except perhaps in educating managers in ever sophisticated control techniques (Apple 1993). Teaching methods that rehearse future work roles, prompted by the employability agenda, might support such a view although these are more likely used to help graduates than employers. The classical Marxist approach also rejects any possibility for higher education to function as a means of social mobility, preferring instead a static view of the class structure that can only be changed by overthrowing the capitalist system. There is also little explanation for

expansion in the range of jobs that graduates do. Employability from this perspective could be seen as an attempt by capital to mould potential workers to the needs of the workplace aided by the socialisation of workers in university. Newer occupationally-oriented courses such as nursing seek academic validation and certification but it is doubtful whether this is driven by capital rather than professional self-interest.

There is a strong connection, however, in this approach in terms of who does what job. Progressive and relentless deskilling characterises the nature of work and education acts as a filter to service the needs of capital. There is, however, only a minor contribution to the types of jobs required. In the Marxist frame, the legitimacy of qualifications in matching is cast as a response to capitalist exploitation and graduates collude in their own exploitation by seeking to become qualified. This perspective seems to suggest that capitalists are the only beneficiaries of education and yet no corrective is offered in the literature, nor is there any space given for alternative explanations. Consequently the Marxist approach does little to advance knowledge of graduate work and employment which is perhaps why higher education does not feature in Bowles and Gintis' work. It appears that writers in this tradition focus only on examples that fit their own interpretation within the confines of the "grand narrative" employed. The next section considers an alternative view of demand for graduates, also embedded in the capitalist system but one where knowledge and skills are emphasised as valuable commodities in the relationship between education and work.

3.2.2 Knowledge economy approach

This section considers the extent to which graduates fit with wider shifts towards a post-industrial society and knowledge economy. Demand for graduates is logically situated in economic activity, and determines the level and type of education required. In common with the Marxist perspective, the focus is also on the preparation of graduates for work. However, integration between employment and

education is viewed positively and contributes towards fulfilling a technical need. Guile (2002:253), explains the Knowledge Economy Thesis as,

“global economic and technical change heralds the emergence of a Knowledge Economy, growth in knowledge work and high skills employment. The economy is dependant on education and a positive link between investment in education, economic growth and employment”.

Useful skills and knowledge are the new base of power in modern society and access to this power is via education. (Bell 1999). Advocates of the knowledge economy proclaim that the mode of production has altered to such an extent that society is now structured on the basis of knowledge capitalism (Adler 2001; Burton-Jones 1999). The shift from industrial to post-industrial society means that material assets such as land, labour and machinery are secondary to intangible “weightless” assets. The knowledge economy thesis is based on an idea that knowledge is the key determinant for economic success (Thurow 2000). The type of knowledge required, however, is variously and vaguely described as high level, creative and theoretical. According to Bell (1999:195) post-industrial society, rests on “a set of organized statements of facts or ideas, presenting a reasoned judgement or an experimental result, which is transmitted to others through some communication medium in some systematic form”.

The role of technology looms large in the knowledge economy thesis. Castells (2000), for example, speaks of informationalism. The transformation in society for Castells is not restricted to high level knowledge, rather it is the process of distribution of knowledge via information technology, diffused throughout the occupational structure which drives change. In contrast to the Marxist view, technology does not deskill and alienate workers, instead it facilitates a burgeoning market in the exchange of symbolic goods. Knowledge is not the major commodity, instead the action of knowledge upon itself becomes the main source of productivity. Information technology (IT) is privileged as the facilitator of change in the mode of production. Although Castells only makes a passing reference to higher education as an example of a workplace that cannot universally rely on IT to facilitate change, by implication he suggests that IT skills may be decisive in evaluation of graduate

employment. At the forefront of the shift to “weightless” assets will be a new cadre of knowledge workers, an attendant shift in work organisation, accompanied by new organisational structures and networks. The breakdown of bureaucracy is fundamental to the knowledge economy thesis. Burton-Jones (1999:12), for example, states that

“signs of the emerging knowledge economy are apparent in the increasing use of symbolic rather than physical goods, the lessening need for physically massed/collated resources, and the declining importance of the traditional boundaries defined by business functions, industries and nations.”

Although graduates are central to this approach, there is little clarity on the precise forms of knowledge required to fit the vision. Is it theoretical knowledge itself or is knowledge more properly situated in the context in which it is used? The new economy is based on more than knowledge per se, it also rests on an ability to produce new forms of knowledge and to effectively communicate with other stakeholders in the business environment. Stehr (1994: 95) criticises a narrow definition of technical-scientific or formal knowledge and suggests a definition of knowledge as “capacity for action”. Stehr’s definition would extend the scope of knowledge work beyond technical-scientific workers that Bell foresees. However capacity for action is not distinctively a feature of graduate jobs, nor does it appear in competencies valued by graduate employers (Hesketh 2000). Indeed it is itself a rather “weightless” term.

In addition, Thompson et al (2001:924) note that placing service work at the centre of the knowledge economy ignores differences in the nature of service work, much of which is “outside the framework of any conceivable notion of a knowledge economy”. Stehr (1994) also notes that information about the growth in the number of jobs in a specific sector does not reflect changes in the type of work. Demand for graduates may predominantly be from the service sector but if this means that graduates are employed in call centres then it is unlikely that their knowledge and skills are being used effectively.

This approach implies a functional correspondence between education and work but one where the emphasis is on useful skills and knowledge rather than compliance and docility. Acquisition of human capital in the form of qualifications is the dominant measure of individual and aggregate success. Social class, gender and racial inequalities disappear to be replaced with a new “knowledge class” (Bell 1999), ordered by educational achievement (cf Darr and Warhurst 2008). In other words an implied education-based meritocracy allocates people to their correct positions in the occupational hierarchy and transcends original class position. The assumption made in the knowledge economy thesis is that prospective students act in a rational calculative manner in circumstances where they are not in full possession of the vagaries of future labour market opportunities. This is why, despite increasing numbers of graduates, shortages remain, particularly in science-related employment, at the forefront of knowledge work. Undergraduates continue to pursue esoteric studies such as sociology and philosophy and the correspondence between general intellectual capability and economic success has yet to be substantiated, particularly at the level of higher education (Keep and Mayhew 1999, 2004; Mayhew et al 2004).

Although the knowledge economy and Marxist approaches differ in their view of social structuring (Saunders 2006), perceptions of the role of higher education are remarkably similar. Both perspectives reduce the role of education to the needs of the workplace and seem to allow limited space for the agency of educators or students. Human and cultural capital leads to greater personal power in the economic arena and is produced in educational institutions either via socialisation or technical, theoretical knowledge. They both appear to be grand narratives that view any contra-evidence as deviant rather than disconfirming.

Consequently the knowledge economy drives an increase in the supply of graduates. Policy-makers have wholeheartedly adopted the vision and yet avoid intervening in demand. Warhurst (2008:72) notes that “[g]iven that there is a commonly held belief that it is hard practically, politically and financially for governments to shape labour market demand in firms, supply-side intervention then appears not just desirable but feasible”. The GLM therefore becomes a co-ordinating mechanism that is supposed to make efficient use of existing talents and skills but one where co-

ordination between demand and supply is absent. Knowledge economy proponents accept that the market may be inefficient in the short-run by inducing oversupply. Nevertheless they argue that increasing supply is a necessary ingredient for reaping dynamic increasing returns to scale associated with competition and stimulus of innovation. Yet there is a tension between stimulating innovation and increasing employer influence in universities which perhaps explains why definitions of required knowledge are vague. If graduates are to enter the world of work equipped to challenge existing knowledge, then general intellectual abilities would seem more important than reproducing received wisdom. This suggests that employers may interpret increasing numbers of graduates according to their own requirements rather than the fulfilment of a knowledge economy.

Within literatures on the knowledge economy, the terms knowledge economy, knowledge society and post-industrial society are often used interchangeably. Stehr (1994:6), for example, speaks of a knowledge society because “the constitutive mechanism or the identity of modern society is increasingly driven by “knowledge”” but adds that “the emergence of knowledge societies signals first and foremost a radical transformation in the structure of the economy” (ibid:10). His line is that because knowledge has become the determinant for economic success, it has the wider potential to transform social hierarchies, stratification and class structures and become the principle means of social cohesion and integration. Logically therefore, it is necessary to assess the extent to which the premise that there has been a radical transformation in the economy holds. By examining linkages between education and work, and employment outcomes for graduates, the assumption that increasing graduate numbers leads to wider societal change can be questioned. Bourdieu and Passeron (1977:185) note that

“given that there is no society in which the educational system is reduced to the role of an industrial enterprise subject to exclusively economic goals ..., it is only by sheer force of ideology that one can present the “needs of the economy” or society as the rational reasonable basis for a consensus on the hierarchy of the functions incumbent upon the educational system.”

This quote demonstrates that there may be conflicting perceptions of the purpose of higher education and its role in society, leading to confusion over how education is measured. It appears that educational policy stems, not from the idea of a knowledge society where education and learning for its own sake is the ideal but rather by a knowledge economy measured almost exclusively in terms of economic success. Bell (1999:176) cites Robert Lane in making the distinction between “the “democratic” society [that] has a foundation in governmental and interpersonal relations, and the “affluent society” a foundation in economics, so the knowledgeable society has its roots in epistemology and the logic of inquiry.” The implications are clear: affluence does not flow from knowledge itself, rather from the way in which it is used and valued in the world of work (Crouch et al 1999). The idea of knowledge as a commodity cannot be easily reconciled with its role as a public good. Society also looks to universities to solve social problems and qualifications can be seen as passports for those who do not have class advantages (Jackson 2007). The transformation from industrial to post-industrial society implies structural changes from possession of material assets to knowledge assets. Since knowledge in the form of qualifications does not confer any material advantages outside the workplace, then the transformation cannot be complete.

Evaluation of knowledge in terms of its contribution to the economic sphere introduces instrumentalism in higher education and perhaps limits students’ approach to learning. According to Hollingsworth and Boyer (1999:205),

“Individuals who invest in knowledge to increase earnings capacity in the labour market, rationally limiting their efforts to learning what they will “need”, tend to learn less, and often subsequently earn less, than individuals who learn for other than economic reasons – because they identify with teachers or have been socialized into a culture of learning”.

The pursuit of knowledge for employment is therefore at odds with knowledge as valuable in itself and consequently limits the knowledge acquired. Furthermore it presupposes that the technical and social requirements of work can be made explicit and that universities are capable and willing to service these needs. Keep and Mayhew (1999) note that the type of knowledge required for jobs in the putative

knowledge economy is conflated with an ever-widening conceptualisation of skills which produces confusion over where these are best acquired. The OECD Report on Tertiary Education for the Knowledge Economy notes a tension in the mission of educational institutions between producing an enlightened society and acceding to the demands of the labour market (OECD 2008). Depending on the criteria used for measurement, demand for graduates is not necessarily restricted to achieving high status employment, rather the possession of degree knowledge may have benefits to society. However, demand for graduates tends not to be measured in these terms. Moreover, the rise in vocational degrees seems to suggest that undergraduates seek courses to enhance their chances of employment. Commenting on vocational degrees, Tribe (2003:465) notes that their graduates “are routinely denounced by employers as lacking in skills that, say, a training in classics or mathematics might better provide”. Again this suggests that there may be tensions in the type of knowledge required in the new economy and consequently in the type of graduates supplied.

Fulfilment of the knowledge economy thesis is concerned with a “paradigm shift” in the nature of work and the workers required. The thesis posits fundamental changes in the industries and occupations that will fuel demand. As noted, definitions of the knowledge required in a knowledge economy present problems. As evidence for change in the character of knowledge, Bell (1999:44) points to “the exponential growth and branching of science, the rise of a new intellectual technology, the creation of systematic research through R&D budgets, and, as the calyx of all this, the codification of theoretical knowledge”. The primacy of theoretical knowledge more than anything else defines the new economy, although related to its utility in specific sectors of work, particularly IT and science. Consequently we might expect these areas of education to have expanded in parallel. However this has not been the case: indeed many universities have seen science departments reduced or closed. Moreover there does not seem to be an appetite from undergraduates to pursue such courses (Tribe 2003).

In addition the knowledge economy thesis proposes that there have been fundamental changes in the way in which work is organised and in the employment relationship, necessary to facilitate expansion in knowledge work. Burton-Jones (1999), for example, claims that the hallmark of modern production systems is the progressive erosion of boundaries. This is seen in the importance of teamworking, the interchangeability of tasks and the breaking down of demarcation lines between industries. Instead of being employees, workers in the knowledge economy are urged to think of themselves as “knowledge suppliers” working with a variety of organisations.

Much has been written about such claims and this chapter cannot do justice to individual aspects of changes in the nature of work. Suffice to say that whilst they may hold true for a small section of the occupations that graduates might enter, the extent to which such trends are pervasive is challenged (Powell and Snellman 2004). Teamworking, for example, provides a framework for the utilisation of expertise, but generally remains based on fragmented and highly specialised tasks (Alvesson and Thompson 2005:492). Flexible working practices either facilitate worker autonomy or reinforce managerial control, depending on the perspective adopted (Powell and Snellman 2004). If such trends in the nature of work become more prevalent than critiques of the knowledge economy suggest, they also raise questions on the types of knowledge required and used. Useful knowledge may command a premium and facilitate new ways of working.

Yet the extent to which these claims demonstrate a paradigm shift in the nature of work is arguable (Thompson 2005). In addition, changes in the nature of work also suggest individualisation of the employment relationship. This is cast by optimists as freedom to move from job to job (Burton-Jones 1999). By contrast pessimists argue that individualisation results in job insecurity and responsibility for training being devolved to the individual (Keep and Mayhew 1999). Barley and Kunda (2004) in their ethnography of archetypal itinerant knowledge workers find that such workers contract their services to bureaucratic organisations moving from market to job. Interestingly Barley and Kunda (2004:288) also note that “by itself technical knowledge was insufficient for having a career as a contractor. Contractors also

required social skills and social capital". Whilst the onus is on workers to acquire technical expertise, it is the marketability of the expertise and the skills of the worker in accessing project work that ensure success which resonates with Brown and Hesketh's (2004) idea of the "narrative of employability". The erosion of boundaries between organisations, broadly speaking, suggests that more general and transferable knowledge might be required by employers, at odds with increases in vocational degree courses which tend to channel graduates towards a narrow area. The extent to which specialisation in knowledge is a limiting or enabling factor is clearly related to occupation and employing organisation. Whilst freedom to move jobs may seem desirable, it is dependent on labour market opportunities and the ability of, in this case, graduates to market their knowledge. There is a curious "missing link" in the knowledge economy thesis, as forecast by Bell and prescribed by Burton-Jones. Presumably at some stage between the acquisition of knowledge at university and the vision of highly-skilled, transferable knowledge workers, work experience and training are required, unless graduates emerge from university fully equipped to perform in work.

It has been noted that the knowledge economy will demand ever increasing numbers of highly-skilled knowledge workers but where will they be employed and how is the term "knowledge worker" to be defined? Warhurst and Thompson (2006) argue that "while all work is knowledgeable, only a small range of activities (and therefore, occupational and professional groups) meet the criteria. Although a distinction between knowledge and other workers may be useful, occupational categories are not particularly sensitive to knowledge and arbitrary decisions are made on the types of worker that might be needed in the new economy. Definitions of knowledge workers abound (Frenkel et al 1999) and are intimately connected to the increase in service work. Stehr (1994:171), for example, speaks of "experts, counsellors and advisers" although he admits that these terms lack precise and well-established meanings. In terms of graduate employment, the pertinent question is to what extent are graduates, knowledge workers? De weert (1999) proposes that knowledge acquired in formal education and knowledge derived from workplace settings may be incompatible. The difficulties in measuring knowledge and defining knowledge industries and workers, Warhurst and Thompson (2006) argue,

means that a number of proxies are used namely ICT, R&D, qualifications and occupation. According to Warhurst and Thompson, such proxies lead to inflation in occupations and industries described as knowledge intensive because they neglect what workers actually do. Projected growth in demand for knowledge workers is not easily reconciled with the literature on over-education where significant proportions of graduates report that they are not using the skills and knowledge gained from their degrees.

Adams and Demaiter (2008) address connections between education and work for IT workers. IT is considered emblematic of knowledge work and is an area where we would expect to find highly-educated and skilled workers. However the results of their study suggest that the nature of work means that formal and informal networks within organisations rather than qualifications appear to be crucial for skill acquisition. Although workers are generally highly-educated, they come from a diverse set of educational disciplines, and almost half lack formal advanced education or credentials in their field. Whether this is because the knowledge required is not provided by education or that degree education indicates a general trainability for these workers is unclear, although this group is particularly vulnerable, given the pace of change in the IT sector. Specific knowledge gained in higher education may have already become obsolete by the time graduates reach the workplace. It remains to be seen whether this pattern extends into other sectors of employment. However it raises questions on one of the central propositions of knowledge economy theorists: that demand for graduates is increasing in line with achieving the knowledge economy and that degree education is a pre-requisite for knowledge worker status.

The knowledge economy thesis, in common with Marxism, can be criticised for its functionalist approach to the relationship between education and work. The centrality of theoretical knowledge is seen as sufficient to engender increased demand for graduates without any elucidation of the form that knowledge will take in the occupations that graduates enter. It is clearly at odds with evidence on mismatch in the GLM outlined in the previous chapter. These literatures and their critiques do not end with any definitive answer to the question of the extent to which

graduates are knowledge workers. Indeed it is more likely that the growth occupations outlined in the SOC(HE) are “associated with knowledge handling and servicing” rather than “autonomous and empowered knowledge productive jobs” (Fleming et al 2004:725).

The assumptions made in this approach appear to be somewhat naive. It is by no means clear what counts as merit in the knowledge economy and the type of worker required is not immediately apparent (Bills 2004). Thurow (2000) suggests that the knowledge economy will be driven by younger workers because they “work harder, have better skills, are more flexible, and have greater potential” but he also argues that new forms of skill acquisition will involve greater levels of mature adult education. This demonstrates a contradiction in the knowledge economy thesis and in the economic and social mobility drivers of higher education policy. It is apparent, though, that workers in the new economy will be required to continually upgrade skills on their own account. Consequently if employment is increasingly insecure then the notion of career is eroded.

The social and educational inequalities that were primary in the Marxist approach are absent from this literature, excepting the assertion that in the new economy, a new “knowledge class” will emerge (Darr and Warhurst 2008). It is notable, however, that this approach also indicates closer links between higher education institutions and work. Burton-Jones (1999: 210) calls for greater co-operation between firms and educators in order to improve industry-specific training and to encourage knowledge production that is useful to business. This view is vigorously criticised (Marris 2006; Wolf 2002) on the grounds that academic autonomy is crucial for knowledge production. It is doubtful whether Bell (1999: 232) foresaw the extent of educational expansion and differentiation when he stated, “[t]he major problem for the post-industrial society will be adequate numbers of trained persons of professional and technical calibre”. The knowledge economy model produces a circular argument. Growth in demand for graduates is substantiated by increasing levels of education in occupations that in turn confirms the need for more education in the workforce.

The scope and character of the knowledge economy presents some analytical problems for this study. It is unclear whether the primacy of knowledge in this approach will affect all jobs and workers or whether it is limited to a small range of knowledge-intensive industries and groups of workers. Within the graduate population, we have also seen that there is not necessarily a linear connection between the knowledge within the degree and its application in work. Castells and Stehr appear to suggest that the former is the case, others are more critical (Brown and Hesketh 2004; Thompson 2004; Warhurst and Thompson 1998, 2006).

The glaring omission within this approach is the absence of concrete evidence on what knowledge workers do and relatedly what graduates would be expected to do in the jobs that they enter (Adams and Demaiter 2008; Darr and Warhurst 2008; Warhurst and Thompson 2006). The increase in supply of graduates, driven by the ideal of a knowledge economy has perhaps been a pyrrhic victory: more graduates actually reduces the value of qualifications they possess and encourages employers to select on ascription rather than achievement. Nevertheless, discussion of the knowledge economy offers valuable insights on a tightening relationship between education and work and legitimation of educational qualifications as a matching device. Demand for graduates may indeed be related to useful knowledge and skills and their transferability to occupational settings. Employability agendas might prompt educators to think about what types of skills and knowledge students need when they progress from education. Yet it seems that the knowledge required by archetypal knowledge workers is not necessarily gained in higher education which is surprising given that knowledge work is said to drive the new economy. The next section addresses weaknesses in the functional approaches of marxist and knowledge economy frames of reference by considering the theory of social closure which emphasises the agency of actors in the relationship between education and work.

3.2.3 The theory of social closure

The previous two versions of the relationship between education and work, it has been argued, tend to reduce the relationship to a “grand narrative” that does little to explain the variations revealed in Chapter Two. The third approach, social closure,

operates at a different level of analysis and is concerned with the basis of social structuring more generally. Instead of laying out a one-dimensional vision of how society should, or should not, operate, it seeks to explain how groups in society make use of available resources in particular circumstances. Given that this thesis seeks to explore the utilisation of graduates in circumstances of increasing supply it therefore speaks directly to this objective.

In essence, the theory of social closure is related to the monopolisation of status on the basis of group membership (Murphy 1988). Social closure can be formed on the basis of race, class, occupation or other forms of hereditary prestige but of particular interest to this study is closure by means of formal education, sometimes referred to as credentialism (Collins 1979). This is a sub-set of the general theory of closure where the principal forms are traditionally by means of lineage and titles, race or private property. Credentialism is therefore more properly conceived as a rule by which closure can be achieved rather than as an inherent characteristic (Murphy 1988). This approach rests on Weberian notions of the stratifying function of education (Collins 1979, D Brown 1995). The assumption is that educational certification provides a legitimisation of social advantage at an individual level and is used to improve life chances in the market rather than embedded in the means of production. Collectively, education becomes a means to enhance the status of self-interested occupational groups (D Brown 2001). Collins (1979: 34), for example, argues that credentials are a source of occupational control and become the means to build up a sinecure sector of specialist technical and professional enclaves. Davis (1981) suggests that the logic of credentialism lies in reducing competition for entry to occupations. Weber, (cited in Collins 1979:viii) observed,

“The elaboration of the diplomas from universities, business and engineering colleges and the universal clamor for the creation of further educational certificates in all fields serve the formation of the privileged stratum in bureaus and in offices. Such certificates ... above all, claims to the monopolization of socially and economically advantageous positions”

This indicates a strategic use of credentials, which in turn has economic benefits suggesting that the economic and cultural spheres, for Weber, were separate.

Education does not necessarily confer status but it improves the life chances of credential holders. Murphy (1988) explains that there are two forms of closure, exclusion and usurpation. The former involves the exercise of power to defend a group's share of rewards or resources through a process of subordination. Usurpatory closure is the reverse process, whereby groups exercise power in an upward direction to seize advantages from a higher group. Both strategies are legitimated by credentials. Collins (1979) explicitly rejects functional theories of the relationship between education and work which assume the needs of society determine the rewards and behaviour of its members because functionalism cannot explain the continuing importance of both ascriptive factors and the growing importance of credentials in occupational success. Collins (1979:7) argues, "[w]hichever way we look at it the technocratic [functional] interpretation of education hardly receives any support. The same is true if we test the functional theory of stratification". Closure theorists argue that educational credentials are socially determined constructs that necessarily view the occupational structure as a contested and shifting terrain which involves negotiation and conflict between groups seeking to maximise resources and rewards. Whilst it may seem, in that respect, to have similarities with Marxism, it operates at a different level of analysis. Whereas Marxism sees conflict between capital and labour, closure theory addresses conflict amongst occupations and workers in these occupations. There is a connection between work and education but closure theory rejects the idea that the capitalist class has the power to influence the form, content and structure of the education system (Murphy 1988:144). Instead capital takes advantage of features of schooling that have developed autonomously within the educational system. The use of credentials is a strategy whereby occupations can simultaneously dominate in the market for jobs by protecting themselves from the market (Collins 1979:175). GLM for credentialists is therefore a mechanism for making compatible initially independent and possibly conflicting strategies of a large number of agents pursuing their own selfish interests (Hollingsworth and Boyer 1999).

For the purposes of this chapter, credentialism is the process of using credentials to match (in this case) graduates to jobs. The theory of credentialism (Berg 1973; D Brown 1995, 2001; Collins 1979; Davis 1981) seeks to elaborate on the reasons for,

and outcomes of, this process. It sees expansion of higher education as a response to consumer demand rather than a functional necessity. Although the state funds provision of education in the UK, it relies on demand from consumers (students) to propagate the system. Two forms of closure, are distinguished within the theory. The first is closure based on credentials as a type of cultural currency: this is similar to ethnic or racial exclusion insofar as the educated class sets up requirements unrelated to work performance. In this sense credentialism is a derivative of the principal forms of closure in society because owners of property have the right to manage their companies as they choose (Murphy 1988:71). They may therefore choose to exercise that right by stipulating credentials for entry. In this form, credentials are related to monopolisation of power, resources and rewards but not to task-related skills. In essence, the information provided in the degree is an abstraction from the substantive knowledge of degree holders that delimits who may question their competence (D Brown 2001). Occupational groups are successful in legitimating the use of qualifications by claiming that cultural attributes are necessary for the occupation (Collins 1979).

The other interpretation of credentialism focuses on the presence or absence of skills needed for the occupation (Murphy 1988). As such it is contingent on principal forms of closure because it often relies on legal licensing from the State (ibid:72). Occupational reward is determined by market forces and the relative scarcity of skills and knowledge. The complexity of occupational knowledge and skills is important here, for only those occupations that can establish scarce knowledge and skills are successful in achieving closure. Contingent forms of closure operate on the basis of occupational monopolies. It is, however, simplistic to suggest that these two (derivative and contingent) interpretations are mutually exclusive. Indeed they begin to explain different aspects of the connections between education and work. Both are possible but not necessarily in the same proportion. For example, the latter view might be more apparent in traditional professions where specific degrees are required although this does not mean that cultural attributes are irrelevant. Eraut (2000) notes that socialisation plays an important role in the education of professional groups.

Whilst credentialism focuses on the ways in which qualifications are used to achieve closure in the labour market, Bourdieu and Passeron (1977) are concerned with the process of higher education. They focus on class reproduction and argue that the university reproduces (middle) class values in graduates. Education is less about knowledge and skills than the accumulation of cultural capital. Dominance is preserved in the economic system so that advantaged groups are able to cash in on appropriate style, language and cultural dispositions produced in the higher education system. This is achieved by way of the group's habitus which is constructed in an instinctive rather than a deliberate fashion and the economic and cultural spheres become inseparable. Although these arguments may appear to resonate with the Marxist approach, there are subtle differences that make it more appropriate to locate them within a weberian approach. Instead of forcing middle-class values, for Bourdieu and Passeron, education is an interactive process and consequently the habitus of middle-class students closely resembles the values and ideas that higher education seeks to instil. In turn this means that graduates are successful, legitimating the structure of the system. What is often overlooked in their work, is the role of educators and educational certificates in masking and hence legitimating reproduction. Educators are portrayed as colluding in reproduction of cultural capital because they are themselves largely drawn from privileged classes and hence transmit their own cultural capital to students. Regarding certification, Bourdieu and Passeron (ibid:164) state,

“the more an educational system is capable of concealing its social function of legitimating class differences behind its technical function of producing qualifications, the less able it is to ignore the incompressible demands of the labour market”

Technocratic demand ensures that the worth of qualifications is not questioned by employers for fear of unmasking the real purpose of those qualifications, which is to legitimate the hierarchies they sustain. By delegating the power behind selection to academic institutions, privileged classes seem to be renouncing hereditary privilege but are actually concealing it. Demand is therefore closely related to the certification effect of qualifications: “the diploma tends to prevent the relation

between the diploma and occupational status from being related to the more uncertain relations between capacity and status” (ibid:165).

It is difficult to accept, particularly in a differentiated higher education system such as that emerging in the UK that all educators act in this way. Indeed critique is seen as a fundamental precept of higher education and structures of dominance are not immune. Nevertheless, strategies of social reproduction may be reflected within the structure of the system, where prestige is attached to Russell-group universities. Much of the literature on the GLM points to the status of ancient universities disproportionately advantaging their graduates (Breen 2003; Brown and Hesketh 2004), who are themselves disproportionately drawn from the public school system. Bourdieu and Passeron (1977) argue that reproduction manifests itself at different levels of schooling within the education system, so the working classes generally receive less education. They claim that the labour market is used as a means to measure academic success. What is of interest to this study is the direction in which the two aspects of credential closure may be moving influenced by the increase in occupationally-targeted degrees and the process of graduatisation. For example, whilst many management occupations do not specify a particular degree, management education is now much more differentiated into functional departments and fields of study.

There is some confusion over the way in which credentialism is used in contemporary literature. More recent use of the term generally denotes artificial inflation of qualification requirements (Felstead et al 2007; Warhurst 2008). Qualification inflation is held to be a reaction to increased supply, rather than a deliberate strategy on the part of occupations to graduate. In this sense employers assume that higher qualifications automatically signal greater productivity, irrespective of occupational requirements. This use of the term does not strictly adhere to its original theoretical construct. It is more akin to the opportunistic use of graduates, rather than a deliberate strategy to effect closure in occupations. Despite this, the possibility that increased demand for graduates is merely a function of general oversupply is a viable possibility both in opportunism and in strategic graduatisation.

Social closure proposes that the purpose of credentials is to provide a legitimate means of exclusion in the labour market. It appears to explain and predict expansion in consumer demand for higher education and expansion in types of credential. It is less clear how far closure can operate in such circumstances. If claims of oversupply are true then the mechanism of closure in the GLM may alter more towards internal than external means. In other words as the supply of graduates increases, the process shifts more towards differentiation amongst graduates. Exclusion, and utilisation of graduates might then be more likely to be restricted to relevant degree subjects. The original sense of closure remains, however, so that employers may also select on the reputational capital of institutions or principal forms of closure. This approach, therefore, appears to offer more explanatory power than either of the two previous conceptualisations of the relationship between education and work. To an extent the value of closure as an explanatory theory is that it does not merely arrive at a conclusion of match/mismatch in graduate employment. Indeed, Collins (1979) line is that the whole process of matching by qualifications is flawed. What it does do, however, is reinforce the argument that correspondence between education and work is not only dependent on a relationship between what employers want and the skills and knowledge that graduates possess. Moreover it indicates that a focus on recently graduated occupations may clarify the dominant forms of closure in the graduate labour market.

3.3 The function of qualifications: signals, screens and proxies

Once it has been established that the role of qualifications in systems of social structuring varies according to the approach adopted, this section looks more closely at the ways in which qualifications may function in the GLM. If we assume that the occupational structure is hierarchical, the structure of the hierarchy is reflected in the technical division of labour and objectively mapped in the SOC (ONS2000). Each successive division between and within occupations is connected to an associated level of knowledge and skills. Changes in the nature of work, however, shape interpretation of the overall classification leading some to believe that we now have

an “hourglass” structure (Nolan 2001). In general, this proposes that jobs at the top and bottom are expanding, producing contraction in jobs at the intermediate level (Anderson 2009) which has clear implications for graduate employment. As graduate numbers increase and the range of occupations that they enter expands, qualifications may be used to indicate a general upskilling of intermediate occupations.

Yet the question of which occupations are, and should be, included in the jobs at the top of the hierarchy is contested. Debate is often located in perspectives on the upskilling/de-skilling impasse (Grugulis et al 2004; Sawchuk 2003). The impasse, Sawchuk (2003:594) suggests, leaves

“roughly equal proportions of persuasive work/skills research demonstrating that disempowerment and resistance occur, new forms of technological and socio-emotional control occur, rising educational requirements and attainments continues to occur, de-skilling occurs, and up-skilling occurs – all with little agreement as to their inter-relations”.

Clearly, if the SOC(HE) model presents a true picture of graduate employment, then occupations in the New and Niche categories must have experienced a significant level of up-skilling, given that these occupations were previously filled by non-graduates. The associated levels of skills and knowledge within and between occupations means that it is not necessarily just the level of qualification that is required for entry but also the type. Despite debate on trends in upskilling and downskilling, there is general agreement that the requirement for qualifications is growing (Felstead et al 2007).

Whilst attention to the upskilling/deskilling debate may inform analysis of demand for graduates, and demonstrates that changes in the nature of work may have associated changes in educational requirements, it is not particularly useful to indicate if graduates’ skills and knowledge are being used. In other words, if the mismatch problematic is criticised for a focus on supply-side characteristics, then analysis of the upskilling/deskilling impasse may use required qualifications as a proxy for upskilling. Yet it has also been noted that qualifications may be an

artificial device, used to achieve occupational closure complicating a causal connection between graduatisation and upskilling.

Nevertheless, where rising educational requirements are observed, then the underlying reasons require further research. Felstead et al (2007) have noted that many jobs in the current decade are becoming more complex but also that workers are expected to become competent to carry out such jobs in a shorter period of time. It may be that specialisation is an emergent, or growing, trend in graduate employment, where a supply of specialist degrees leads to specific areas of employment. If this is the case then degree knowledge and skills may mask the need for occupational training and competency may be achieved more quickly. Alternatively, the time required to become proficient may be elongated by including the period of degree education in newly graduatised occupations. Evaluation of complexity of work and competency in work is influenced by the extent to which degree education is, or is seen as, a form of occupational training.

Notwithstanding complexity in evaluating technical division of labour, Fevre (1992:50) notes that “specialisation suggests a reason to divide labour but no system for dividing people”. Consequently there is also an implicit status hierarchy in the occupational structure, reflected in the social division of labour. This recognises that there are qualitative differences amongst different types of labour and amongst the people who carry them out. Gender, race and class divisions are obvious examples but even dress-codes (blue and white collar workers) can serve as indicators of occupational status. Moreover, competition amongst occupations and amongst entrants means that, within the structure, occupations are involved in jurisdictional battles over knowledge, skills and status that have attendant ramifications for qualification requirements (Abbott 1988). Such “battles” are apparent in the established professions where peripheral elements of professional expertise are ceded to associate but subordinate occupations who in turn seek to improve their relative status. Using qualifications is an obvious method for occupations to establish boundaries in terms of knowledge and skills but also as a means of enhancing status. Thus the system for dividing people, it could be argued, in part rests on the extent to which graduatisation has a status enhancing role.

Qualifications might then be seen as a bridge that connects the technical and social division of labour. Nevertheless, the bridge is built on shaky foundations for a number of reasons.

Firstly, it is necessary to evaluate the extent to which demand for graduates is, or could be, driven by the technical or social divisions of labour. Chapter two revealed that graduates enter the labour market with different levels and configurations of personal capital (Brown and Hesketh 2004). Consequently qualifications signal different attributes to employers. Spence (1973) observes that in most job markets the employer is not sure of the productive capabilities of an individual at the time of hiring. Employers make assumptions about the signalling capacity of qualifications in order to reduce this uncertainty. The two possible mechanisms of upskilling and status-enhancement would indicate different perspectives on the elements of personal capital that might be attractive to employers. More specifically, the former suggests an emphasis on “hard currencies” and the latter incorporates soft currencies. Particularly in the case of graduates, qualifications can therefore also be used as a screening device in circumstances of uncertainty. Separating the technical and social divisions of labour with reference to the GLM indicates that demand for graduates is influenced by employer perceptions of the content and value of degrees within their particular occupation.

Screening and signalling are not, however, mutually exclusive and may include substantive and relative dimensions dependant on how closely degree and occupational skills and knowledge are connected or indeed whether there is a status element to demand. For example, occupationally relevant qualifications attempt to signal required education so, for example, medics require a specific degree. For graduates with more general degrees though, as Davis (1981:652) notes, “the skills required to persevere and succeed through the education system are believed to be closely associated with the skills required by the employer”. The key word here is “believed”: employers use qualifications as a cost-effective way of screening potential recruits. It must also be remembered that in circumstances of oversupply, the balance between supply and demand is tipped in favour of employers. Even

where graduates have occupationally relevant degrees, there is no guarantee of employment. The balance can, however, be redressed by the relative scarcity of specialised degrees. D Brown (1995) notes that in circumstances where market crowding occurs, employers become more discerning and, in his view, place emphasis on social skills. It could equally be argued that market crowding is overcome by reducing applicants to those with specific degrees. The status enhancing aspects of qualifications are influenced by an increase in the graduate population leading to a “devaluing” of qualifications in general terms (Brown and Hesketh 2004; Mayhew et al 2004). Of course, employer discretion over qualification requirements is not limitless. It may also involve professional bodies or the state in its capacity as a license-granting authority.

Nonetheless, the status versus technical debate is not an either/or scenario. There is a body of literature (Collins 1979; Grugulis et al 2004; Warhurst and Thompson 2006; Wolf 2002) that questions connections between qualifications and work. Berg (1971), for example, maintains that there are very few jobs that cannot be adequately served by secondary education plus on-job training. He characterises the use of credentials to match people to jobs as the “great training robbery” suggesting that qualifications are imperfect indicators of productivity. Warhurst and Thompson (2006), cite History graduates who work as city traders as an example of qualifications operating as proxies for knowledge and skills. This could equally be an example of status-led demand, if these graduates are, for example, from Russell-group universities, or it could be that History degrees provide transferable skills of use in this context. Following Warhurst and Thompson (1998), it is argued that an attempt should be made to disentangle skills and knowledge that may be particularly relevant in the GLM. In so doing, recognition is given to the key principles associated with defining skill outlined by Grugulis et al (2004). These are:

- (i) skill is a property of the worker
- (ii) skill as a property of the job, including job design, forms of control and the nature of the employment relationship
- (iii) skill is a social construction arising from negotiation between economic actors

Essentially, the proxy argument highlights that the supply of skills is subordinate to employer demand and if “these days, whatever employers say is a skill, is a skill” (Lafer 2004:116), supply will most probably be found wanting. Moreover, if uncertainty over the signalling capacity of qualifications influences employer demand, then it is also a problem for educators. Hesketh (2000), for instance, argues that employer perceptions of skill are context bound and vary across sectors of the economy with the result that universities cannot deliver what employers want, or think they want. Employability also emphasises soft skills such as teamworking and communication, that may or may not be successfully incorporated into degree education. Gleeson and Keep (2004) note that the expansion of higher education becomes a substitute for workplace training so that employers freely criticise universities and dodge training costs, thereby abrogating responsibility for improving the skills of their employees onto higher education. The social construction of skills suggests that it is incumbent on the job-seeker to persuade the employer of his/her worth in circumstances where required skills may not necessarily be made explicit introducing the “narrative of employability” element of personal capital.

Nevertheless, credentials are the major currency with which graduates enter the labour market and it is at this early career stage where the function of qualifications can be evaluated by considering how closely, required and acquired skills match. The notion of skill as a property of the job expands the scope of analysis to include scrutiny on work itself. If employers are criticising educators, it could also be argued that they ought to adjust their expectations of graduates by re-designing entry level jobs or by providing context-specific occupational training. However, it seems far more likely that there will be a closer match between skill as a property of the job and in graduate employees when specific degrees are required for an occupation. The mix of social and technical skills in graduate employment is noted as an important element in analysis, both at port of entry and once in employment.

With regard to knowledge, qualifications are again criticised as a proxy measure (Warhurst and Thompson 2006), given the distinction between tacit and formal

knowledge. Graduates may possess knowledge but they are not necessarily equipped to apply it to work situations. Abbott (1988) discussing the professions, notes that separation of formal knowledge, developed and disseminated by the academy, and the “knowledge in use” of practitioners is necessary. This, he suggests, is because the legitimacy of occupational boundaries lies partly in the prestige of connected academic knowledge. Again we can see that knowledge may also be socially constructed: knowledge gained in higher education is implicitly understood to be superior to practitioner knowledge. Whilst graduates’ knowledge is relatively easily assimilated according to field of study, the extent to which knowledge becomes practitioner training is a proposition that requires further empirical evidence. Teichler (2007), however, warns against assuming that, for example, all engineering graduates will become engineers. Consequently, universities may be faced with a dilemma on the types of knowledge taught even in vocationally-oriented degrees. It appears then that different perspectives emerge on the role of qualifications. The technical and social divisions of labour complicate how demand for graduates is conceived. Yet, they offer some useful indicators for the empirical element of this study.

Despite complexity and variation in the function of qualifications, educational credentialing shows remarkable tenacity as the major criterion for allocating people to jobs, particularly in the GLM. Qualifications are seen as a legitimate allocative mechanism, irrespective of whether they are signals, proxies or screens. Perhaps the absence of alternatives for sorting people and jobs partially explains this, coupled with the potential cost-effectiveness of using higher education as a training facility. Variation in the function of qualifications exposes tensions in evaluating matching in the GLM. Qualifications can have an “exchange” or a “use” value in the market for jobs, based on what they signal to employers and the relative value attached to different elements of personal capital (D Brown 1995). The exchange value is concerned with the qualification *per se* or the cultural capital it confers whereas use connects degree skills and knowledge to the occupation. How qualifications translate into capacity in work, however, remains unclear. Whilst we might assume that relevant qualifications have a use value, this requires to be substantiated with empirical evidence.

It certainly appears that different sources of demand might emerge from analysis of the function of qualifications. Yet discretion over the pool of applicants is not necessarily entirely in the employer's hands. Externally validated standards of knowledge required in occupations or professions constrain employer choice to accredited degrees. Existing inequalities amongst graduates may also impact on demand, altering the status-enhancing effect of qualifications which may be particularly apparent where emphasis is placed on the soft currencies within personal capital .

3.4 Summary and conclusions

The aim of this chapter was to explore theoretical approaches to the relationship between education and work, in order to explain differing sources of mismatch in the GLM. It has already been noted that research on the GLM focuses on a particular aspect of the relationship: level of occupation, use of degree knowledge and/or skills or personal attributes. Consequently, the emphasis is on identifying where and why mismatch occurs. Yet Jackson (2007) suggests that where labour market inequalities exist, they are “the macro-level result of a whole range of micro-level decisions by employers and prospective employees.” In the GLM, these micro-level decisions are often ignored in favour of a macro-level analysis of supply and demand.

The three theoretical approaches in this chapter begin to explain variation in the territories of mismatch. They also suggest that correspondence between supply and demand is not uniform and cannot be attributed to any single demand mechanism. The Marxist approach emphasises demand driven by social control and an overly deterministic view of the influence of capital accumulation on the education system. The knowledge economy model presented an idealistic transformation from industrial to post-industrial society that does not stack up with the very real possibility that there are too many graduates and insufficient jobs of a high-level, theoretical nature. Review of these literatures exposed tensions in the type of knowledge required by knowledge workers and that produced in universities. The theory of social closure appeared to offer a more plausible explanation of the

evidence presented in Chapter Two, suggesting that closure may be via qualifications, required knowledge or on the basis of social class. The theory of credentialism also assumes that the requirement for qualifications is driven by occupational self-interest, worthy of further exploration in this thesis.

This chapter has revealed that research on graduate employment also requires recognition of wider societal forces and actors in the relationship between education and work. The qualities needed by graduates may vary but the types of jobs required are embedded in the dominant mode of production. The theory of closure appears to explain sources of rising demand that may or may not be connected to a general upskilling in work. Instead of being grounded in a “grand narrative”, it emphasises the actions of occupations and employers and introduces agency as a factor in analysing how an increasing number of graduates might be interpreted. Whereas Marxist and knowledge economy literatures take an either/or perspective on the dominant characteristics required of workers, closure theory offers the possibility that different patterns of demand for graduates can co-exist. Closure also includes an appreciation that the matching process is governed by market mechanisms that enable or constrain the influence of actors in pursuing different types of closure. Although credentialism in its derivative and contingent forms is pertinent to this study, the principal forms of closure may also operate in the GLM. Graduates do not enter the market with the same levels of personal capital, nor do employers necessarily act in a uniform manner.

Examination of the role and function of qualifications involves a complex interaction amongst actors involved in the GLM rather than an exclusive focus on graduate attributes related to employment outcomes. Supply-side government interventions have succeeded in increasing the number of graduates but these may be interpreted differently by employers, occupations and higher education institutions. The expansion of higher education has produced a bewildering array of knowledge and skills in the graduate population that may or may not be driven by closer attention to the skills and knowledge required by occupations and employers. It is insufficient, however, merely to consider the signalling capacity of qualifications. The potential for qualifications to act as a screening mechanism means that demand can also be

governed by notions of closure. Closure strategies may be formed to “select in” specific graduates or to “select out” the less or inappropriately qualified. The social division of labour emphasises that utilisation of graduates may also derive from status-enhancing effects of qualifications. Yet there is still a gap in understanding of graduate employment. Whilst the three approaches indicate different perspectives on connections between education and work, they are less than forthcoming on what graduates do in occupations where degrees are required or the micro-level decisions made in matching. There does not appear to be a great deal of evidence on the utilisation of graduates once in work, such as Adams and Demaiter (2008) have begun to undertake. Without such evidence, it is difficult to resolve debate on the possible labour market mechanisms identified in this chapter.

This, and the previous, review chapters reveal that we have perhaps been asking the wrong questions in research on graduate employment. Instead of employing a broad brush approach focusing on differences in employment outcomes for graduates, we need to begin with research at the micro-level in order to clarify how graduates are matched in specific occupations. An occupational reference point will allow potential differences in requirements and utilisation to emerge. The next chapter continues the logic of discovery by examining the sociology of the professions, an area of work which features in all approaches considered in this chapter. In particular it pursues the theory of social closure applied in employment and revisits the concept of graduatisation which was introduced as a feature of the GLM in Chapter Two.

CHAPTER FOUR: PROFESSIONAL WORK, “IDEAL-TYPE” GRADUATE EMPLOYMENT

4.1 Introduction and definitions

The two previous chapters established that relationships between education and work are more complex than is often assumed. The reviews revealed different perspectives to analyse the utilisation of graduates. The dynamics of demand may also be influenced by wider societal forces and actors and cannot be reduced to a tension between what universities produce and what employers want. Yet questions remain. Notably, although graduatisation has been identified as a possible outcome of increasing graduate numbers, its impact on graduate work is relatively under-developed thus far.

This chapter examines the pathway between education and work in the professions as a corrective to the critique of current literatures, offered in previous chapters. The aim of this review is to establish the extent to which the professions, accepted as typically graduate, contribute to understanding change in graduate work and employment. Growth in professional employment is integral to claims of a burgeoning knowledge economy (Bell 1999). Professions are incorporated unquestioningly into the “knowledge worker” bracket. Yet the types of knowledge and skills used by professionals and knowledge workers require further exploration. Although these descriptors are often used synonymously, it appears that making some sort of distinction may help analysis of graduate employment. Theories of closure and credentialism draw inspiration from the ideal-typical professional model, although more radical credentialist writers imply that professions use education for status-enhancement rather than any technical skills and knowledge (D. Brown 1995; Collins 1979). The sociology of professions may shed light on the extent to which graduatisation is connected to professionalization strategies.

The chapter begins with a brief overview of what Johnson (1972) refers to as “definitional wrangling” in the sociology of professions and goes on to chart

developments in the literature. If it is accepted that the professions are an ideal-typical model of the relationship between higher education and work, how is this model conceptualised? Key questions include the extent to which professions are a separate group, distinct from other occupations (Sciulli 2005) and how are distinctions made? In terms of the labour market, to what extent does an influx of graduates alter the number of occupations that might be considered “professional”? The final section draws together the literatures covered in this thesis to identify pertinent research questions.

4.2 Definitions of professional work

As noted, professional and knowledge work are generally believed to be synonymous, particularly by those who claim a growth in knowledge work. Yet as Warhurst (2008:75) asserts, “not all knowledge workers are professional workers and not all professional workers are knowledge workers”. Freidson (1994), however, proposes that examining concepts on professions will illuminate the way in which post-industrial society is visualised and how the occupations therein are classified and appears to believe that the professional work is automatically knowledge work. In part, this review will identify the factors that might distinguish these groups, of particular relevance to the objectives of this thesis and analysis of graduate employment.

Notwithstanding definitional distinctions, there also appears to be some commonality in literatures on the GLM and on professions. Both are dominated by ideal-types leaving contested occupations at the boundaries. Chapter two revealed that graduates are now found in occupations that are variously described as semi-professions, quasi-professions or associate professions. Teichler (2007), for example, argues that claims of mismatch are exaggerated because higher education now services such requirements. This could indicate a general upskilling of associate professional occupations or that graduates are colonising occupations previously held by non-graduates (Brynin 2002).

The SOC gives professions a separate category, sub-divided by sector of work. Major groupings within the category are Science and Technology, Health, Teaching and Research and Business and Public Service, all of which are further sub-divided into particular professions. The common theme within sub-divisions is that professions are concerned with providing a service. The Business and Public Service category, for example, contains such diverse occupations as legal professionals, accountants, management consultants, architects, surveyors, social workers and the clergy. Differences amongst professions are related to the historical aspect within the division of labour and indicate how powerful groups in society have come to be considered professional. Thus the clergy remain in the professional category, despite their somewhat peripheral influence in modern society. This suggests that the professional category defined in the SOC is perhaps inadequate for what Hanlon (1998:45) describes as “a shifting rather than a concrete phenomenon”. Freidson (1994:153) notes that whilst all writers agree that professionals are specialists and placed in the upper tiers of the occupational hierarchy, critically important differences emerge in how writers discriminate amongst the occupations therein. Definitions of “profession” may subsequently refer more to how jobs are classified rather than the nature of work and the knowledge of those who carry out the work (ibid:113).

Despite this, the common denominator amongst definitions appears to be the use of some form of expertise in a specialist area of work. Moreover, a descriptor of professions is that required knowledge and skills are acquired in higher education. Knowledge within professions, by implication, becomes credentialed knowledge, supplied by graduates. However, higher education is not in itself sufficient to grant professional status. All professionals may be graduates but the reverse is not true. Brint (2001:110), discussing knowledge workers, gives prominence to “a conception of knowledge as verifiable systems of thought generated and transmitted through advanced university-level instruction”. He describes professional knowledge as the central factor of production used by a privileged form of labour in advanced capitalist societies. Significantly, his definition includes knowledge *and* privilege.

It is argued here that the latter descriptor perhaps sets professions apart from other forms of labour.

The distinction between knowledge and privilege is particularly evident when management occupations are considered. There appears to be ambivalence in the literature in terms of whether managers are professionals (Freidson 1994). Bell (1999), for example, excludes managers from his description of professionals and gives prominence to possessors of scientific-technical knowledge that itself is internally differentiated into a hierarchy of occupations according to complexity of knowledge. Wilensky (1964) reserves the professional label for a relatively few well-established prestigious occupations, concluding that barriers to professionalisation mean that few occupations are successful. Business graduates, however, comprise one of the largest and expanding groups in the GLM (Wilton 2008) and categorisation of management occupations will be revisited in a later section of this chapter.

Crompton (1990) considers how contradictions in debates around defining professions actually reflect wider and more general tensions in the sociologies of work and occupations. She notes that the general tendency to treat the consequences of the division of labour and its associated employment outcomes as *either* generally positive or generally negative ignores the fact that both aspects are co-present. For Crompton, portrayal of professions as either self-interested or altruistic is too simplistic to conduct analysis of a diverse occupational group, a point which will be revisited. This leads her to conclude that professionals should not be placed in a distinctive category separate from other experts. Evetts (2006b) also focuses on expanding the boundaries of professionalism conceptually and empirically. She defines professionalism as service sector, knowledge based and achieved via higher education and a period of vocational training¹.

Konzelmann et al (2007) usefully place professions on a spectrum ranging from emerging to established and incorporate occupational mobility in their definition.

¹ This definition would appear to incorporate many of the occupations that are classified in the SOC as “associate professional”.

Emerging professions are new occupations in the process of acquiring professional status. Established professions have already achieved professional status and awarded legal protection. Midway are the aspiring professions, described as established occupations aspiring to professional status. When this distinction is applied to graduate employment all three groups may potentially make use of graduates but for different reasons. Emerging professions, engaged in defining occupational jurisdictions in order to create a monopoly over the service they provide, may use graduatisation to aid the process. Established professions who are exclusively graduate use higher education as a source of initial occupational knowledge, supplemented by extensive occupational training. Aspiring professions may also consider that graduate entry provides a status-enhancing role.

Overall, there does not appear to be a hard and fast definition of the professions. Whilst they are defined by a specialist area of expertise, there is also an inherent status element to professionalism. As with knowledge work and definitions of graduate employment, implicitly or explicitly, the characteristics of job-holders and the nature of the work cause tensions in definition. On the one hand, a supply-side perspective such as that in the SOC(HE) suggests that the presence of graduates in occupations makes them graduate level (Elias and Purcell 2004). On the other, judgements on the level and type of work are made in order to distinguish whether the occupation might be graduate level, irrespective of whether a degree is required. Already the terms profession, professional and professionalism have been used indiscriminately. Conceptually, however, they require to be made distinct, particularly in evaluating the relationship between higher education and professional work.

According to Evetts (2006a) most writers have now moved on from definitional wrangling because differences between occupations and professions are of degree rather than kind (cf Freidson 1994; Sciulli 2005). As Chapter two revealed, it is relatively easy to describe jobs that are definitely graduate and those that are definitely not, but there is a grey area in between these two extremes. The same appears to be true of professions. Nevertheless examining debate within these literatures may clarify what is happening within graduate work and employment.

There are some guiding questions that will influence the review. Is the object of analysis the characteristics of work or the people who carry out work, or of governance over work and the influence of external actors and forces? All have their place in literatures on the professions and this chapter cannot do justice to them all. However, previous chapters established that diversity in graduate destinations is a contested terrain. Growth in graduate numbers has not produced “more of the same” types of graduates, nor have they been employed in traditional graduate jobs. The sociology of the professions may therefore illuminate the interplay between workers, occupations and external influences on work.

A traditional view of professions such as the SOC provides would exclude a significant proportion of graduate employment leading to claims of occupational mismatches in the GLM. Yet if Associate professions are included, there is a corresponding reduction in the occupational mismatch. Crompton’s definition of expert labour is attractive insofar as it is comparative in nature although “expert labour” could be applied to occupations not usually defined as graduate level so this definition is perhaps too general. In line with Thompson et al’s (2001) distinction between knowledgeability and knowledge work, expertise can be applied to an extent within all categories of work but that does not make all occupations expert labour. The extent to which managerial occupations can be included in a wider definition of professional employment would also have an important impact on graduate employment. In attempting to reconcile the jobs that graduates do in relation to the professions, it appears that the former cannot be neatly mapped onto the latter, particularly by using existing occupational classifications. This chapter rather seeks to outline relevant developments in the literature which may aid understanding of graduate work and employment.

4.3 Perspectives on the professions: the functional approach

Initial attempts to categorise professions adopted a functional approach, later supplemented by definitions of essential characteristics or traits within work that make the professions distinctive. Essentially, functionalists argue that professions

are different because they are seen to act in the wider interest of society and their role extends beyond “doing a job” (Freidson 1994; 2001; Johnson 1972; MacDonald 1995;2006). Much of this literature draws on Durkheim, whereby the increasing division of labour can only be rectified by the formation of moral communities based upon occupational membership (Johnson 1972; MacDonald 2006). Professions are thus at the forefront of maintaining social order in society and their status legitimises decisions that they take. The nature of the work in the professions which is involved with birth, survival, health, education, dispute resolution, law based social order, military engagement, the arts and religion, is seen to give professional workers a moral authority in society extending beyond the workplace (Evetts 2004). In the functional perspective, professional workers are driven by altruism. They do not seek status, rather it is conferred on them by a grateful public. Functionalists claim that the professions are a special category of occupation, assigned a level of status and material reward in return for an undertaking of non-exploitation (of clients), the maintenance of standards of training and other guarantees to society (Crompton 1990).

The functionalist school of thought was developed by adding a list of professional traits derived from the special position in society. Traits comprise autonomy over an area of expertise, the provision of training, self-regulation and altruism accompanied by an ethical code (Johnson 1972). Autonomy in professional judgement and decision-making gives immunity from regulation or evaluation by others. Self-regulation by professional associations gives professions power over monitoring education and training requirements, licensing powers and control over professional practice (Evetts 2002). Trust is an integral part of the relationship professions have with consumers of their service. Codes of ethics are produced so that deviant behaviour can be identified and punished by the professional association, reinforcing the trust clients place in professionals. This approach is, to an extent, engaged in *post hoc* justification of the constituent factors within a profession. Scholars in this area, according to Johnson (1972:37), base their arguments on “abstraction from the core elements which are most fully exhibited by true professions”, usually medicine and law. The search for a theory of the

professions is, for Johnson, hampered by relativism against the traits displayed by a very few occupations.

Within this perspective, counterclaims are made to challenge the central tenets of professionalism. It is believed that professions have to cope with assaults on autonomy such as managerialism and State regulation (Freidson 2001). Such assaults lead to claims of deprofessionalisation and proletarianisation. Deprofessionalisation suggests that, for example, technology routinises professional work and allows the lay population to become more knowledgeable. The continued division of labour makes professionals dependent on other specialists, in turn challenging monopolies (Freidson 1994:131). Even within the traditional professions such as law, many workers are engaged in routine work and only a few in high-level decision making (Darr and Warhurst (2008). Yet they are protected by a license to practice in the profession. Proletarianisation is based on an argument that professions are becoming less autonomous as more are employed in organisations, leading to dilution of the distinctive nature of profession (Muzio and Ackroyd 2006). Again, such claims tend to draw their evidence from law and medicine and use counter-evidence to disprove the functional argument. However they provide evidence that changes in the nature of work such as new technologies may alter professional work. The impact of context of employment may also be a useful avenue for research in this study.

The influence of the state also contributes to weakening the functionalist argument: successive governments, beginning with Thatcher, have sought to control traditional professions by de-regulating markets for their services, introducing competition and imposing external control regimes. Nevertheless, particularly in the ideal-type professions, such initiatives have had minimal effects (Leopold, Glover and Hughes 1996). Successive change projects in the NHS, according to Harrison and McDonald (2003), may have bureaucratised physicians' work but their essential professional status remains strong. However the influence of the state in licensing occupations is key. In the interests of competition, it may be that the state knowingly expands professional ranks in order to counteract the power of existing, strong professional groups.

The functional approach is criticised in the literature (Crompton (1990; Evetts 2004) for neglecting the social context within which professions operate. Crompton (1990), for example, argues that the trait approach does no more than take on board the profession's own definition of how it would like to be seen, or how writers in the tradition see professions. Evetts (2002) argues that discretion is more appropriate than autonomy for analysing professional work. She states that "professional discretion enables workers to assess and evaluate cases and conditions, and to assert professional judgement regarding advice, performance and treatment (Evetts 2002:345) which may apply in medicine but less so in other professions. Following Freidson (1994), she goes on to say that professions need to resist pressures towards routinization of their work and that discretion is defensible whereas autonomy is not. In rejecting the functionalist approach, Johnson (1972) argues that not only do professions presume to tell the rest of society what is good and right for it, they also determine ways of thinking about problems within their jurisdiction. Leopold et al (1996), for example, suggest that defining AIDS as a medical, rather than social problem changed public perceptions of the disease. Claims of autonomy, it is argued (Freidson 2001) are tempered by the contention that occupations, whether professional or not, struggle for control over work processes and do not exist in a vacuum.

The functionalist perspective begins to unravel some of the features of work that might be salient to this study. Although criticised, the functional approach suggests that the nature of professional work incorporates at least some control over work content. Consequently professionals are accorded status that is independent of what they do. Absolute autonomy may be an unobtainable ideal, but discretion and its constraints might be a contributing factor in analysis of graduate employment. Self-regulation in occupations also introduces another, important, actor in the relationship between work and education so that professional associations, sometimes in tandem with the state, may influence entry requirements. This influence may be particularly evident when the state as a major employer of graduates is considered. The functional perspective provides some tools with which to analyse occupations that may or may not be professions. Yet the fundamental assumption of altruism is not particularly helpful in analysing the range of jobs that graduates do. For

example, are associate professions so labelled because they do not have the requisite degree of autonomy, or is it that their expertise is insufficient to grant professional status? Alternatively, does the absence of a professional association affect employment status? In order to answer these, and other, questions the next section looks at literatures on professionalization, developed from dissatisfaction with the functionalist approach.

4.4 Perspectives on the professions: the professional project

In rejecting the functionalist approach, some writers argue that professions operate in their own (rather than society's) interest (Abbott 1988; Collins 1979; Johnson 1972; MacDonald 1995). The professional project evaluates professions in terms of the means by which occupations effect mechanisms to protect and close knowledge and thereby professionalise. Instead of speaking of occupations as tasks or functions, or by locating them in a hierarchy, this perspective evaluates the process (or project) that occupations pursue in order to differentiate themselves and effect upward mobility. From this perspective, professions are expert occupations that happen to establish and maintain monopolies in the market for particular services. Monopolies come about by strategic means that may be structurally unnecessary (Collins 1979; Sciulli 2005), indicating that professional projects do not necessarily begin with upskilling. Collins (1979:134), for example, states that professions are class-based status groups where the community is organised within the realm of work. For Collins, economic reward and social status drive monopolisation of a service. Exclusionary closure provides a market shelter for members of the profession. Alternatively, monopolies are cast in a positive light, as a protective mechanism for those who work in the profession (Freidson 1994).

The emphasis in this perspective shifts from defining professions and particular traits to a more fundamental one of "what are the circumstances in which people in an occupation attempt to turn it into a profession and themselves into professional people?" (Hughes 1963, cited in MacDonald 2006). MacDonald goes on to assert that by this Hughes was referring "not to a structure or a system within which *things*

happen, but to *people's actions* in a social arena.” (MacDonald 2006:359, italics in original) It is therefore more about the means than the outcomes, although these remain important in analysis. Success is not objectively determined by the nature of occupational knowledge or work, rather by the ability to identify and maintain an area of expertise. Standardisation of professional knowledge is integral to the professional project and the subsequent institutionalisation of knowledge within a university degree. Indeed Larson (1977) terms standardisation of knowledge as “the production of producers”. A codified framework of professional knowledge legitimises the occupation and enables the profession to eliminate competition from outside.

This perspective, in contrast to static, structural accounts of the division of labour, offers a plausible explanation that professions may use degree qualifications as a source of occupational closure to deny access or enhance their status. It recognises that occupational mobility is not necessarily a result of change in the nature of work and that agents, for whatever reason, define and redefine areas of work, knowledge and expertise. Fragmentation of expertise resulting in associated and distinct new professions is an accepted feature of professional work and it may be that graduatisation of occupational knowledge is a contributing factor. The process of professionalization, according to Wilensky (1964) consists of five stages: the emergence of a full-time occupation, the establishment of a training school, the founding of a professional association, political agitation directed towards legalising the service and adoption of a formal code. Although the order of these stages is contested and not necessarily invariant (Johnson 1972), they appear to contribute to understanding graduate work and employment. To an extent, the professional project presupposes that occupations pass through different stages to achieve professional status, only one of which is graduatisation. Notably, however, there is no mention of the type or level of knowledge required to stimulate a professional project. MacDonald (1995) claims that professionalisation is not an inevitable process and that unsuccessful projects do not negate the concept, suggesting that there is no pre-defined endstate for professionalization strategies. Freidson (2001)

alludes to occupational mobility in his chapter on training programs for the professions. He argues that semi-professions², although in control of training, credentialing and supervision, “have not established sufficient cognitive authority to dominate either the division of labour ...or public discourse concerning its work.” Friedson does however see the key index for (upward) mobility as successful association with a university reinforcing the notion of graduation as an important driver of mobility. The creation of a market shelter is key to the professional project and the best, if not only, way of achieving this aim is by restricting service provision to qualified members of an occupation. It appears that forging links with higher education at some stage is necessary for a successful project.

Given that the central focus of this chapter is the pathway between higher education and the professions, the professional project is attractive because it introduces agency in demand for graduates. It reinforces duality in the purpose of credentials as providing a rational means to evaluate suitability but also as a source of closure. The professional project, in effect, combines these two elements. If traditional professions are ideal-type graduate jobs, then it could be argued that other occupations are at least potentially heading in that direction. Here again the impact of credentialism discussed in the previous chapter is reiterated, irrespective of whether it is given a positive or negative spin. Freidson (1994:159), for example, notes that there is no alternative other than to rely on indicators such as credentials in order to facilitate the process of choice among labour consumers. Exclusion may indeed be the outcome of credentialism but this rests on the ability of the credential to reliably predict competent performance. Attacks on credentialism, for Freidson (ibid:162) fail to comprehend differences amongst various kinds of work and forms of credentialism. It appears that more evidence is required on the relationship between education and work in various occupations, rather than generalised criticism of credentialism as a process (Brown 1995; Collins 1979). Closure, as Murphy (1988) argues, is not necessarily only exclusion but also inclusion.

² Freidson uses nurses and secondary school teachers as examples of semi-professions.

Although Abbott (1988) rejects professionalization as inadequate, given that it tends to view the process as having an inevitable end-state and also considers occupations in isolation, his own work is really just another version of the professionalization thesis. Abbott suggests that a better way of thinking about professional work is something that is defined and redefined through continuous struggle between occupational groups. His point of departure from the professional project is that once occupations have gained a monopoly over a service, they have to defend that monopoly from competing groups. Objects of struggle can be within the same group (e.g. lawyers and paralegals), in which case fragmentation of knowledge is the issue, or between professions (e.g. personnel and accountant groups struggling for power within organisations (Armstrong 1985). A third source of struggle is competition between groups for clients (solicitors and barristers). In Abbott's work, conflict between occupations in the same general area of expertise is the central theme (Abbott 1988). Abbott's major argument is based on the centrality of expertise to a profession but also on its ability to defend or construct boundaries with other occupations. The thesis is laid out as follows.

“The central phenomenon of professional life is thus the link between a profession and its work, a link I shall call jurisdiction. To analyse professional development is to analyse how this link is created in work, how it is anchored in formal and informal social structure and how the interplay of jurisdictional links between the professions determines the history of individual professions themselves. (Abbott 1988:20)

Closure appears to be the defining element of Abbott's systems theory. The value of his work is to suggest that professions should not be considered in isolation, rather embedded in an interlinking network of occupations. There is also greater emphasis on what professionals do within work in order to protect and maintain jurisdictions. Abbott's case studies focus on the jurisdictions of information, law and personal problems and he proposes that factors such as the introduction of new technologies, inter-professional battles over jurisdictions and markets for expertise explain why professional projects fail or succeed. For example, the medicalisation of personal problems wrested at least part of this area of expertise from the clergy to newer

professions of psychotherapy and neurology. The general area of expertise which included advice on financial or marital difficulties became relevant to psychotherapy only when they generated, or appeared to generate, medical symptoms. The therapeutic remedies offered by psychotherapists, irrespective of their efficacy, gave the profession scientific legitimacy and allowed jurisdiction over the area, achieved at the expense of the clergy who had, until then, maintained a monopoly on personal problems (ibid: 290). The successive division of labour thus identifies new areas of expertise (rather than new knowledge) that in turn creates new professions. Professionalisation, for Abbott, requires analysis beyond defining an area of expertise. It also seeks to explain the circumstances that enable expertise to be defined and their impact on related jurisdictions. In marketing a particular service to the client group, professions attempt to monopolise that service. However, the relationship between occupations is not necessarily conflictual, as Abbott suggests. It may be that jurisdictional boundaries are established with the consent of related occupations.

The advantage of the professional project and Abbott's more sophisticated version are their explanatory power in reconciling supply and demand patterns in the graduate labour market. They explain why professionalising occupations might choose to establish occupational boundaries by using degree education to control entry. Demand for graduates consequently indicates an emphasis on degrees targeted towards specific occupations. Given that Higher Education is itself an industry that seeks to expand its client base (students), professionalisation may also be driven by supply (Wolf 2002). Degree courses might then be developed and offered without any push from the occupation. Aldridge and Evetts (2003) suggest this is the pattern for journalism so that degree courses were offered without any demand from the occupation. However once the value of the qualification was recognised, the occupation has subsequently taken advantage of a supply of relevantly qualified applicants. Whether this means that the occupation automatically becomes a profession is of course open to debate but it demonstrates a mutually beneficial relationship between higher education as producer and the occupation as user of degree education.

Notwithstanding this, closure in the professions can also incorporate factors other than professional knowledge or an area of expertise. Bolton and Muzio (2007) discussing the legal profession find that gendered closure overcomes credentialed closure so that whilst women have the requisite qualifications for entry, men tend to secure higher positions in the legal hierarchy. Credentialed closure is therefore not invariant or independent of other forms of closure (Murphy 1988). Bolton and Muzio (2007:60) state that

“although entry to the profession focuses on individual merit and accomplishment and has facilitated the admission of women solicitors, movement in the profession is influenced by collective criteria which respond to the ascriptive biases of gender and which are largely responsible for keeping women in a position of subordination.”

MacDonald (2006) draws attention to the work of Witz (1992) to illuminate the gendered dimension of professional work. Witz uses the concept of patriarchy to explain why professional projects are constrained by gender and why female-dominated occupations tend to be excluded from professional classification. To an extent a meritocratic view of higher education is supposed to negate ascriptive differences amongst graduates but these emerge both in the degree subjects that women pursue, reflected in the occupations that they enter (Smetherham 2006). This distinction is particularly evident in medicine and its allied, subordinate, associate professions such as nursing and midwifery that are almost exclusively female and Bolton and Muzio’s evidence suggests that patriarchy may be prevalent throughout the professions.

The professional project offers a plausible explanation of how relationships between key aspects of higher education and work may be changing. In part it potentially explains the rise in occupationally-targeted degree programmes and graduatisation. However explanation is restricted to professions and aspiring professions that choose to codify knowledge in a particular degree programme, leaving more general degree requirements open to debate. Moreover higher education is not the only factor in the professional project and requiring graduates does not necessarily denote strategic occupational uplift. The range of associate professional occupations that now

require higher education may be indicative of such a trend (Elias and Purcell 2004b). Despite these advantages, the professional project does little more than suggest a potential use of graduates. Upgrading of required qualifications is hardly adequate to analyse or explain whether skills and knowledge are utilised effectively. Whilst it may increase the scope of *potential* graduate employment, it does little to explain differences between the occupations that graduates enter. Although the approach was developed in rejection of the trait and functional literatures, evaluation of the success or failure of professional projects tends to be related to the traits exhibited by the ideal-typical professions. The possibility of credential inflation is also left open so that specific qualifications may merely be used to limit applications.

4.5 Perspectives on the professions: professionalism as occupational control

More recent literature conceptualises professionalism as an ideology rather than a set of defining functions, traits or processes. Professionalism is said to be a form of occupational control over work (Evetts 2002, 2003, 2006; Fournier 1999). Control over work and members makes the professions distinct from other forms of labour and their attendant control mechanisms. In turn, this becomes the method used to analyse and differentiate amongst occupations, irrespective of their place in the occupational hierarchy. The model of professionalism revolves round “*the central principle that the members of a specialized occupation control their own work*” (Freidson 1994, italics in original). The focus is not on what professionals do, or on professional people, rather professionalism is seen as the means by which professional work is organised (Evetts 2002,2006a,b; Freidson 1994,2001; Johnson 1972). Evetts (2006b) argues that the discourse of professionalism works to inculcate appropriate work identities, conducts and practices, irrespective of occupational status, that may in itself produce aspirant professionalization.

Johnson (1972:45-46) rejects professionalisation as a suitable theory on the grounds of rigidity and argues that it neglects structural bases for variation in occupational control. He identifies three forms of control over work: collegiate, patronage and mediated, based on the relationship between the producer and consumer of a service.

Professionalism is a form of collegiate control where the service producer defines the needs of the consumer and the manner in which these needs are met, as in medicine. Patronage, or more precisely corporate patronage, is where the consumer defines the needs and the manner in which they are met, for example in accountancy. The third form is where a third party (the state or capitalism) mediates in the relationship, defining both needs and the manner in which they are met. Social workers and other government officials exemplify this form of control. The nature of the service and the way that it is controlled distinguishes amongst professions rather than amongst all occupations. Johnson concludes that corporate patronage and mediated control will become more dominant in advanced capitalism as the consumer becomes more discerning and the state introduces more regulation. Consequently, as the service sector grows, there may be room for expansion in the types of work defined as professional.

The ideological perspective begins to explain why the separation of professional, managerial and associate professional occupations occurs in the SOC, and why the sociology of the professions may be reluctant to incorporate managerial occupations within its ambit. Control over work in Associate Professions, for example, is limited by subordination to a dominant profession. The service provided is consumed directly or indirectly by the dominant profession as in the numerous professions allied to medicine. Whilst Associate Professions exhibit most of the features of professions and may have followed a process of professionalisation, control (or more correctly lack of control) over work ultimately means that they remain subordinate to the dominant profession.

Evetts (2005) and Freidson (2001) produce versions of the occupational control approach. Freidson's (2001:60) typology is based on the division of labour and distinguishes free market, bureaucratic and occupational control and Evetts distinguishes between organisational and occupational professionalism. These versions argue that although all forms of control co-exist in a division of labour, they are in competition with each other. Competing "logics of control" offer a method of understanding expert occupations, particularly in terms of the circumstances in which one or other form of control is, or might become, dominant. Professional

control means that goals, terms and conditions of work, along with the way work is evaluated, and by whom, sets professions apart from occupations where such conditions are regulated by “others”, usually managers. Rather than limiting analysis to existing professions, as Johnson does, these writers claim to include other highly-skilled occupations. Freidson (1994) for example argues that differences in control over work create a barrier to professionalization for occupations under bureaucratic control. In industries dominated by managerial control, highly-skilled and educated technical workers are unlikely to gain control over work because the tasks related to their jobs are specific to that industry. He argues that the professionalization of engineers may in reality be a “flattering symbolic reward” from management that masks career immobility outwith joining management ranks (ibid:113).

Evetts (2005:11), proposes that professionalism is a discourse that pervades the occupational structure. She states that,

“[t]he appeal to the discourse (of professionalism) by managers in work organizations is to a myth or an ideology of professionalism which includes aspects such as exclusive ownership of an area of expertise, autonomy and discretion in work practices and the occupational control of the work. The reality often includes the substitution of organizational for professional values”

The ideological approach offers some useful pointers for the present study. It resonates with status-enhancing effects of qualifications and raises questions on how graduates identify themselves through their work. In addition material aspects of control and work organisation are clearly of interest. It is evident that Evetts’ cynicism would deny a place for management occupations in the professional category. Despite these writers’ claim to be expanding the boundaries of professionalism, the initial assumption that professional and bureaucratic control are always in competition derives from a somewhat rigid view that occupational control is somehow superior to bureaucratic control and that management techniques are solely designed to constrain professional ideals. It seems to be acceptable for doctors to control the work content and organisation of Associate professions, yet

unacceptable for such control to be used by managers. It does, however, point to a distinction between professional and knowledge work: knowledge workers are generally employed in organisations and therefore more likely to be subject to bureaucratic control although this is not universal (Barley and Kunda 2004). Frenkel et al (1999), for example, argue that knowledge workers have a separate but overlapping “act of work” in comparison to professions.

David Brown³ (1995:58ff) also distinguishes between bureaucratic and professional occupational control in his critique of credentialism. Amongst other features, he separates bureaucratic control via the labour market, as opposed to professional control via exclusion. He notes that bureaucratic work is an arena of competition between individuals attempting to advance within an organisation. Careers in the professions promote solidarity by internal stratification within the profession, justified by a requirement for expert training to advance (ibid:58). Consequently, recruitment for professions is based on standardised formal training whereas bureaucratic positions are accessible through multiple qualifications. Diversification of organisational functions creates new areas of discretionary power which in turn mirror control strategies used in the professions, one of which may be the process of educational credentialing. This, it could be argued, results in the creation of new university disciplines allied to particular functions, particularly in business schools. However it should be noted that the body of knowledge in such (management) occupations is not necessarily amenable to codification in a degree programme. There is no “one best way” to conceptualise management. Consequently, it might be expected that the content of management degrees might vary considerably according to particular university departments. There may be little consensus on the form and content of what graduates in managerial disciplines require to know (Khurana 2007). It might then be reasonable to suggest differences in transfer of knowledge and skills in management occupations. Nevertheless, accredited degrees in management often offer membership of an associated professional body which perhaps demonstrates that bureaucratic and professional control are converging in

³ Note that Brown does not employ these terms in an either/or manner: he sees them as ideal types that serve as an analytical tool in order to locate crucial attributes and processes along an imaginary continuum (Brown 1995:57)

terms of education strategies. Barley and Kunda (2004) note that knowledge workers in their study demonstrate that work itself becomes a credentialing process, re-enforcing the contextualised nature of knowledge work and difficulties in codifying such knowledge.

Research by Muzio and Ackroyd (2005) on the legal profession counters the rigid approach taken by writers who distinguish between bureaucratic and occupational control. They propose that managerial imposed standards are countered by “defensive professionalism” which ensures the survival of professionalism as a mode of work organisation and bolsters the notion of occupational control. Muzio and Ackroyd (2005:21) find that external threats to the legal profession suggest that closure is “increasingly being shifted from occupational closure, which controls entry to the profession, to organisational or internal closure regimes which regulate promotion and progression through the ranks”. In part this is due to increasing numbers of university-qualified applicants in the profession and strategies are implemented to maintain the profession’s elite status. These are in the form of restricting opportunity for promotion to partner level, producing a concomitant increase in the number of salaried professionals. Work intensification at junior levels in the profession is also an emerging feature of re-organisation of the professional hierarchy, a suggestion of interest to this study. It may well be that graduates are experiencing greater levels of work intensity as a result of external market pressures on employing organisations which drives work down to the less qualified, who have reduced chargeout rates during early careers.

The distinction between organisational and occupational control may therefore be less clear cut than Evetts and Freidson suggest. Instead of bureaucratic or managerialist principles diluting professional work, professions adopt strategies more usually found under ideal-typical bureaucratic control. In turn, management functions follow the professional model of early education and employ strategies found in the professions such as protecting jurisdictional boundaries. The formation of associated professional bodies in management occupations reinforces the professional template. As with some of the previous perspectives, it may be easier

to conceptualise professionalism as a mode of control within traditional and established professions than in aspirant and emerging professions.

The value of professionalism as an ideology is twofold. Firstly, it gives some insights on evaluation of the occupations that graduates enter in terms of control and work organisation. Bureaucratic/organisational control over work may be driven by standardised procedures and rational forms of authority. However, (managerial) occupations may themselves pursue professional projects, irrespective of whether they are considered professional in the literature. Instead of management as a form of control directed at other groups of workers, it seems reasonable to assume that managers might also be oriented towards maximising autonomy within an area of expertise, thereby distinguishing themselves from competing groups (Armstrong 1985). Indeed, Bolton and Muzio (2008) speak of certain sections of the manager category as aspiring or new professions. Yet organisational context in management places limits on codification of expertise. David Brown (1995: 65) notes that uncertainties in management tasks favour recruitment of “adaptable generalists”, providing a possible explanation of the different requirements in such occupations. The nature of work becomes decisive in selecting the type of labour required and relatedly in stipulating required qualifications. Secondly, and significantly, organisational and occupational professionalism are both said to be achieved via certification that implies codification and standardisation of knowledge and expertise within higher education. The next section explores professional knowledge and expertise in greater depth.

4.6 Professional knowledge and skill

The nature of professional knowledge and expertise features in all perspectives within the sociology of professions. Professional knowledge is inseparable from professional work: it defines work, is the source of jurisdictional boundaries and professional projects and the means by which control over work is exercised. Although professional knowledge is intimately connected to the occupation and has a practical element, theoretical knowledge is also significant. Abbott (1988:104)

discusses the forces that “push abstraction in professional knowledge towards an equilibrium between extreme abstraction and extreme concreteness”. In line with his jurisdiction thesis, he proposes that extreme abstraction can weaken a profession if it is lacking in practical content, and extreme concreteness reduces the profession to a craft. Where occupations can achieve equilibrium between the concrete and the abstract, professional member can successfully exercise judgement and “put themselves and their actions and their decisions beyond the scrutiny of clients and the lay public” (McDonald 1995:165). A tension emerges in professional knowledge: theoretical knowledge is key but utility is measured by practical application of knowledge within work settings.

The client group is also relevant to Abbott’s distinction: professional knowledge and decision-making remains wedded to a sense of moral authority, despite critiques of the functionalist approach. According to Brint (1994:7), occupations such as schoolteaching and social work with dubious technical capacities nevertheless claim a kind of moral superiority because of the function they perform. Such professions are often cited as examples of unsuccessful projects (Friedson 2001; MacDonald 1995), which may be due to the level of required knowledge and its potential substitution by non-credentialed knowledge. Claims that theoretical knowledge is key to professional work are tempered by the notion that credentials may function as a legitimating device for those who are qualified to enter and practice in the occupation (Collins 1979).

Notwithstanding the foregoing, higher education has not always been universally required in the professions and remnants of previous modes of knowledge formation and accumulation are evident. Eraut (1994:6) proposes five modes of training and preparation for professionals, often used in combination. These are:-

- A period of pupillage during which students spend a significant amount of time learning from an expert in the field
- Enrolment in a professional college outside the higher education system
- A qualifying examination, normally set by the professional association

- A period of relevant study at a college, polytechnic or university leading to a recognised academic qualification
- The collection of evidence of practical competence in the form of a logbook or portfolio.

Different modes of professional training indicate that degree education is not sufficient to secure professional membership. Practical training has also played a significant part in the education of professionals. Accountants, for example, spend three years as apprentices (or trainees) during which they acquire practical experience and techniques, examined by the professional body. Other professions such as surveyors traditionally used the “trainee” route where acceptance into the profession was via professional examinations and a logbook but latterly the profession has become all graduate via an accredited degree. Nevertheless to become a chartered surveyor, practical experience, gained in the first two years of employment, remains necessary (www.rics.org). Consequently, theoretical knowledge may be less important than writers in the sociology of the professions claim, certainly for some professions. If professional knowledge and skills have traditionally been successfully acquired via practical experience, then the requirement for degree education may merely be symbolic of status. Locating initial education in higher education is perhaps less about “codifying the professional knowledge base” than avoiding the uncertainty and expense associated with employing and training large numbers of apprentices. Accumulation of practical experience is clearly an important element of professional work but control over entry remains with the profession, even after knowledge in the form of a degree has been demonstrated. Critics of the expansion of higher education argue that degree education is an abrogation of responsibility for training (Keep and Mayhew 2004) which may not only be restricted to new areas of employment for graduates.

Abbott (1988:56), however, claims that the abstract knowledge of the professional serves to legitimate professional work. In constructing a body of knowledge, the profession relies on connected academic research. Abbott proposes that the abstract knowledge system exists only in textbooks which may in fact make professional

knowledge more vulnerable to competing groups. Locating professional knowledge in higher education is thus not sufficient to guarantee or maintain a professional jurisdiction. Indeed, Abbott argues that academic knowledge is necessary but not sufficient to define jurisdictional boundaries because it does not recognise the influence of the client group who must be persuaded of the value of the professional's expertise. Consequently, professional knowledge may be produced and advanced in universities but the connection with work, practitioners and service users cannot be ignored.

Friedson (2001) views professional knowledge in the light of specialisation, given his perspective is based on the division of labour. He claims (ibid:34f) that "the ideal typical position of professionalism is founded on the official belief that the knowledge and skills of a particular specialisation requires a foundation in abstract concepts and formal learning". Education, training and experience are fundamental requirements but once achieved (and sometimes licensed), the exercise of discretion is central and deserving of special status. The principle of specialisation is experienced differently across the division of labour in terms of status, reward and value. It appears to implicitly include comparison with the opposite condition, generalism, viewed positively or negatively according to perspective and the specific occupation that is under consideration. Freidson (2001), for example, criticises management knowledge as an elite form of generalism, given that managers claim authority over specialists without necessarily knowing what these workers do.

Specialisation within an area of expertise, in and of itself, can be a force for upskilling and lead to greater professional status. Career trajectories of established professions such as law or medicine follow a pathway where general, initial education narrows as the career progresses to a pinnacle where specialised knowledge is in one particular aspect of the field. The orthopaedic surgeon, for example, whose expertise is in hip replacements. Alternatively, specialisation in knowledge can be a limiting force and where control over work is in the hands of management, the worker is vulnerable to task reallocation or substitution of labour by technology (Littler 1982). It may therefore work to the advantage of dominant

professions to codify subordinates' knowledge so that their own remains inviolate which again suggests that specialisation is related to the nature and control over work.

Specialist knowledge can be attributed to almost any occupation and is not solely the preserve of professions. Johnson (1972:42) refers to the "esoteric characteristic of knowledge applied by the specialist". He suggests that professional knowledge is not connected to the level or complexity of knowledge, as is generally assumed in the literature. For example, whilst skills may increase in complexity, measured by the level of training necessary for their application, it is not inconceivable that the general level of understanding might increase with educational advance on a broad front, reducing the esoteric nature of professional knowledge. The knowledge of the professional is therefore relative to that of the client group, dependent on the profession's ability to close access to knowledge. To an extent, professional knowledge relies on a socially constructed value of knowledge in the client group and in the general population. This indicates another distinction between knowledge and professional work: high-level theoretical knowledge is not necessarily an implicit condition for professions.

The foregoing suggest some tensions between a profession and its knowledge. Codification of professional knowledge within a university degree programme may enable professional formation, dependent on links established with particular higher education departments. The effects of professionalization strategies are also worth considering. These centre on the benefits or disadvantages of codifying knowledge. Whether graduatisation is a structural or strategic condition for aspirant professions, ceding even a degree of control over training exposes some contradictions, in terms of degree content and de-mystifying knowledge (Eraut 1994; Freidson 2001).

In contrast to Marxist and Knowledge economy perspectives outlined in Chapter three, professional literatures view academic autonomy as necessary for the advancement of knowledge (Abbott 1988; Freidson 2001). Questions are then raised on whether the locus of control over university curricula should be entirely in the hands of the academy or should incorporate the views of practitioners. It is arguable whether establishing closer links advantages universities, the profession or

graduates. Wolf (2002), for example, proposes that universities and occupations follow differentiated objectives which will never coincide. Eraut (2004:14) states that “higher education has a strong interest in the sale and production of knowledge as a commodity: and user-derived standards threaten its hegemony.”

An alternative is advanced in the literature, (Neimark 1996, Boyce 2004)), which demands standards of education that have utility for the profession concerned. For example, the Bachelor of Law degree is currently under review by the Law Society to ensure its relevance to 21st Century legal practice (see Robley et al 2005 for medical degrees). Professional education may engender debate between university and profession. Eraut (1994) suggests that such debate is central to development of professional knowledge. Conflicting agendas may result in the university seeking to broaden and academicize knowledge or to challenge professional practices whereas practitioners may be more concerned with relevant skills. Particular departments within universities may also have competing perspectives within their roles as knowledge producers and educators, or training providers (Bennett et al 1999, Cranmer 2006). In a review of gateways to the professions, conducted for the UK government, tensions between higher education and the professions are apparent (Langlands 2005). Universities argue that they should be left to determine the content of professional education. By contrast, employers view universities as being “out of touch with the realities of key professions” (ibid:91)

Professional training is not, however, restricted to the substantive components of degrees. One of the consequences of professional education is to strengthen students’ commitment and identification with the occupation (Eraut 1994). Another is to foster solidarity with other students who have gone through the same process and so share the prescribed body of knowledge and skill, or discipline (Freidson 2001:102). The “socialisation” aspect of professional training requires a link between the profession and university and is similar to Bourdieu and Passeron’s (1977) notion of cultural capital. Hanlon (1998), for example, notes that professions have successfully argued that their cultural capital is important, subsequently translating skills into a means of earning rewards. Another key advantage of

recognised cultural capital for the profession is that the individual worker decides how skill is transferred to a specific context, giving independence from any one organisation and enabling the profession to resist bureaucratisation.

D. Brown (1995:60) also expands the realm of professional knowledge from the abstract and technical to a form of cultural capital. He proposes that professional knowledge is in reality a combination of written and oral “languages”. In distinguishing between bureaucratic and professional work, Brown notes that written professional standards facilitate the formation of occupational communities because their interpretation is reliant on members of the particular profession. Knowledge is inextricably linked to the person who conveys and translates it into practice. By contrast, written standards and texts in bureaucratic settings create actions undertaken by positions (or jobs) rather than persons. Bureaucratic stability is facilitated by written rules governing relations and hierarchies of authority. Nevertheless, both forms facilitate communication amongst participants in the language of the business or the profession. Languages are acquired in higher education, along with dispositions and skills that enable members to communicate in a common language. In part then, the role of specialised degrees is also to impart appropriate occupational languages.

Although university education is seen as key in establishing boundaries for an occupation, appropriate knowledge may not be the only criterion for recruitment into the profession. Scholarios and Lockyer (1999) found in their study of professional recruitment that qualities such as honesty, conscientiousness, general ability and potential were more important than qualifications in recruitment, suggesting that such qualities are indicators of labour market success. Yet the balance of knowledge, technical and social skills is not clear cut in the professions, echoing debate within graduate employment more generally (Brown and Hesketh 2004). Social skills may dominate at recruitment where some form of discrimination amongst applicants is necessary. However, it remains unclear whether selection on social skills is a requirement of work. Particular professions may, indeed, exhibit different requirements. Where clients have a choice between providers, for example in accountancy firms, social skills may form an important part of the service.

However, where a monopoly over service has been established, for example, in medicine, social skills are, to an extent, less important. The nature of work is clearly important: if a doctor makes a technical error, then lives are at stake whereas an accountant may merely lose a client. Nevertheless, the mix between knowledge, technical and social skills in work may prove an interesting avenue of research.

Finally, Abbott (1988:196) notes that universities play several roles in professional life. They serve as legitimators, providing authoritative grounds for the exclusive exercise of expertise. They contribute to knowledge advancement, enabling academics to develop new techniques outside of practice and train young professionals, often in conjunction with the function of research. Universities, like states, may also become another arena for inter-professional competition. Often a set of professional techniques is not legally restricted and professions compete by attracting students and monopolizing the teaching of courses in such subjects (ibid:207). University rankings also impact on professional education, given that all universities do not offer all degrees. Medical degrees, for example, are only offered at a few, higher-ranked universities. Equally, associate professional education tends to be located in newer universities. Historically, professional affiliation with universities encouraged professional divisions of labour with law and theology as archetypal fields of study, followed closely by medicine (Collins 2000). It could, therefore, be argued that this model is being adopted at lower reaches of the occupational hierarchy, in occupations where university education was not traditionally required. It may also be a means by which newer universities can compete with more established institutions. If employment outcomes are a measure of higher education more generally, newer universities may be less concerned with supplying graduates for high-level occupations and drawn to provide education targeted towards specific occupations.

4.7 Lessons from “ideal-type” graduate employment

The foregoing has provided some useful insights for evaluating graduate work and employment. Although significant disputes emerge in defining the professions, charting developments in the literature advances understanding of the potential for

new areas of employment. The professional literatures are more developed than those on knowledge work and for this reason appear to be theoretically grounded and robust. Although weaknesses can be identified in specific areas, in combination, these literatures offer some salient lessons for the empirical work in this study.

The trait approach, although rigid, suggests an ideal-typical pathway between education and work, exemplified by traditional professions. The pathway may only be evident in a few professions but nevertheless, provides a template from which to compare and contrast other graduate occupations, particularly those who may use the availability of graduates to professionalise. The organising principles of autonomy, self-regulation and trust in ideal-typical professions mean that a protracted period of post-graduate training and professional standards are required. Altruism, however, is less important to this study than the presence of a professional body that regulates education and protects members.

The professional project is useful to explain why occupations might graduate. Graduate entry may be used to enhance status or delineate occupational boundaries. As a strategy, professionalization may be facilitated by the expansion of higher education. Although useful as an indicator of potential mobility, identifying a professional project does not clarify the drivers of the project or whether it is purely for [upward] occupational mobility. Nor does it indicate if graduate skills and knowledge are being used. Indeed the literature does not explore skills and knowledge use to any great extent. Whilst the numbers of occupations that could be considered professional may be expanding, it remains unclear if this is a result of increased supply or demand. Abbott's systems approach is a reminder that graduate occupations should not be examined in isolation and connected occupations may be relevant. It also suggests that the relative status of occupations can, and does, change according to internal and external forces. It also supports the contention that the actions of agents, in this case professional groups, may influence graduate employment.

The distinction between occupational and organisational forms of control goes some way to explain why some occupations might choose specific degrees and others

more general qualifications. The nature of work is therefore important in determining educational requirements. Whilst the distinction would, in general terms, split graduate jobs into managerial and professional occupations, such categories are perhaps too broad to be useful. It also appears that forms of control may be converging, the dominant factor being the use of qualifications, which may itself be evidence of “spiralling credentialism” (Collins 1979). However it is doubtful whether Collins’ view of self-interested, greedy, status-hungry occupations is the only potential explanation in the (increased) use of qualifications.

The use of professionalism and professionalisation as a way of assessing connections between education and work does not necessarily end in a hierarchy of jobs, as other models of occupational classification produce. The influence of associated professional bodies is noted as relevant in setting and assessing educational requirements. Established professions such as medicine and law provide a model which suggests a pre-determined consensus between profession and university of what entrants to the profession need to know. To an extent the transition from aspiring to established profession is ill-defined in the literature and suggests that these terms are perhaps useful to describe the relative position of occupations as they are now but offer no means of determining what they will become.

Discussion of literatures on the professions focuses on specialised knowledge. Yet there seem to be important differences in archetypal knowledge work and professional work. Perhaps a relevant distinction is that professionals work *from* knowledge whereas knowledge workers work *with* knowledge. It does not appear that the level and type of knowledge in professional work is necessarily high-level or particularly theoretical. Instead, control over knowledge, coupled with barriers to acquiring and dispensing knowledge, differentiates the professions as a group. A body of codified knowledge is a pre-requisite in the professions and expertise is measured by interpretation of knowledge within a client-based relationship. By implication, the body of knowledge is expanded incrementally. The knowledge of archetypal knowledge workers, by contrast, expands (and contracts) rapidly and can quickly become obsolete, depending on markets for knowledge (Barley and Kunda 2004). To an extent professional work appears to be more suited to degree

education, where qualifications are used as an exclusionary mechanism and controlled by the occupation.

The ideal-typical professional pathway gives prominence to useful knowledge and skills, although stops short of occupational training. Professional knowledge is, by definition, specific to the profession concerned and not generally transferable. Graduates who elect to pursue specific degrees therefore become entirely dependent on the labour market. Moreover, professions may also require additional evidence of competence for admission. Literature has proposed that practical experience is also required for professional membership which may not be available in higher education. It was also noted that universities may act to instil occupational identity and appropriate occupational languages. Socialisation for a particular profession may, however, only be deliverable during degree education when there are limited occupational destinations. Professional knowledge may provide a clear and relevant pathway between higher education and the profession. Alternatively, it could be argued that the professional pathway is an elaborate subterfuge, constructed to justify the status and rewards associated with professions.

In summary, this review has deliberately remained distant from promoting or adopting any single perspective on the professions, preferring instead to select relevant concepts for this study. The review has addressed and explained some of the issues raised in previous chapters but questions still remain. Expansion in professional work would suggest increased demand for graduates. However demand would then be restricted to the type of graduates required by specific professions and perhaps connected to strategies of professionalization. It is also dependent on the relationship developed between the profession and higher education and a mutually constituted agreement on what graduates need to know that satisfies the objectives of both parties.

4.8 Lessons from the literature review: formulating the research questions

This section combines lessons from literature review chapters in order to formulate appropriate research questions. It revisits literatures reviewed in Chapters Two and Three. The first stage of the literature review was designed to map existing research

on the GLM and to explore territories of debate. Mapping the GLM reveals that different factors within personal capital contribute to claims of mismatch. As the concept of mismatch gains momentum, it becomes an orthodoxy based on supply-side factors linked to graduate destinations. Consequently the focus of research is concerned with identifying mismatch, rather than on graduate work. The review exposed a weakness in analysis so that one or more factors which may produce mismatch are generalised across the GLM. Evidence that demand for graduates is rising (Felstead et al 2007; Green 2006) requires further research. Whilst these facts are established, they overlook a third feature of structural change in the supply of graduates which is expansion in the range of degree subjects and internal differentiation in the skills and knowledge signalled by degrees at the same level. Employment outcomes for graduates are clearly a contested terrain, particularly in new areas of employment for graduates which may be sites where the change in the relationship between supply and demand is most apparent.

In order to address the various factors in mismatch, the second literature chapter sought to explore theoretical resources for connecting education and work. It examined the role and function of qualifications in demand. Literatures offered considerable scope for variation in the workings of the GLM, and different explanations of demand emerged. Demand for graduates is more complex than a neat functional correspondence between educational and occupational knowledge and skills (Smetherham 2006). Qualifications are also used in a screening capacity or said to be a proxy device (Warhurst and Thompson 2006). Consequently, it seems reasonable to separate qualifications and their constituent knowledge and skills. Theories of the education/work relationship also offer considerable scope for variation in demand, according to perspective and scope of analysis. Marxist and knowledge economy frames of reference argue that the way in which society is structured influences how demand is conceived and translated. Marxists argue that capitalists makes use of (graduate) labour to control other groups of workers (Apple 1993; Bowles and Gintis 1977) and that the purpose of education is to produce compliant, docile workers, in turn reproducing existing structural inequalities in society. On the other hand, knowledge economy theorists argue that high-level theoretical knowledge is the dominant means of production, requiring ever greater

numbers of graduates. Both however, are largely silent on the actions of agents in demand and see counter-claims as deviant rather than disconfirming. Closure theory addresses this weakness (Murphy 1988), proposing that occupational groups may take advantage of an increased supply of graduates to enhance status and create occupational boundaries. Although these literatures are instructive in identifying possible causal mechanisms in the labour market for graduates, they are less forthcoming about what graduates actually do in their jobs.

Taken together the literature chapters suggest that conceptualising the research problem is not entirely straightforward although they raise considerable scope from which to proceed. Consequently this thesis proposes a conceptual framework based on different levels of analysis. The first of these, mismatch between supply and demand based on a critique of HCT enables a comprehensive understanding of the factors said to contribute to differences in employment outcomes for graduates. Whilst such factors are necessary to construct an adequate picture of labour market inequalities and begin to indicate that increasing numbers of graduates might cause change in employment, they present a piecemeal argument.

The second territory of debate is based on the type of graduates required in different areas of employment. This overlaps with general conceptions of supply and demand but includes utilisation of graduates in work. It explores the contention that a rising number of graduates may cause mismatch between degree and graduate work, given that the range of graduate jobs is expanding. However, evidence is required to explain how graduatisation is manifest.

The third area of research derives from an understanding that policy designed to increase the supply of graduates requires analysis of the key actors and interests in the relationship between education and work. Rather than a relationship dependent upon the tension between what universities produce and what employers want, the social construction of skills and knowledge within professions may also influence change in graduate employment. An emergent theme from the literature review is that qualifications act as a legitimating device as well as a substantive contributor to occupational knowledge and skills. Moreover, close connections between the degree label and the occupation it serves cannot necessarily be read off without

discovering the extent to which transfer between university and work is apparent. Legitimation also involves closure in the sense that it delimits who may question the content of qualifications (Bourdieu and Passeron 1977).

Questions remain on the extent to which demand for graduates is altered by rising numbers of graduates. Although the outcomes of a rise in supply produce debate, the matching process at the occupational level is relatively under-researched. The use of qualifications may be changing insofar as the range of jobs is said to be expanding. However, this does not necessarily mean that there are more of the same type of jobs.

At the macro level, explanations for the relationship between supply and demand for graduates, are concerned with the dominant mode of production and the labour market for graduates. The knowledge economy is said to require ever more highly skilled, autonomous innovators (Burton-Jones 1999). If it exists, then we might expect new areas of employment to reflect this type of work. At the meso level, it is the choices that occupations and organisations make on the type and level of qualifications required for entry and the underlying reasons for their decisions. At the micro level, the object of enquiry is how such processes are experienced and translated in practice by employers and graduates. Taking each of these together, and following the logic of enquiry outlined in the literature review, produces the following research questions:

- How applicable are existing models of the GLM?
- What actors, factors and interests shape new of employment for graduates?
- What is the salience of graduate knowledge and skills in work?
- How are graduates utilised, once in employment?

The more usual research problem of identifying where and how mismatch occurs is replaced by research questions that seek to describe and explain new areas of employment for graduates. Essentially the research questions explore the structure of the GLM and the changing nature of graduate employment.

CHAPTER FIVE: A CRITICAL REALIST APPROACH TO RESEARCH ON GRADUATE WORK AND EMPLOYMENT

5.1 Introducing critical realism

This chapter discusses the research strategy, design and methods employed in this thesis. It draws on critical realism (CR) as a meta-theory from which to conduct social science research. The first sections of the chapter are concerned with the core domain assumptions within CR followed by an account of how these are implemented and translated to this particular study. In line with the logic of enquiry, the chapter suggests how to approach and operationalise the research in order to fulfil the objectives which are:-

- Explore existing models of the graduate labour market (GLM)
- To incorporate the labour process in analysis of graduate employment
- To contribute to academic and policy-maker knowledge of graduate employment

The chapter proceeds from an assumption that CR is a legitimate form of social science research, albeit one that is being refined and modified (Harre 2002; Sayer 2000). CR is a relative newcomer in the field of social science research, generally arising from the work of Roy Bhaskar and collaborators in the 1970s. Much of the literature to date has, by necessity, adopted a defensive approach, accomplished by critiquing the alternative research strategies of positivism and interpretivism, particularly the latter (Ackroyd 2004; Reed 2005,2009; Sayer 2000). Sayer (2000:32), for example, complains that “realists increasingly find that they must first answer the epistemological questions these anti-realist positions raise before they can get their main case heard regarding ontology and explanation”, whilst Danermark et al (2002) speak of unhappy dualisms in social science research. This thesis proposes that there is sufficient and convincing evidence of the contribution made by CR to social science research. Persisting in methodological “bickering” does little

to advance knowledge in any discipline. The structure of the thesis and its analytical perspective should allow the reader to evaluate the utility of CR to research on graduate work and employment.

CR, it is argued, is the most productive approach for this study which seeks to describe graduate work and employment and more specifically the utilisation of graduates, in circumstances where government policy has sought to increase supply. In other words, following Sayer (2000), the research problem has dictated that CR functions as an under-labourer from which the theoretical framework is developed and empirical work selected and analysed (Danermark et al 2001; Fleetwood and Ackroyd 2004). In order to consolidate CR, the thesis adopts a pragmatic approach, measured by application in concrete research, rather than continued philosophical debate. Similar studies have begun to appear, located in various disciplines such as education (Clegg 2008; Maxwell 2004; Scott 2005), the built environment (Naess 2004), management and organisation (Reed 2005, 2009, Fleetwood and Ackroyd 2004; Mutch et al 2006; Vincent 2008) and economics (Lawson 1997) amongst others. Reed (2009) suggests that

“future work within the CR tradition needs to refocus on the emergence, reproduction and elaboration of the domination structures through which systems of “position-practices” are generated within advanced capitalist societies and the complex ways in which these are creatively utilized by collective agents”.

This study locates graduate employment within wider systems and structures that may influence relationships between education and work. Although, on one level, increasing numbers of graduates is said to produce match or mismatch in the labour market, it is the underlying processes and mechanisms which become the focus of analysis.

In part, the decision to use CR reflects the way in which the study has evolved. Interaction between theory and empirical work occurred iteratively and each stage of the process informed the next, discussed more fully below. More generally, the research design arose from dissatisfaction with existing accounts of the GLM examined in the initial literature search, most of which tend to over-generalise and

focus on supply-side characteristics. Whilst such analysis is interesting, and necessary, the point of departure for this study is to advance knowledge of graduate employment. It proposes that we have perhaps been asking the wrong questions on graduate employment, or at least assuming that identifying mismatches is the only deliverable from research in this area. The resultant account does not seek to challenge evidence that mismatch may be a result of increased supply. Instead it offers an alternative way of conceptualising graduate work and employment by incorporating work content in analysis. The thesis evaluates the utility of this approach, whilst simultaneously adding to the stock of knowledge on the way in which increasing numbers of graduates *might* impact on graduate work and employment more generally. The value of CR is in its approach to conceptualising and conducting social science research: the nature of the research problem suggests CR as a meta-theory, in turn this affects the types of questions to ask as well as how to answer them.

5.2 Critical Realism as a meta-theory

There are several domain assumptions within CR which distinguish it as a meta-theory from which to conduct research. Implicitly or explicitly, meta-theory informs the researcher as to what they can/cannot do (and even see) and what kind of knowledge can or cannot be obtained (Bhaskar and Danermark 2006). The first core assumption is concerned with the ontological and epistemological perspectives within CR. In arguing the case for using CR, Ackroyd (2004) notes that prominence is given to ontology over epistemology so that “configurations of social structures, positioned practices, powers, mechanisms and tendencies exist” [in a socially real world]. Danermark et al (2001:5) suggest that “critical realism involves a switch from epistemology to ontology, and within ontology a switch from events to mechanisms.” CR’s distinctive contribution is to explain that the truth (ontology) and knowledge of that truth (epistemology) can be reconciled whilst accepting that knowledge itself is fallible. Fallibilism in the context of CR does not refer to its usual interpretation that humans are prone to error. Instead according to Bhaskar (cited in Hartwig 2007:241),

“[i]t is only if the working scientist possesses the concept of an ontological realm, distinct from his current claims to knowledge of it, that he can philosophically think out the possibility of a rational criticism of these claims. To be a fallibilist about knowledge is to be a realist about things”

This quote indicates that social science research aspires to uncovering an objective truth whilst at the same time making allowances for the (*inter alia*, social, economic, political) factors which come to bear on the process of knowledge production (Scott 2005). Consequently, CR proposes that what happens in a socially real world does so independently of our ability to know it. The job of the researcher is to uncover what is happening by means of thorough empirical research and retrodution, whilst also admitting that mechanisms are not always observable or amenable to empirical scientific research (Vincent 2008). Essentially CR postulates three domains of reality (Bhaskhar 1998:41): the empirical, the actual and the real. The empirical is what we experience, directly or indirectly and is separate from the actual where events happen whether we experience them or not. However what happens in the world is not the same as what is observed – the real also contains that which can produce events, which can metaphorically be called mechanisms (Danermark et al 2002). For example, we do not need to fall off a cliff or observe this event to know that falling off a cliff is subject to the laws of gravity. In the real, however, what causes the event becomes the subject of enquiry: that is to say, was she pushed or did she jump? The circumstances which produce the event mean that the same event can be interpreted in different ways (i.e. as an accident or a murder). Empirical evidence is designed to search out the appropriate clues rather than replicate the event. In addition, the absence of the event does not mean that the mechanism is any the less real so that the mechanism (falling or being pushed) is still real whether or not it occurs. Mechanisms therefore exist independently of whether or not they are exercised in practice.

Scientific understanding and explanation is (or should be) concerned with providing accounts of how and why events happen in the way that they do, rather than in other ways (Reed 2009). Mechanisms rather than events become the object of enquiry and the “point of departure is that the world is structured, differentiated, stratified

and changing” (Reed 2009:5). Nevertheless access to this “open” system of social science is not straightforward and represents a redefinition of sociological research (Bhaskar 1997). Rather than forming theories based on group characteristics (in this case graduates) which is the staple diet of existing GLM research, this study researches graduate employment by incorporating a “depth ontology” at the level of causal mechanisms. Ontological depth is consistent with process and CR argues that the world is hierarchically structured, fluidly unfolding and interacting. However the stratified nature of the real means that different mechanisms produce variation in interpretation of the same events (Collier 1994:202) rather than a “monistic” or uni-dimensional conception of power relationships.

According to Shipway (2004:16), due to misalignment and different conceptions of where power lies (within the education system), “real social structures and mechanisms have to spend their energy working to preserve and legitimate their power, rather than using their power for the emancipation of humans”. This quote suggests that universities may be pulled one way by the relations between university and government funding agents which rely on numbers of students. They may also be pulled another way to attract research funding, maintain standards, and seek degree accreditation from professional bodies. Both interfere with the core processes of research and teaching within systems of higher education and demonstrate that in producing an event, different interests may be present (or absent) within the same phenomenon. Such contrastive “demi-regularities”, according to Lawson (1998), are pervasive at all levels in the social sphere. It is not necessary to continually seek one and only one mechanism to explain a phenomenon and the role of identifying demi-regularities and competing interests often serves to direct social scientific investigation. CR therefore rejects reductionism as inadequate to conceptualise emergent levels of reality (Hartwig 2007). CR research becomes context-bound and resultant claims are related to the circumstances in which they become apparent. This leads to the next domain assumption on the relationship between structure and agency in critical realist thought.

5.3 The structure/agency debate

According to Reed (2005:1632), the “structure/agency problem or dilemma has a long and often controversial history in social theory that stretches over, at least, two centuries of intellectual debate and ideological conflict”. Essentially, debate centres round the question of whether individuals structure society or vice versa⁴ (Harre 2002). Whilst it is beyond the scope of this chapter to consider such a wide-ranging and continuing debate, a critical realist approach to structure and agency informs framing of the research. Thus, structure and agency are made separate, and possess entirely different properties and powers, yet the one is essential for how the other will be moulded (Danermark et al 2002). Consequently, there are three distinct reference points within CR: the structure of society, the actions of people and the (mediated) relationship between the two. Reed (2005:1633) explains this domain stating, “the dynamics, trajectories and outcomes of social change are viewed as emerging from ongoing power struggles between multiple collective agents located in structured settings that alternate between opportunities for agential creativeness and structural constraint.”

Consequently, critical realist research focuses on the interplay between structure and agency which takes place over time. Archer views CR as a morphogenetic social theory (Archer 1998) and explains that structure logically precedes agency which leads to a transformation or reproduction of social structures. The time element is crucial because social structures were originally created by agents who no longer have influence over them. Structures such as the GLM that we may be interested in today were created by other agents in the past. The pre-structuring of actors’ contexts and interests is what shapes pressures for transformation or reproduction in the present (Archer 1998). Structure and agency have to be made separate to explore the nature of both. According to Bhaskar (1997:35, italics in original)

⁴ Layder (2006) notes that the dilemma can be characterised as a series of dualisms: between individual and society, structure and agency and macro and micro analysis. Whilst these are often used interchangeably in sociological theory, he argues that they are subtly different. However for the purposes of this discussion, structure is defined as the social setting and context of behaviour and agency the actions that individuals or groups exert on pre-existing structures.

“Society is both the ever-present *condition* (material cause) and the continually reproduced *outcome* of human agency. And praxis is both work, that is, conscious *production*, and (normally unconscious) *reproduction* of the conditions of production, that is society”.

In other words, society and social structures are liable to produce continuity and change, shaped by, and dependent on, the actions of agents. This argument does not privilege action over structure, rather social structure is both enabling and constraining and position within the structure may determine the potential for action (Manicas 1998).

The distinction between structure and agency is particularly relevant for this study. CR argues for an ontological conception of social structures (in this case education systems, labour markets and stratification processes) with innate causal powers or tendencies that can only be creatively activated and mobilized by agents (the state, educators, employers, occupations and graduates) in pursuit of their collective interests and values (Reed 2005). Social structures such as the GLM have emerged from human agency, which is different from saying that people create society. The point of research intervention makes some assumptions about, for example, the process of using qualifications to match graduates to jobs that has produced the GLM. The process itself can be criticised as Collins (1979) does in “*The Credential Society*”. Alternatively the focus of intervention can be on outcomes of the process which are seen in the distribution of graduate employment. Research interventions therefore require to make such assumptions explicit in the course of describing and explaining events.

If we assume that social structures exist, and agents modify them by their actions, the GLM exists independently of the choices and decisions employers make on the characteristics of the graduates they employ. However, potential for change relies on identifying tendencies within the structures that may cause them to alter. In this study, for example, increasing numbers of graduates is a tendency in the labour market. Nevertheless, in order to understand how and why graduate employment

may be altering, the social structure must be kept apart from the people who, at a given point in time, occupy its different positions and use specific practices (Sayer 1992:92). Whilst changes in the distribution of graduates may be identified, research is also concerned with the interests of actors within the GLM, and should recognise that there is also potential for reproduction of existing structure(s).

It is at the intermediate level where the agency of employers, educators, occupations and to an extent graduates themselves, reproduce and transform structural mechanisms through which connections between education and work are coordinated and controlled. Sloane (2002), for example, notes that the “sheepskin effect” causes demand for higher education to rise, despite evidence that many will not be successful in the labour market. At this level, according to Reed (2005:1635),

“the underlying dynamics of the power and control struggles that shape and reshape the structure of social positions and the differentially distributed pattern of material interests and social rewards that it reproduces are most clearly articulated and most keenly contested.”

The structure of the GLM may be influenced by divergent interest groups pursuing their own agendas: universities who are engaged in supplying growth, occupations and employers who may take advantage of the increased supply and graduates who seek qualifications as a labour market advantage. Using qualifications as a matching device is legitimated and strengthened through convergence of these interests. Convergence of interests is a possible driver for change in the GLM, suggesting that this study should be sensitive to the “structure/agency” dilemma.

5.4 Emancipatory intent: the purpose of critical realist research

The next core domain within CR is its “emancipatory intent” (Reed 2005; Sayer 2000). To an extent, Sayer (2000) argues, this is what makes critical realism, *critical*. Whilst the main focus of CR is to explain underlying structures and mechanisms, its purpose is to effect emancipation. Indeed, it could be argued that

CR, in its role as a social science meta-theory, is itself an emancipatory project designed to liberate its users from false beliefs about knowledge production particularly associated with post-modernism. Bhaskar (1986, cited in Collier (1998:191) explains emancipation as:

“It is my contention that the special qualitative kind of becoming free or liberation which is emancipation, and which consists in the transformation, in self-emancipation by the agents concerned, from an unwanted and unneeded to a wanted and needed source of determination, is both causally presaged and logically entailed by explanatory theory, but that it can only be effected in practice. Emancipation, as so defined, depends upon the transformation of structures, not the alienation or amelioration of states of affairs.”

Bhaskar seems to suggest in this quote that emancipatory intent has a (r)evolutionary component. Social science research is designed to enable emancipation for individuals and, in the process, to transform society for the better. Explanation in CR is not purely a cognitive process and has practical implications. However, this assumption causes some problems for the researcher, for what is “unwanted” and “wanted” are open to interpretation. Consequently, selection amongst possible explanatory theories may be coloured by the researcher’s values. For example, the expansion of higher education may be viewed as necessary to achieve a knowledge economy (Burton-Jones 1999) or explained by “spiralling credentialism” (Collins 1979).

There is an ongoing debate amongst critical realist researchers on the fact/value dilemma (Collier 1998; Harre 2002; Sayer 2000). Collier (1998), for example, proposes that there is no justification for moving from value to fact, although admits that interpretations of fact may vary. Sayer (2000), by contrast, sees the normative aspect of critical social science as a necessary moderation to critical realist reconstructions of events. He accepts that prediction is outwith the scope of the emancipatory project, yet argues that “we can make some judgements about what is or is not feasible and desirable”. Qualifying this claim, Sayer (ibid:164) suggests

that in CR terminology, the dilemmatic character of social life can be described in terms of structures which have both desirable and undesirable mechanisms, or mechanisms which tend to produce both desirable and undesirable effects. Thus the mechanism of matching by qualifications may work where graduates achieve “graduate jobs” or be undesirable if they do not. Alternatively, the structure of the GLM may be based on meritocratic principles or reproduction of social inequalities. In any event, if the mechanism itself is criticised, then an alternative needs to be proffered.

Sayer (2000:159) proposes a four-stage model for critical social science as follows,

- (i) Identifying problems – unmet needs, suffering, false beliefs
- (ii) Identifying the source or cause of these unmet needs
- (iii) Passing to a negative judgement of sources of illusion and oppression
- (iv) Favouring (*ceteris paribus*) actions which remove these sources

The emancipatory intent and the fact/value debate present some interesting questions for critical social scientists. This core assumption serves to warn against normative or utopian judgements which may not produce the desired results. The emancipatory intent is of particular relevance to this study which seeks to inform public policy on education, as it may suggest instances where such policies may not be working as intended (Ackroyd 2004). Nevertheless, operationalisation does not fit neatly into the model described above. Firstly, the concept of unmet needs or false beliefs is dependent on the perspective adopted towards the purpose of higher education. Growth in graduate numbers can be interpreted as a social good which benefits society, or alternatively as a potentially unmet need to access high-level employment. The source of the unmet need, if it indeed exists, is also unclear. It could be an oversupply of graduates, or that qualifications are an artificial mechanism for matching people to jobs, or that using graduate destinations is a flawed measurement of the utility of higher education. It is then impossible to pass to stage (iii), despite criticism of expansion of higher education (Keep and Mayhew 1999). The final stage is perhaps most interesting; favouring actions which remove these sources and has fundamental and practical significance for this thesis.

Logically, and if there is an oversupply of graduates, calls for university closures or reductions in graduate numbers are deafening in their silence. Instead the favoured action is political intervention in the demand side of the GLM, admittedly said to be well-nigh impossible to achieve (Warhurst 2008). It may not be desirable, nor feasible, to direct undergraduates into specific courses of study where demand is thought to be high. Consequently the GLM appears to have experienced a shift from merit to market. (Brown and Hesketh 2004).

Collier (1994:191) explains that cognitive emancipation, or realising one's oppression is vital for transformation. However he also notes that the emancipatory process "consists in toil and trouble, conflict, changes in power relations, the breaking up of some social structures and the building up of others". This emphasises that a significant transformation of existing structures is not an inevitable product of realising that qualifications may be a form of oppression. Indeed it may mean that pressures for maintaining existing structures are greater than opportunities for emancipation. An instrumental attitude towards higher education as a means to access employment may be a growing tendency within the undergraduate population. Employer influence in universities is therefore accommodated by the recipients of higher education, and the actions of agents who may be predisposed to challenge it, are constrained.

The practicalities of this specific piece of social research illuminate the benefits and limitations of the explanatory/emancipatory objective. Critique, as distinct from criticism, is a foundation of social science research and dependent on empirically substantiated research. Its purpose is to offer at least the possibility of some kind of social improvement (Sayer 2000) which necessitates thorough description and explanation of the phenomenon in question. The underlying dilemmatic nature of social life is apparent in this study, particularly in terms of the purpose of higher education. Interpretation of the research findings will therefore require to recognise limitations in the "emancipatory intent" in the separate levels of analysis.

5.5 Abstraction/concretization in critical realism

The final core assumption is concerned with the use of theory within CR. Theories, in CR, are not regarded as ordering frameworks but as conceptualisations (Sayer 2000). According to Danermark et al : (2002:140),

[g]eneral theories represent a certain way of viewing reality, a generally valid set of concepts that can be used when formulating interesting and relevant questions which also take into account the more specific contextual circumstances not considered in the general theory. General theories developed in social science are productive instruments for a concrete analysis, only insofar as they are able to capture *real* social structures and mechanisms and the manners in which they are manifested in different social, cultural and historical contexts.”

This quote suggests that a general theory is a set of statements of empirical observations produced by regularities or constant conjunctions. The theory can be supported by further evidence of the same empirical regularities or contested and refuted by their absence. However from a critical realist standpoint, confirming or refuting theory does not explain the real-world mechanisms which produce the theory. This means that theories are used by critical realist researchers to explore *possible* causal mechanisms in a series of events, only applicable to the circumstances and objects of research.

The purpose of literature review is then to approach the research problem, producing a conceptual framework from which to proceed. The object of research is not confined to a particular discipline within the social sciences which itself enables a more complete picture of events. Vincent (2008) notes that the value of critical realist research is that it enables various theories to be combined in order to produce insights about the various levels of the phenomenon that is being considered. Whilst theories may, for example, be criticised for their tendency to explain according to the structural properties of the object of research, they are nevertheless important to aid understanding of an event, even if their limitations mean that they are discarded as inadequate. However, CR also generates concepts that can be used

to understand agential responses and how these might transform or reproduce structures.

The process by which theory is connected to empirical events is referred to as retroduction. According to Danermark et al (2002:96) “retroduction is about advancing from one thing (empirical observation of events) and arriving at something different (a conceptualisation of transfactual conditions)”. Analysis of the data under consideration reasons backwards from the phenomenon under investigation and seeks to explain and account for its existence. However, a focus on explanation rather than event regularity allows space for judging the possible causes of events and allows possible consequences of either heeding or ignoring them to emerge (Sayer 1992).

In summary, examination of the core domains within CR provides the analytical conditions to advance the debate on graduate work and employment. The seemingly simple question that Bhaskar (1998) proposes, asks what the world must be like in order for research to be possible. At the ontological level the answer is that the world has depth and the level of the real cannot be reduced simply to experience (Clegg 2008). The object of study is not what happens, but why it happens, in what circumstances and with what outcomes. In order to make sense of complexity and the dilemmatic character of social life, structure and agency require to be made separate. CR embraces the concept of variation and it becomes the object of investigation. The work of Archer (1998) is a reminder that research is situated in a context of evolving processes that take place over time. This poses a problem for social scientists, who are largely conditioned to presenting “cross-sectional snapshots in time” oriented towards uncovering change (Mutch et al 2008). This is particularly relevant for this study and analysis will recognise that the conditions present in the empirical work may not be static. Nevertheless, as Sayer (2000:47) proposes, CR accepts “epistemic relativism, that is the view that the world can only be known in terms of available descriptions and discourses”. Therefore critical realists begin by clarifying research questions, the focus of the next section.

5.6 Research Design: formulating the problem

In order to apply the core assumptions within CR, this section formulates the research problem. The literature review followed a “logic of discovery” which began by mapping the GLM. The mapping process offered some useful insights on the way in which existing research examines the effects of an increasing supply of graduates. It revealed that there are opposing models of the GLM. On the one hand the optimistic policy model relies on the SOC(HE) to propose that policy is working as intended. On the other, a mismatch problematic has emerged, derived from hard and soft currencies within “personal capital” (Brown and Hesketh 2004). The next stage of the review examined the role and function of qualifications in the GLM. Although the Marxist and Knowledge economy approaches were criticised, they suggested that the structure of the GLM may be influenced by wider societal actors and factors. The theory of social closure appeared to offer a plausible framework from which to examine the GLM, particularly given its focus on agential responses to increased supply. Yet conceptual and empirical gaps in knowledge were exposed, suggesting that occupational reference points were missing in analysis of the GLM. In order to explore these, the sociology of the professions was examined, both to construct a picture of “ideal-type” graduate employment and to understand how professional work is conceptualised. In line with a CR approach, the following research questions were developed from the literature review:-

- How applicable are existing models of the GLM?
- What actors, factors and interests shape new areas of employment for graduates?
- What is the salience and character of graduate knowledge and skills in work?
- How are graduates utilised, once in employment?

The more usual research problem of identifying mismatch in the GLM, is replaced by research questions that seek to describe and explain new areas of employment for graduates. Essentially the research questions seek to explore possible changes in the structure of the GLM and also qualitative features of work that graduates undertake. The research focus is narrowed by considering jobs where degrees are required but this in itself represents a point of contact between structure and agency.

5.7 Operationalising the research

This section discusses the ways in which the conceptual framework is applied according to the critical realist meta-theory. As such this thesis is an exploratory attempt to chart the terrain between the core domain assumptions of CR and their implementation in a practical, empirical research project (Sayer 2000). The fundamental precept of “open systems” means that the research process is guided by a pragmatic approach towards methods (Hartwig 2007). Danermark et al (2002:110) also note that “it is never possible to study anything in all its different components. Therefore we must in practice confine ourselves to studying certain components but not others.” A major component of the research process is to narrow the focus and identify components that best inform the research objectives. For this reason, the relationship between social class and employment outcomes was discarded in favour of a focus on knowledge and skills transfer. The literature suggests that the impact of social class is most apparent in Russell-group universities and given that it was not possible to arrange access to such universities, the effects of social-class may be less obvious in the selected universities. Admittedly this is a limitation of this study but it is governed by pragmatic considerations.

In this study, research will be conducted using extensive and intensive methods (Sayer 2002). The extensive procedure has to do with quantitative data collecting and statistical analysis (Danermark et al 2002). A combination of qualitative and quantitative research methods is designed to be complementary and chosen with specific research questions in mind, consistent with a research process guided by critical realist ontology. Mingers (2004), for example, notes that some techniques are more useful than others in different circumstances and at different times. Intensive and extensive methods represent varieties of case study evidence in this study. Both use multiple-case studies and are designed to answer specific research questions (Yin 2003). Thus the first case studies explore models of the GLM, operationalised in two cohort surveys. The subsequent occupational sub-samples are designed to gather qualitative data on the nature of graduate employment and utilisation of graduates. The sequence of data collection is shown in Table 5:1. Each phase of the research informs the next and is evaluated by returning to the

research questions and relevant literatures. A hallmark of critical realist research is that it works incrementally. Harrison and Easton (2004) note that the effectiveness of each research intervention is determined and evaluated by the researcher. Decisions are made regarding a shallower explanation across a wider range of contexts or a deeper explanation derived from a narrow range of subjects. To an extent the range of occupations chosen for the qualitative data perhaps sacrifices a degree of depth. However this is justified by the absence of comparative evidence in the literature: occupational case studies are scarce in studies of graduate employment⁵. Table 5:1 groups the data collection chronologically.

Table 5:1: Sequence of data collection

Data Source	Method	Data Collection Period
Strathclyde University (2003 cohort)	Survey	Distributed April 2005
Strathclyde graduates	Occupational case studies	August – December 2006
Glasgow Caledonian University (2004 cohort)	Survey	Distributed April 2007
Glasgow Caledonian graduates	Occupational Case studies	July – October 2008

The sequence of data collection is a reflection of the iterative process, and represents the logic of enquiry. Initially the cases were grouped by university so that Case 1 is Strathclyde (Survey plus occupations), Case 2 being Glasgow Caledonian (Survey plus occupations). However as the study progressed, on reflection, a decision was made to organise the data so that institutional differences were considered in the survey evidence and the qualitative evidence analysed separately. In part this was based on the pragmatics and purpose of the qualitative research: if the focus remained on differences between universities, then empirical research would have to probe educational differences which was neither feasible nor desirable.

⁵ Where these exist they generally consider employment outcomes for Business graduates (Nabi and Bagley 2001; Wilton 2008). An exception to this is Adam and Demaiter (2008) who usefully consider connections between education and work for IT workers.

Regarding the surveys, case studies are in the form of two entire cohorts from universities in Glasgow⁶. The first survey was conducted to pilot and inform the direction of research and the second, to offer comparative evidence from a university cohort who, in theory, would be accessing the same labour markets. The surveys are an important source of data in their own right and help to establish and identify patterns amongst variables within the sample. Despite this, when a quantitative approach discloses an empirical regularity, it is neither a necessary nor sufficient condition for explaining a phenomenon (Bryman 2004). If an expected connection cannot be found, this does not infer that a causal force (mechanism) is lacking. Forces that counteract each other might prevent the empirical manifestation of the mechanism in question (Danermark et al 2002). For example, it is not entirely possible to conclude that differences in the ranking of the universities are the only cause of variation in employment outcomes.

Comparison amongst cases is productive because it provides an empirical foundation for retrodution, a foundation to sort out contingent differences in order to arrive at the common and more universal” (Danermark et al 2002:105). Case studies are a very important feature of a social science founded on critical realism. (ibid:106). The next section explains the rationale for selecting specific occupations.

5.7.1 Rationale for the qualitative case studies

Occupational sub-samples were selected in order that comparison might be made within and between groups of graduates in recently graduatised occupations. The rationale for using occupational case studies is driven by a number of factors. Firstly, the decision arose from dissatisfaction with existing accounts of the GLM which largely rely on large-scale survey evidence. Aggregate evidence of utilisation generally conflates knowledge and skills (Warhurst and Thompson 2006) and neglects the possibility that qualifications be may required for reasons other than a correspondence between degree and occupational knowledge. Secondly, there is very little available data from graduates about their working conditions and culture,

⁶ Given that the author of this phd is an ESRC CASE student, the funding for the surveys was generously provided by the collaborating organisation, The Scottish Government (Department for Education and Lifelong Learning) and the universities selected were decided jointly.

the relationships between higher education and work, and opportunities for training and career progression within specific occupations (Little 2003). In other words, we do not have much empirical evidence on why occupations graduate.

Thirdly, literature on the professions indicated that higher education may feature in the “professional project”. This proposed that occupations pursuing upward mobility might take advantage of the opportunity to site initial education in universities, suggesting empirical evidence is required in occupations that might pursue this strategy. Micro-level analysis at occupational level allows examination at point of entry but, more importantly, once in work. Given the objectives of this thesis, it seemed reasonable to select from occupations where degrees are required. To an extent the exploratory nature of the research offers considerable scope to select occupations. However, in practice, selection was limited to respondents from the survey who expressed a willingness to participate. Emphasis was placed on new occupations and those that have been relatively recently graduated in order to identify trends and potential mechanisms.

The literature review suggested that existing tools for categorising graduate employment are not entirely adequate for the purpose which has obvious repercussions for this, and other studies of graduate employment. The SOC is useful for classification, if only for the reason that it is widely accepted and understood. It does however represent rather a blunt instrument. Given that the SOC is revised and modified every ten years, it provides a basis from which to consider how graduate employment may have changed in the interim period although this may only indicate that the SOC is outdated. The SOC(HE) provides a typology with a questionable method and although it indicates expansion in the range of graduate occupations, it is weak on explanation. The professional literature does not offer an explicit definition of graduate employment but is nevertheless useful as it incorporates an element of process. In general terms, the qualitative case studies were selected and organised into established, aspiring and emergent professions (Konzelmann 2007)⁷. In

⁷ Emerging professions are new occupations in the process of acquiring professional status. Established professions have already achieved professional status and awarded legal protection.

operationalising the study, analysis will use the SOC, the SOC(HE) and professional status, according to “fitness for purpose” which guides critical realist research (Fleetwood and Ackroyd 2004).

In the study, established professions are Chartered Accountants and Building Surveyors, emergent professions, Active-schools co-ordinators and Risk Managers in Health and Safety and in Finance and the emergent profession is Environmental Health Officers⁸. Four of the occupations, are located in the New category of the SOC(HE) and although Risk Managers have been placed in the Traditional category because their work is judged to be largely similar to that of management consultants, they are also a new area of employment. Admittedly the breadth of occupations studied perhaps sacrifices a degree of depth: it is however necessary in order to explore possible causal mechanisms and features of graduate work and employment. In the literature review, it was noted that criticism of expansion in graduate numbers often rests on an ideal typical model of graduate employment. According to Danermark et al (2002:49) “ideal types do not aim at grasping differentiations in the world and identifying objects in terms of their specific generative mechanisms. As a rule, therefore, differences and similarities between the ideal type and the actual cases give us little information; we do not know what has produced them or how to assess them”. Nevertheless, with reference to this study, ideal-type graduate employment in the professions, it is argued, is a useful indicator to assess change, particularly in terms of the occupational mismatch. If it is accepted that traditional professions are matched, then the features of connections between education and work represent a template produced by professionalization. It therefore seems reasonable to include occupations which are widely accepted as graduate jobs (established professions) and others represented in new areas of employment for graduates (aspiring and emerging professions). The case study occupations are at

Midway are the aspiring professions who are described as established occupations aspiring to enhanced professional status.

⁸ Several other occupational groups were considered and discarded, either because they did not generate sufficient numbers of interviewees (Human Resource Managers) or because there was too much diversity in jobtitles (Engineers). It was tempting to select the occupations with most survey respondents (Teachers and Nurses) but these were discarded because, at the time, it was felt that connections between education and work for these groups are well established.

different stages in the professionalizing process which means that the study will also clarify the extent to which this mechanism is a factor in change.

5.8 Specifics of the fieldwork

The first stage in the empirical work establishes the distribution of graduates from survey evidence, gathered across an entire cohort. Strathclyde University was selected by collaborating partners in the CASE studentship and access to graduate names and addresses agreed with the University's Career Service. An initial postal survey was therefore conducted in Strathclyde University. The survey instrument was adapted from the Higher Education Statistics Authority (HESA) in their Destinations of Leavers from Higher Education (DLHE) survey, conducted six months after graduation. The survey design was at the request of The Scottish Government in order that the data collected could be compared with existing government intelligence gathered by the HESA. The questionnaire largely uses closed questions and familiarity with the DLHE questions, it was felt, might also aid response rates. The questionnaire was distributed to the 2003 cohort, 18 months after graduation. Minor modifications were made to the DLHE survey, primarily to reduce its length in order to induce a higher response rate but also for reasons of cost. The viability of response rates varies: according to Bryman (2004) anything under 50% is not acceptable whereas researchers in the graduate labour market (Smetherham 2005, Hesketh 2000) are content with a response rate of 20%. Despite the cost, it is for this reason that entire cohorts were used, as opposed to probability sampling (Bryman 2004).

The DLHE survey has a response rate of 76% (HESA 2004) perhaps reflecting the timing of the survey. However, it was decided that six months post-graduation may not allow graduates sufficient time to secure employment⁹. The cohort selected also recognised that contact information retained by universities relies on graduates to update their addresses and that, as time progresses information may become outdated. According to Groves et al (1992) factors influencing survey participation

⁹ Subsequently, and in response to criticism, HESA now distribute longitudinal surveys, three years post-graduation.

include the perceived legitimacy of the survey, its length and attractiveness which were all considered in the survey design. A copy of the survey is attached as Appendix 1 to this thesis.

Areas covered in the survey include status of employment, further study, characteristics of the employer, job title, earnings, reasons for employment, qualification requirements and salary details. With regard to those undertaking further study, questions on course details and reasons for further study were included. In the final section personal details were elicited including degree subject and level, age and gender. The questionnaire was anonymised to aid response rates. Additional questions were incorporated of interest to the Careers Service at Strathclyde, through whose offices the survey was distributed.¹⁰ These asked for details of whether graduates had changed jobs since leaving University, and job-search information. A question on intention to remain with the present employer, it was felt, would allow exploration of commitment to the employer, job and sector. Finally, respondents were asked whether they would be prepared to participate in future research.

Data quality may have been affected by restricting the survey to graduates of Strathclyde University so that results would be related to position in the rankings (Buela-Casal et al 2005; O'Leary 2005). Data is also restricted to job title and a brief description of duties, making it dependent on the thoroughness and accuracy of the respondent. For this reason, a comparative survey was agreed with collaborating partners in the research. Glasgow Caledonian University was selected at the request of The Scottish Government, given that graduates would be accessing the same labour market. The survey was distributed in April 2007 to the 2005 cohort. It was not possible to use the same cohort at Glasgow Caledonian, given that a longitudinal survey had subsequently been developed and distributed by HESA. The second survey followed the same general format to allow for

¹⁰ Data protection legislation precludes disclosure of graduates' names and addresses to any third party. The survey was distributed from the Careers Service at Strathclyde with a covering letter that explained the purpose of the research and the University's Ethics Policy. By returning the survey, respondents gave consent to use of the data. A similar procedure was used in the second survey with the Alumni Office in Glasgow Caledonian.

comparison. However slight alterations were made to address problems arising from the first survey. Foremost amongst these were that a “return-by” date was included and a question on the respondent’s full educational biography inserted. This, it was felt, would illuminate patterns of educational access and offer a more complete picture.

This section considers the limitations of the data. Firstly, limitations in survey evidence more generally, in this specific survey and secondly in the qualitative evidence. According to Bryman (2004) the major disadvantages of self-completion questionnaires include lower response rates and greater risk of missing data. In the present study both are salient. It may be that graduates who have been less successful in gaining employment did not complete the questionnaire and results can only be generalised with that in mind. Low response rates may also mean that data analysis is limited. Missing or incorrect data is also an issue, particularly in terms of degree subject and level. This was addressed to an extent, by matching data with a checklist of graduates and degrees provided by the Careers Service. Given that self-report evidence is subjective, questions on specific knowledge and skills were omitted from the surveys. As noted in Chapter two, in graduate employment, it may be less important to ascertain which skills are used, than to assess the level of skills use.

The survey evidence is therefore necessary, but not sufficient, to uncover causal mechanisms in graduate employment which suggested using qualitative data. Qualitative method has the principal characteristics of: a case study design, study of the cases in their natural environment, orientation towards understanding, “thickness” and theory-generating (Sayer 2000; Yin 2003). In general terms the researcher chooses to study a number of cases which are all assumed to manifest the structure that she wishes to describe, but which are different in other aspects”. The rationale for supplementing the surveys with qualitative evidence was agreed in advance by collaborating partners in the research and is related to the core research questions and themes arising from the literature search.

5.9 The case study occupations

The occupations for the qualitative element of the fieldwork were selected according to a purposive sampling strategy. As noted, respondents to the surveys indicated a willingness to participate in future research. These graduates were then gathered into occupational clusters. Emphasis was placed on newly-graduated occupations and on those in different categories of the SOC, and at different stages of professionalization, in order that comparison could be achieved. Semi-structured interviews were selected as the most appropriate method to answer the research questions (Bryman 2004). This method is particularly relevant for research designed to compare occupations: structured interviews may not allow sufficient scope for emergent themes and unstructured interviews are inadequate to answer the research questions. The flexibility incorporated in semi-structured interviews, it was felt, would allow graduates to explain their work and reflect on the contribution made by degree education to that work. Nevertheless there are limitations in data collected by interviewing, particularly in comparative cases where analysis may prove problematic (Miles and Huberman 1994). The researcher should therefore refrain from making preconceived assumptions on, for example, the relevance of connected degree subjects to work. In addition, the responses of graduates may be influenced by prior expectations of degree education and experiences in work.

The semi-structured interviews introduced topics from an interview schedule¹¹, yet incorporated flexibility to allow informants to talk about what proved important to them. According to Yin (2003), the strengths of interviews are that they focus directly on the topic under scrutiny and also provide insightful data for causal inferences. The researcher acts as a guide, rather than a director of the interview and the process is interactive. The interviews began by asking graduates for details of their work, how it was organized, support, supervision and training. The interviewer then explored connections between education and work, salience of degree knowledge and skills in work, recruitment experiences before finally discussing opportunities for career progression. At the end of each interview,

¹¹ A sample interview schedule is contained in Appendix 2 to the thesis.

graduates were asked if they wished to add any further comments on their work or the contribution of their degree to work. Semi-structured interviews, of between 45 minutes and two hours, were recorded and then transcribed, either by the interviewer or by a professional transcriptions service. In all cases transcripts were corrected by the researcher and then returned to interviewees who were invited to make additional corrections/amendments. Although, very few suggested amendments, this is an important step in data verification (Bryman 2004). Potential informants were initially contacted by email or telephone and face to face interviews arranged at the interviewee's workplace or another convenient location. In practice, this part of the data gathering process proved time-consuming and, to an extent, influenced the selection of the occupations. Although graduates had indicated a willingness to participate, many were reluctant to do so when contacted. Numerous emails and telephone calls were made before it was possible to consolidate appropriate occupations for the research. Telephone interviews were also used where graduates were employed outside Scotland.

Whilst the focus of research is graduate employment, it was also deemed necessary to collect data from employers and professional bodies where possible. This aids triangulation of the data from graduates and also covers demand for graduates to an extent. Although employers, with the exception of the Active Schools group, were not party to decisions on degree requirements for the occupation, they nevertheless operate within the structure and their interpretation of requirements is salient. This part of the data gathering process was problematic in terms of access to employers. Professional bodies were also reluctant to participate in the research, despite frequent correspondence from the researcher. For this reason additional secondary data for the case studies was gathered from material provided on the websites of professional bodies. Two graduate employment agencies were also contacted and representatives interviewed.

The specifics of the semi-structured interviews were adapted from suggestions made by Warhurst and Thompson (2006) for research into knowledge work and workers. In order to understand connections between education and work, the broad framework for the interview questions is organised round issues of input, output and

opportunity for progression (Warhurst and Thompson 2006). Input refers to the point of entry and assesses the type of qualification needed to access the occupation. To this questions on the selection process were added. Output looks at utilisation of knowledge and skills in the job and in this case transfer of knowledge and skills between university and occupation. It also elicits general details of work content and patterns of further training provided by the employing organisation. Career progression is concerned with future career paths available to graduates. The same general format was followed in the employer interviews with additional topics concerned with the profession and the process of graduatisation.

Issues of confidentiality were addressed in communications with informants. Strathclyde University's Ethics Policy was explained so that interviewees were made aware that their responses were confidential, anonymised in any published material. Consent to recording the interview was also gained. Prior to conducting the interviews, a brief overview of the project was given in order that interviewees were aware of the purpose of the research.

In addition, data analysis will focus on the context of employment. The value of case study evidence is that it allows the researcher to distinguish between person and position (Steedman et al 2003) Warhurst and Thompson (2006) suggest that the key determinants of research into knowledge use are, *inter alia*, organisational hierarchy and control systems, professional or occupation structures, internal and external labour markets. Although, in one sense, graduates enter the labour market with similar education, given that they all have Level 4/5 skills, the context and occupation in which they are employed are differentiating factors in analysing the data. Context can therefore be used to interrogate data within and across occupations.

Literature on the professions also emphasises control mechanisms in order to distinguish professions and professionalism (Evetts 2004; Freidson 2001; Johnson 1972). Professional control influences the knowledge, skills and qualifications required to enter the profession that is said to be entirely independent of the context of employment. Organisational control may mean that work content is highly

contextualised and education, although it may be to degree level, is of a more general nature. The focus of this section of the findings is therefore to explore the contextual factors that may impact on the work content of graduate jobs.

These issues are operationalised in the following, more specific, questions which guide the data collection. They are linked to the main research question and designed according to the features of graduate employment that might allow comparison across occupations.

- What qualifications, skills and knowledge are needed to access the occupation, including professional membership?
- What knowledge and skills are required in the job and transferred between education and work?
- How are these assessed by employing organisations at the recruitment stage?
- What is the impact of context of employment between and within occupations?
- What are the key tasks in work and how is work organised, monitored and supported?
- What further training is required, available and accessed?
- What avenues for career progression are available?

Whilst the overall research objective is to assess utilisation of graduates, the framework produced by these questions describes conditions within the labour process from which this can be assessed. To an extent this is a problem generated by trying to reconcile different graduate occupations. Case studies in the labour process tradition tend to focus on one specific occupation (Zimbalist 1979). Consequently work content is described and contextualised to that occupation before cross-case analysis is conducted.

Table 5:2 summarises the main informants from whom data has been collected in this study. Two further interviews were conducted with specialist graduate recruitment consultancies, to provide a general overview of the labour market in Glasgow and to triangulate data from employers and graduates.

Table 5:2: Numbers of main informants and interviews

	Graduates	Employers	Professional Body
Accountants	11	4	
Surveyors	6		1
Active Schools Co-ordinators	9	2	
Risk Managers	9	1	2
Environmental Health officers	5		1
Totals	40	7	4

Whilst the numbers in each occupation are adequate to allow sufficient comparison, they were limited by graduates' willingness to participate or by cancellation of arranged interviews. This explains why there are fewer surveyors and environmental health officers. Schedules were produced for each interviewee, extracted from the information provided in the surveys, including educational biography and employment details, in order that material was not duplicated within the interview.

5.10 Data analysis in critical realist research

The initial coding approach for the qualitative data reflected the interface between an individual worker and the organisation they worked for. Each transcription was colour-coded according to themes in the interview schedule and a matrix constructed to allow interpretation and analysis. Despite the coding strategy, comparison amongst the transcripts showed divergence in the way the coding approach could be interpreted and used. It was obvious that different codes could be assigned to the same piece of text. A system of 'focussed' coding was developed in treatment of the data that deliberately highlighted the main research questions (Bryman 2007). The data was therefore coded according to five broad features of graduate employment: context of employment, pathway between education and work, recruitment and selection, work and task organisation and career progression. Each

case was analysed separately and then a matrix constructed according to the broad themes in order to make cross-case comparison (Miles and Huberman 1994). The approach adopted to cross-case comparison is that suggested by Miles and Huberman (1994:176) and combines case-oriented and variable-oriented approaches to analysis. In terms of the former all occupations require graduates but have been grouped according to aspiring, emerging and established professions which are assumed to share certain patterns or configurations according to their stage of professionalization and the way in which they are categorised. The established professions are seen as graduate jobs and the aspiring and emergent professions exhibit different patterns for graduation. Nevertheless certain of the coded themes described above cut across cases and are therefore considered separately. For example, public sector employees are a group, in and of themselves, irrespective of occupation and this becomes a subject of investigation according to relevant themes. Themes were finally re-analysed according to the specific research questions.

More generally, this study did not embark on the research in order to formulate a 'grand theory' of graduate work employment. Instead it attempted to explore a range of occupations where degrees are required, with the intention of establishing patterns and emerging themes in the utilisation of graduates. The structure of data analysis and more generally in the thesis, largely follows the pattern suggested by Danermark et al (2002:109-111). Although they stress that their model is a guideline, rather than a template, it serves a useful purpose to distinguish between levels of abstraction and concretization in the research design and analysis.

Stage 1 involves describing the situation that we intend to study. For this thesis the literature on mismatch in the GLM was reviewed and a pilot study conducted with the first survey. A number of issues emerged during stage 2, the analytical resolution of the pilot study. These suggested that the qualitative research should be undertaken and also that the relationship between education and work required further scrutiny. Stage 3 developed the mismatch problematic and placed the original research questions in the context of ideas about the relationship between education and work more generally and specifically by undertaking a review of the

literature on professions and professionalisation. This involved re-thinking the research objectives that were perhaps too focused on mismatched graduates. Accordingly, research questions were developed to explore the utilisation of graduates. Mismatch itself is a relatively elastic concept: occupational mismatches are dependent on a contested definition of graduate jobs; educational mismatches rely on as yet under-researched notions of educational requirements. Skills and knowledge mismatches are perhaps the most misrepresented because they infer connections between occupational and educational knowledge and skills which may not be the reason that employers seek graduates. The altered research questions, it is argued, fulfil and are produced by, the core domain assumptions within CR.

The fourth stage of analysis is closely related to Stage 3, where retrodution occurs. At this point, the data collection is completed. During this phase the second survey and occupational case studies were also conducted. Stage 5 is where the data is analysed according to the core research questions and relevant theories extracted and analysed according to their explanatory power for the findings. Danermark et al (2002) propose that comparison between different theories and abstractions involves in some cases selecting one theory that best explains the findings, and in other cases, theories are complementary because they focus on partly different but nevertheless necessary conditions. In this study the mismatch problematic is not entirely discarded, and forms the basis of analysis of the survey evidence. However the qualitative evidence is considered separately to explore graduates experiences, once in employment. Although the case studies were conducted on a case by case basis, they are presented thematically in order to inform the analysis. In general terms the first findings chapter considers port of entry, recruitment and transfer of knowledge and skills and the second explores utilisation.

In the final stage, labelled concretization and contextualisation, the core concepts of the thesis are analysed in terms of the data. Mechanisms identified in earlier stages of the research process are interpreted and explained according to the nature of graduate work and employment. Structurally, graduatisation may be driven by upskilling, credentialism or professionalisation but the actions of agents are crucial to arrive at a more complete picture. Although conclusions are limited to what can

be adduced from these particular occupations, the intention is to identify some causal mechanisms which themselves may be generalisable within the confines of the conditions within which the data was collected.

The final stage of the research will include some recommendations for public policy arising from the study. It is here that the “emancipatory intent” of CR and associated reservations described above, are particularly apparent. However the thesis itself, may also provide a platform for further research, explored in its conclusions.

5.11 Summary and conclusions

In summary, this chapter has presented the core domain assumptions within CR and the way in which these have been implemented in the present study. It has suggested that CR is sufficiently well-established to make further justification unnecessary. Instead practical manifestations of critical realist inspired research are required to augment the approach. To an extent, interpretation of the meta-theory caused some problems in the present study. For example, it is not always possible to directly translate core domain assumptions to the concrete problems faced by researchers. In this study, these were particularly apparent in the selection of case studies and in achieving access to relevant participants. However there are some major advantages for using CR in the way that it allows re-conceptualisation and shaping of the core research problems and questions as they emerge during the literature search and in the empirical work. In addition the explanatory focus is a continual reminder to probe the data for deeper and perhaps less obvious answers to research questions. The separation of structure and agency is effective in order to critique existing literature and also as an analytical tool in empirical research. The success of this study can therefore be measured in the extent to which findings in existing literature have been reconciled with a different approach to analysis of graduate work and employment. The next chapters will present the findings from the surveys and qualitative data, organised according to the research strategy described in this chapter.

CHAPTER SIX: MODELS OF THE GRADUATE LABOUR MARKET, EVIDENCE FROM TWO COHORT SURVEYS

6.1 Introducing the surveys

This chapter will present the findings and analysis of data from two cohort surveys conducted at the University of Strathclyde (2004 cohort) and Glasgow Caledonian University (2005 cohort). The purpose of the surveys is to interrogate existing models of the graduate labour market (GLM). Models of the GLM, identified in Chapter Two, are the optimistic policymaker model which relies on the SOC(HE) to confirm that demand for graduates is expanding in line with the increase in supply. Alternatively, more critical research suggests an oversupply of graduates arising from different varieties of mismatch. In general, these are derived from three sources: firstly the occupational mismatch that hinges on how graduate jobs are defined; secondly, educational matching that considers the level and type of qualifications required for occupations; and finally, once graduates are in employment, the skills and knowledge mismatch which establishes links between acquired and required skills and knowledge.

In general terms, the survey evidence explores competing models by considering some of the obvious features within personal capital, given that surveys are intended to analyse event regularities. The primary objective is therefore to discover the type of jobs that graduates are in and their salaries. The surveys were distributed to Strathclyde graduates 18 months post-graduation and to Glasgow Caledonian graduates, two-and-a-half years after graduating. These timescales, it is argued, are more appropriate than the First Destinations Survey, conducted six months after graduation and allow the “transition effect”, noted by Elias and Purcell (2004b) to be explored. Yet mismatch tends to rely on supply-side characteristics and the “hard currencies” of institution attended, type and level of degree are related to information on the jobs that graduates are in. In addition, gender and age are incorporated as personal characteristics which may influence employment. As noted, social class was not included as a factor, given that its influence may be more apparent in Russell Group universities.

Nevertheless, of particular interest is the effect of institution attended on employment outcomes. In the UK, university rankings, often headed “league tables” appear annually in the press (Attwood 2008; www.timesonline.co.uk, www.guardian.co.uk). Strathclyde, for example, is placed at 37th in the Times good university guide whereas Glasgow Caledonian is ranked at 60 so it might be expected that Strathclyde graduates are more successful in the labour market. According to Bucla-Casal et al (2006:350), there are three key issues within ranking: who ranks, why rank and the audience for ranking. They are intended to inform prospective students, gauge university performance and are used by recruiters as a measure of educational quality. However they apply different criteria for measurement and aggregate data to produce an overall score. Teaching quality, for example, is measured by student satisfaction. Career prospects are measured from the First Destinations Survey which relies on the SOC(HE) to categorise graduate jobs. A recent report (HEFCE 2008) found that despite reservations regarding methodology and transparency of the data collected, they have an important influence within the university sector and graduate employers and are “being used for a broader range of purposes than originally intended, and being bestowed with more meaning than the data alone may bear” (HEFCE 2008:7). For example, rising up the rankings is being incorporated into strategic plans for individual institutions. A considerable problem within ranking systems is that they over-generalise and mask the reputation of individual faculties, departments and indeed degree subjects.

Despite making a distinction between cohorts, where necessary the results will be combined to make more general observations on the character and scope of graduate employment. The findings will describe broad characteristics of the sample and subsequent interpretation related to implications rather than in-depth statistical analysis. In general terms, and according to a critical realist approach, the surveys are a necessary tool to begin probing utilisation of graduates. The final discussion will reflect on the extent to which the survey evidence has shaped the direction of the qualitative evidence in this study.

6.2 The survey findings

More generally, although analysis requires to focus on differences between cohorts, similarities also need to be considered, primarily because it cannot be assumed that any differences in employment outcomes are a result of the institution attended. They may simply reflect differences in skills and knowledge (Sloane 2002). It should also be noted that a limitation of the data is that successful graduates might be more pre-disposed to respond, resulting in relatively positive results. The data must therefore be treated with a note of caution. Table 6:1 shows the general characteristics of respondents to the surveys, compared with the HESA longitudinal survey conducted from the 2003 cohort of graduates from HEI institutions.

Table 6:1 General characteristics of respondents to the surveys

	Strathclyde University (2003 cohort surveyed 15/4/2005)	Glasgow Caledonian (2004 cohort surveyed 15/4/2007)	HESA Longitudinal Survey (2004 cohort)
Response Rate*	28% (818 usable)	18% (570 usable)	44% (24825 usable)
Male/Female (%)	34/66	29/71	N/A
Mature/non-mature (%)	21/79	40/60	N/A
In full-time work	80%	85%	74%
In part-time work	7%	6.5%	6%
Self-employed	2%	2.5%	N/A
In further study (full-time)	10%	3%	5%
In work and further study (part-time)	10%	11%	9%
Unemployed	1%	2%	2%
Public/Private/Voluntary	42% 55% 3%	58% 40% 2%	N/A
Employed in Scotland	83%	87%	80%#

* Graduates with PhD and MPhil degrees and part-time workers were excluded from analysis, although included in HESA data.

This figure reflects graduates from Scottish universities who were employed in Scotland.

Response rates are, to an extent, disappointing. However they are sufficient to draw some reasonable conclusions from the sample and the data is relatively comparable to the HESA survey, except that the Strathclyde and Glasgow Caledonian graduates were more likely to be in full-time employment than in the HESA survey. Limitations related to response rates will be discussed in relevant sections of the

findings. In addition both cohort surveys show a disproportionate number of female respondents that may also affect results. If, as Smetherham (2006) suggests, gender is a decisive factor in mismatch, over-representation of females in this survey might result in a less positive picture. In addition the occupational distribution may be “gendered”. For this reason, gender will feature prominently in disaggregation of the data.

Respondents from Glasgow Caledonian also contain a higher proportion of mature students that again may affect results, particularly when salary levels are considered. Age is an interesting variable in relation to graduate destinations but also in the utilisation of qualifications. On the one hand, there is evidence that “ageism” is a feature of work and employment more generally (Glover and Branine 1999) which would suggest that mature graduates are less likely to find appropriate employment. Alternatively if qualifications are held to be the major matching device in the labour market, then without them, non-graduates may be at a significant disadvantage and experience barriers to career progression. This point will be considered further below.

The employment status of graduates in the two cohorts is reasonably similar, the major difference being that a greater proportion of Strathclyde graduates are in full time further study.¹² However, the proportion of graduates in part-time study is reasonably similar in both cohorts. The reasons for pursuing further study were predominantly to develop a broader or more specialist range of knowledge and skills (51.2%) or to improve career options (36.7%). Interestingly, only 3.9% of graduates reported that they were pursuing further study because they had been unable to find a suitable job which indicates that there is a proactive rather than negative approach to acquiring further qualifications. This evidence may, in addition, indicate that graduates have “bought into” qualifications as the major matching device in the labour market. Respondents perhaps perceive that more, and higher, qualifications

¹² It should be noted that Strathclyde graduates were surveyed 18 months post-graduation and Glasgow Caledonian graduates 30 months post-graduation. This was done in order to avoid a clash with the HESA longitudinal survey that was distributed at the same time.

will make them more marketable, supporting the notion of positional competition (Hirsch 1977).

In relation to where graduates were employed, the data shows that 84.6% of respondents are employed in Scotland. However this evidence does not tell us whether graduates chose to remain in Scotland. It is a reminder that labour market constraints may mean that graduates are unwilling, or unable, to move to areas where they might achieve employment. Of the remainder 11.6% are employed in England and Wales, 0.6% in Ireland, 1.9% abroad and 1.4% in Northern Ireland. The distribution of graduates across sectors also shows some differences between the cohorts. Strathclyde graduates are more likely to be employed in the private sector and those from Glasgow Caledonian in the public sector. Very few graduates in either cohort are unemployed, perhaps reflecting a buoyant labour market in Scotland or that unemployed graduates did not respond to the survey.

With regard to field of study, Table 6:2 shows the distribution of degree subjects of respondents to the survey, according to the subject areas defined in the HESA survey. In analysing the data, it should be noted that some judgement was required to categorise degree subjects. Indeed in the Strathclyde cohort, there were 365 degree combinations.

Table 6:2 Distribution of sample by field of study

Subject Area	Strathclyde (% in cohort)	Glasgow Caledonian (% in cohort)	Both cohorts (%)
Subjects Allied to Medicine	8.5	36.2	19.9
Biological Sciences	3.8	1.2	2.8
Physical Sciences	3.1	0.4	2.0
Mathematical Sciences	2.3	0.4	1.5
Computer Sciences	1.7	5.6	3.3
Engineering and Technology	11.5	5.4	9.0
Architecture, Building and Planning	2.1	3.2	2.6
Social Studies	4.8	4.7	4.8
Law	9.9	0.5	6.0
Business and Administrative	14.9	29.7	21.0
Languages	0.4	0	0.2
Historical and Philosophical studies	1.4	0	0.8
Mass Communication and documentation	2.3	2.8	2.5
Education	14.5	0.9	8.9
Combined	11.9	4.0	8.7
Psychology	1.6	2.6	2.0
Geography and Environmental Studies	1.8	0.7	1.4
Economics and Politics	1.8	0	1.1
English	1.6	0	0.9
Creative Arts and Design	0	1.4	0.6

(Source: JISC Codes, adapted from Higher Education Statistics Authority)

From this it is evident that business and subjects allied to medicine are disproportionately represented in this sample and perhaps that Arts subjects are under-represented. This point will be revisited in a later section. It is in this section of the findings where the relatively low response rate makes analysis particularly problematic. Respondents from Glasgow Caledonian appear to be concentrated in Business subjects and Subjects allied to medicine and there is a much broader representation of subjects in the Strathclyde group. Moreover, it is interesting to note that there may be difficulties associated with defining which of these subjects are definitively “vocational”, although there may be demand for any of them from

specific areas of employment. This is clearly dependent on whether a relevant or more general degree is required.

6.3 Graduate destinations

This section presents the employment destinations of graduates in the sample, analysed according to the SOC and SOC(HE). The occupational distribution of respondents according to the SOC is shown in Figure 6:1.

Figure 6:1 Occupational distribution according to the SOC.

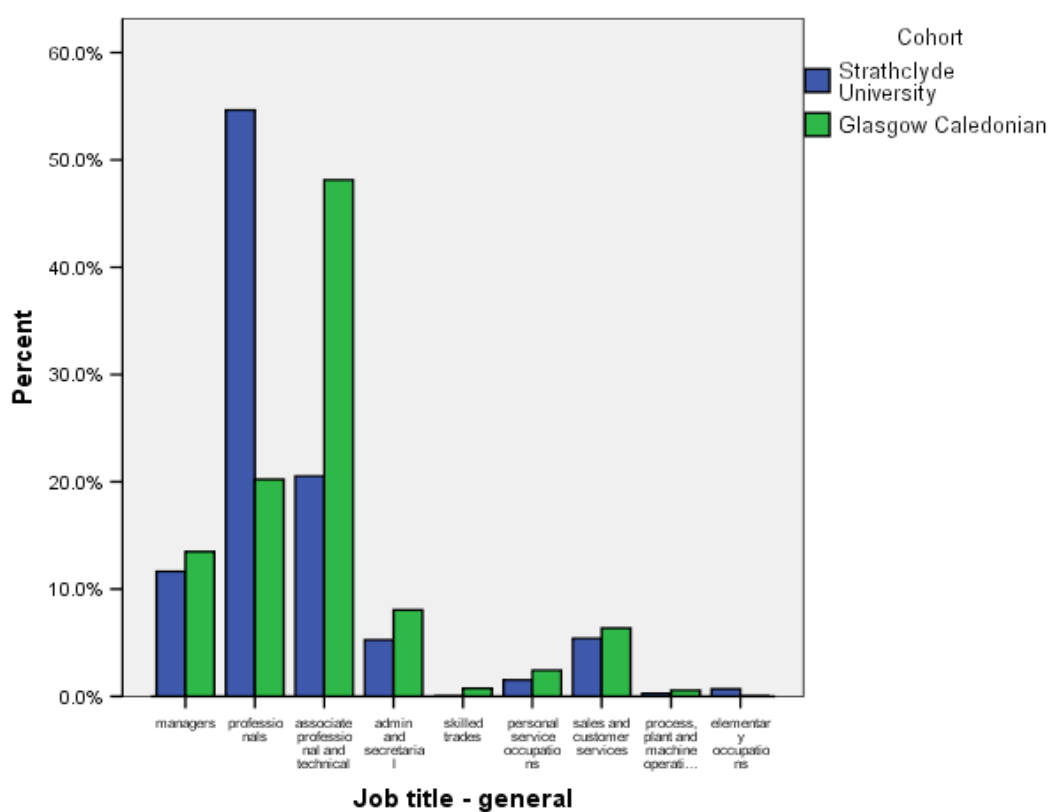


Figure 6:1 shows clear differences between the two universities according to the SOC major groups. In general terms Strathclyde graduates are more likely to be

professional employment and Glasgow Caledonian graduates in Associate professional occupations. It is perhaps because Education graduates were over-represented in respondents from Strathclyde and Nursing graduates from Glasgow Caledonian which is unsurprising, given that each of these subjects are taught within large schools in the respective universities. Table 6:3 gives comparative data for Scotland (FSS: 2006)

Table 6:3 Graduate employment by SOC major group

SOC Major Category	% Scotland (2001-2003)	Strathclyde (2003 cohort)	Glasgow Caledonian (2004 cohort)
Managers and Senior Officials	19	12	13
Professional Occupations	46	55	20
Associate Professional	20	20	48
Other occupations*	15	13	19

* Groups 4-9 are not disaggregated separately in the FSS data

(Source: adapted from FSS(2006))

It appears that Strathclyde is relatively close to the overall profile for Scotland and that Glasgow Caledonian graduates are over-represented in the Associate professional and technical occupations, confirming that there are differences in the occupational outcomes for graduates from these universities. It is somewhat surprising that the Manager group is lower than that for Scotland for both Strathclyde and Glasgow Caledonian, given the substantial number of business graduates in the sample but this perhaps because of the relatively early career stage. It could also be that management functions are also placed in the Associate professional category. Training and personnel officers, for example, are categorised as Associate professionals rather than managers.

In terms of non-graduate jobs, 5.4% from Strathclyde and 6.4% from Glasgow Caledonian were in Sales and Customer Service category (largely employed in call centres). 5.3% from Strathclyde and 8.1% from Glasgow Caledonian were in Admin and Secretarial jobs that show evidence of occupational mismatch, irrespective of the criteria used to define graduate jobs.

Whilst it was noted above that the distribution of graduates across sectors was reasonably similar, excepting that Strathclyde graduates were more likely to be employed in the private sector, Figure 8 gives a more detailed breakdown of employer activity by cohort.

Figure 6:2 Broad employer activity

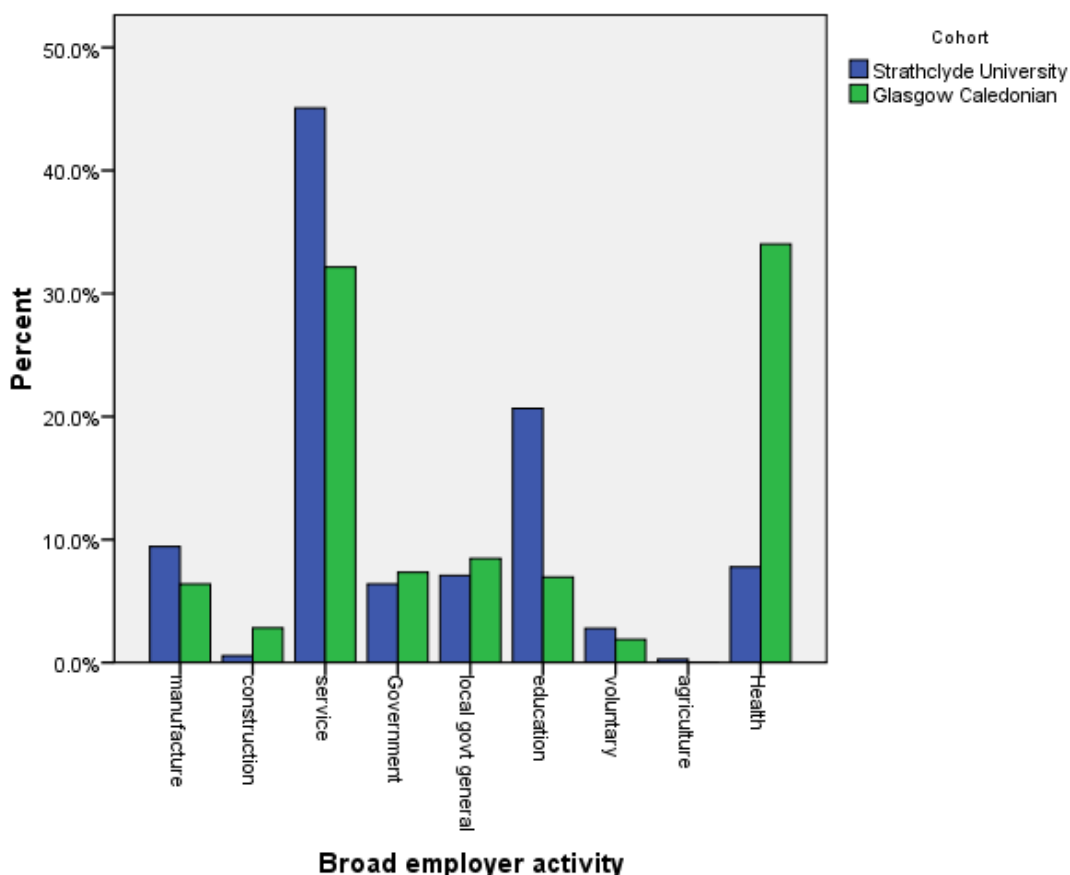


Figure 6:2 demonstrates that graduates in both cohorts are largely employed in the service sector. Indeed, almost half of the Strathclyde cohort (45.1%) are employed in service industries and one third (32.1%) from Glasgow Caledonian. These figures are consistent with the overall distribution of employment in the UK. Data collected by Futureskills Scotland (FSS2006) indicate that business services and health are projected to be the major growth industries in Scotland and it appears that at least some of the positions with these industries are being filled by graduates.

Moreover, if government, local government, health and education are combined, 58.8% of Glasgow Caledonian graduates and 42.0% from Strathclyde are directly employed by the government. We can therefore assume that the government as employer is wholeheartedly embracing the use of qualifications as the major indicator of suitability in employment. Figure 6:3 shows occupational destinations of graduates according the SOC(HE).

Figure 6:3 occupational distribution according to the SOC(HE)

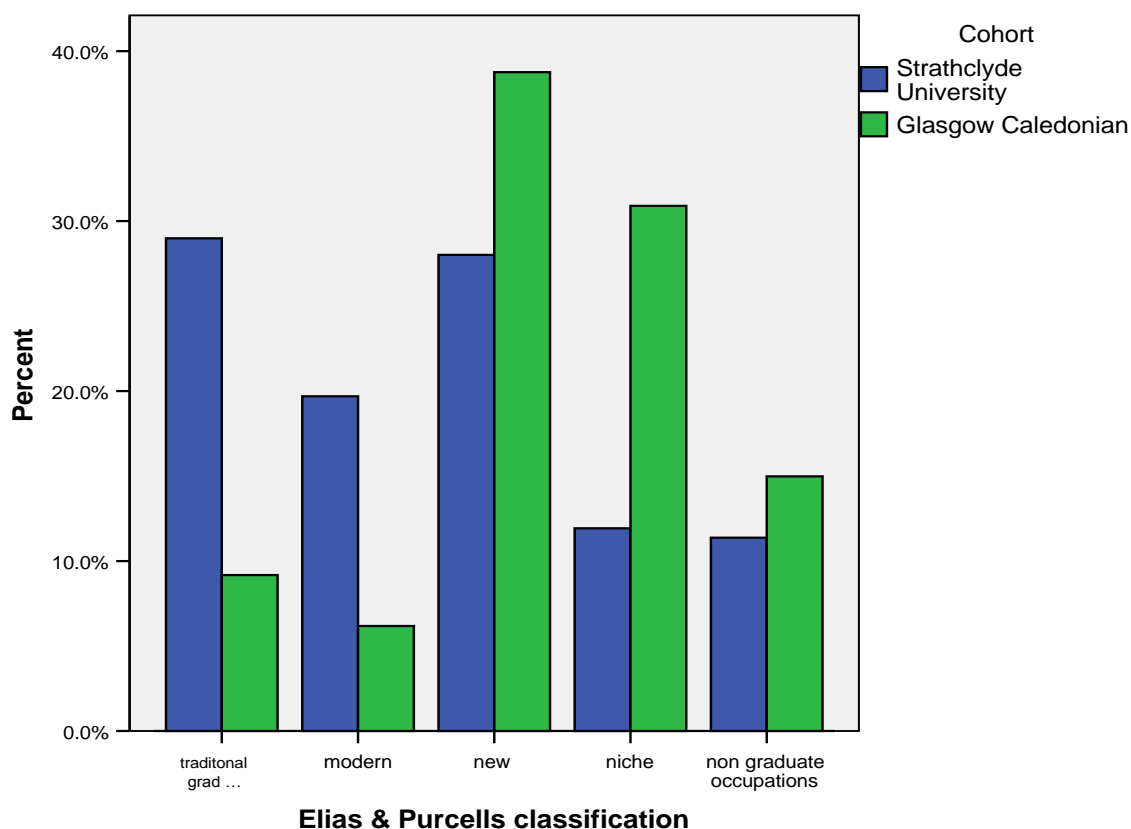


Table 6:4 shows the distribution of graduates according to the SOC(HE) in comparison with overall data for Scotland

Table 6:4 Occupational Distribution of graduates by SOC(HE)

SOC(HE) Category	Scotland Data 2001/2003 (%)	Strathclyde(%)	Glasgow Caledonian(%)	Both cohorts (%)
Traditional	29	29	9	21
Modern	18	20	6	14
New	17	28	40	32
Niche	20	12	31	20
Non-graduate	16	11	15	13

(Source FSS 2006)

There are clear differences in the distribution of graduates from the two cohorts. The higher percentage of Strathclyde graduates in traditional and modern categories could be because 14.5% of respondents held education degrees and were employed as teachers. In contrast, 36.5% of Glasgow Caledonian graduates held degrees in Subjects allied to Medicine (largely nursing) that explains the high percentage of Niche graduates in that cohort. Marginally fewer Strathclyde graduates are in non-graduate occupations (11.4%: 14.6%).

Both cohorts have fewer graduates in non-graduate categories than the overall distribution of graduates in Scotland which perhaps indicates that reputational capital is not a decisive factor in these universities. In comparison, Strathclyde graduates are more likely to be in New graduate occupations and less likely to be in Niche occupations than the overall levels for Scotland. Glasgow Caledonian graduates, however, are less likely to be in Traditional or Modern graduate occupations and more likely to be in the New and Niche categories. The substantial proportion of respondents to the surveys who are employed in the New category is worth further consideration. As far as it is possible to make generalisations on occupations in the New category, it represents more recent graduatisation of occupational knowledge so for example, professions allied to medicine are in this category as are functional managers. It then follows that education for these occupations might be located in newer universities such as Strathclyde and Glasgow Caledonian that have large

business schools and also offer degrees in subjects allied to medicine. If institutional differences are considered according to the exchange/use value of degree subjects, reputational capital of the newer universities may be more closely linked to provision of occupationally targeted degrees. Of course this claim cannot be validated without comparative data from ancient universities but is a possible area for future research.

A gender breakdown of destinations for all graduates according to the SOC is shown in Figure 6:4.

Figure 6:4 Job category by gender

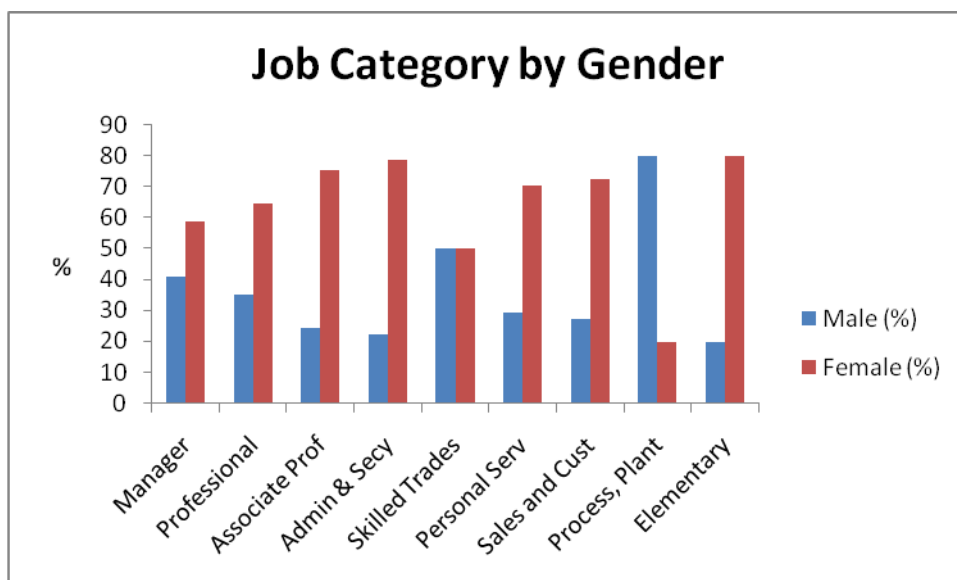


Figure 6:4 shows that in the three graduate categories, there are more females than males in every category. Unsurprisingly this is also the case for Admin and Secretarial and the Sales and customer service category which, it could be argued, contain female-dominated occupations. Interestingly, there are no significant differences when age is considered either except that only 10.6% of graduates in the Sales and Customer Services category are mature. Overall then these findings do

not suggest any significant inequalities within the distribution of graduates across the occupational hierarchy, certainly with regard to gender and age.

In summary it appears that neither the SOC, nor the SOC(HE) model is entirely adequate to evaluate the occupational mismatch. The evidence suggests differences between the two cohorts in terms of the level of occupation so that Glasgow Caledonian graduates are more likely to be in Associate professional occupations and in the new and niche categories of the SOC(HE). Yet it is uncertain whether this evidence can be described as a “cascade” effect. It may reflect differences in the type of degrees on offer at each of the universities surveyed. It was noted in Chapter Two that the SOC(HE) is more useful to chart the graduatisation of occupations rather than a definitive typology of graduate jobs. Consequently, the evidence presented here may indicate that newly graduated occupations may be serviced by degrees from new universities. More generally, it could be argued that internal diversification within higher education systems is reflected in occupational outcomes for their graduates. Institutional differences are therefore less related to levels of employment than type of education which in turn casts doubt on some of the measurement criteria used to rank universities. If the SOC(HE) is used to categorise employment outcomes, then it would appear that the evidence thus far supports an optimistic view of the GLM, certainly for graduates from the universities surveyed. The next section continues to explore graduate employment by using salary as a measure.

6.4 Salary distribution in the sample

This section presents the findings on salary levels which is another feature of graduate employment used to chart trends in returns to education. Figure 6:5 shows the salary distribution of graduates in the sample¹³. Somewhat surprisingly the overall finding is that Glasgow Caledonian graduates earn more on average than their Strathclyde counterparts. This is possibly because there are more mature students in this cohort and salaries are influenced by years of work experience. The

¹³ These figures are for those employed full-time who disclosed their salary (80% of sample N=1110).

Glasgow Caledonian graduates also had one more year in the labour market. This is confirmed by analysing salary ranges within job category for the whole sample in Table 6:5.

Figure 6:5 Salary distribution

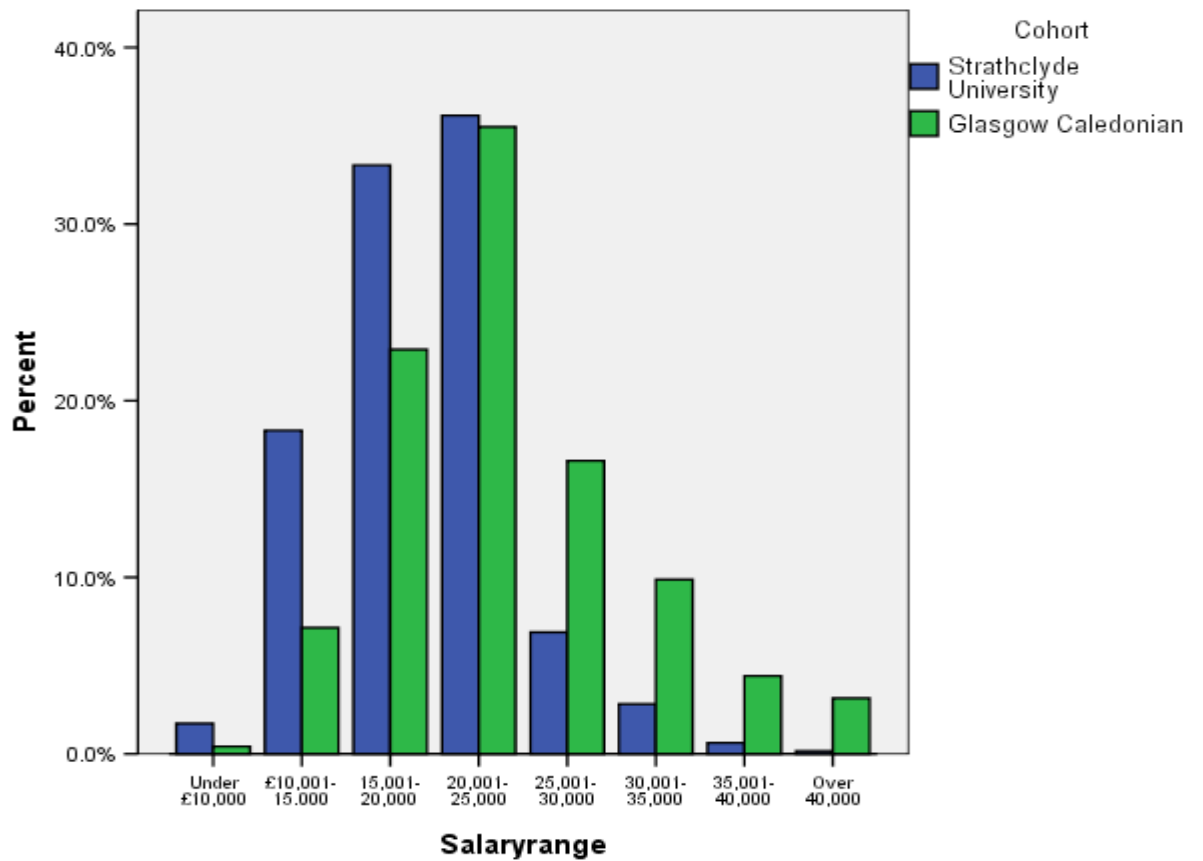


Figure 6:6 Salary distribution by SOC

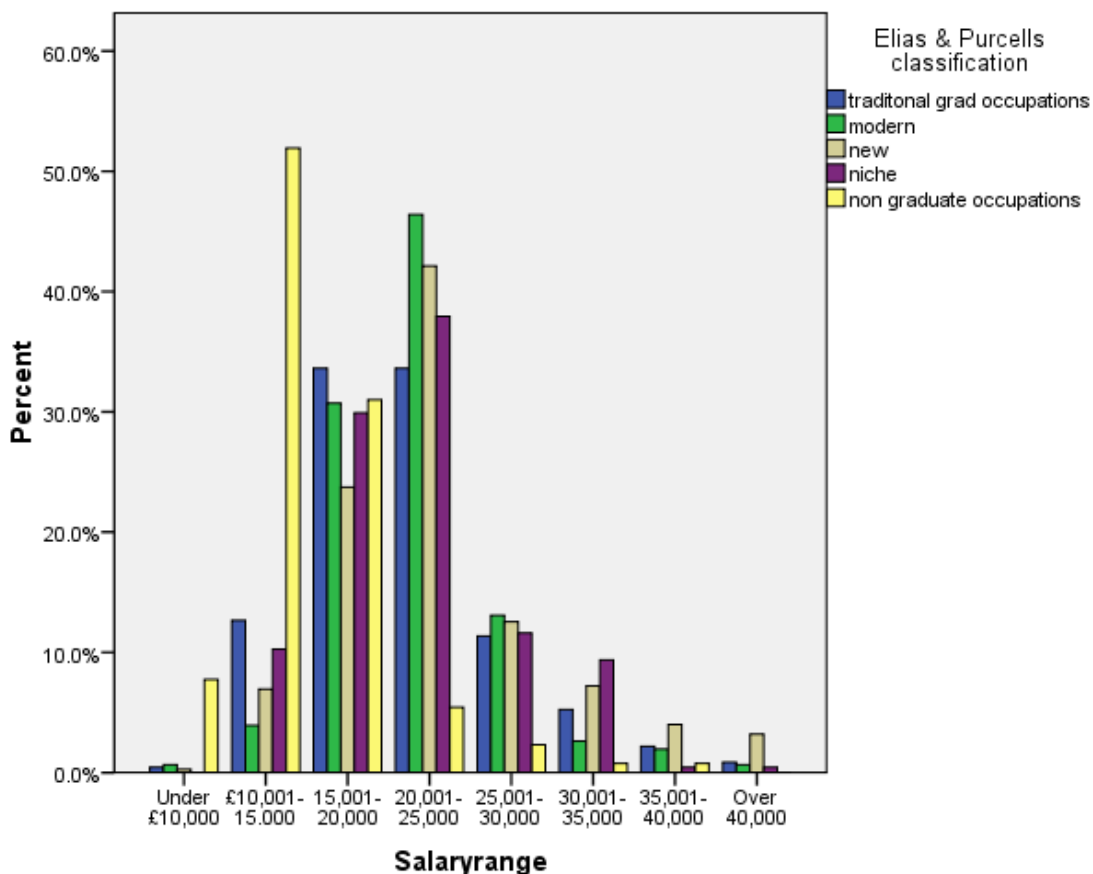


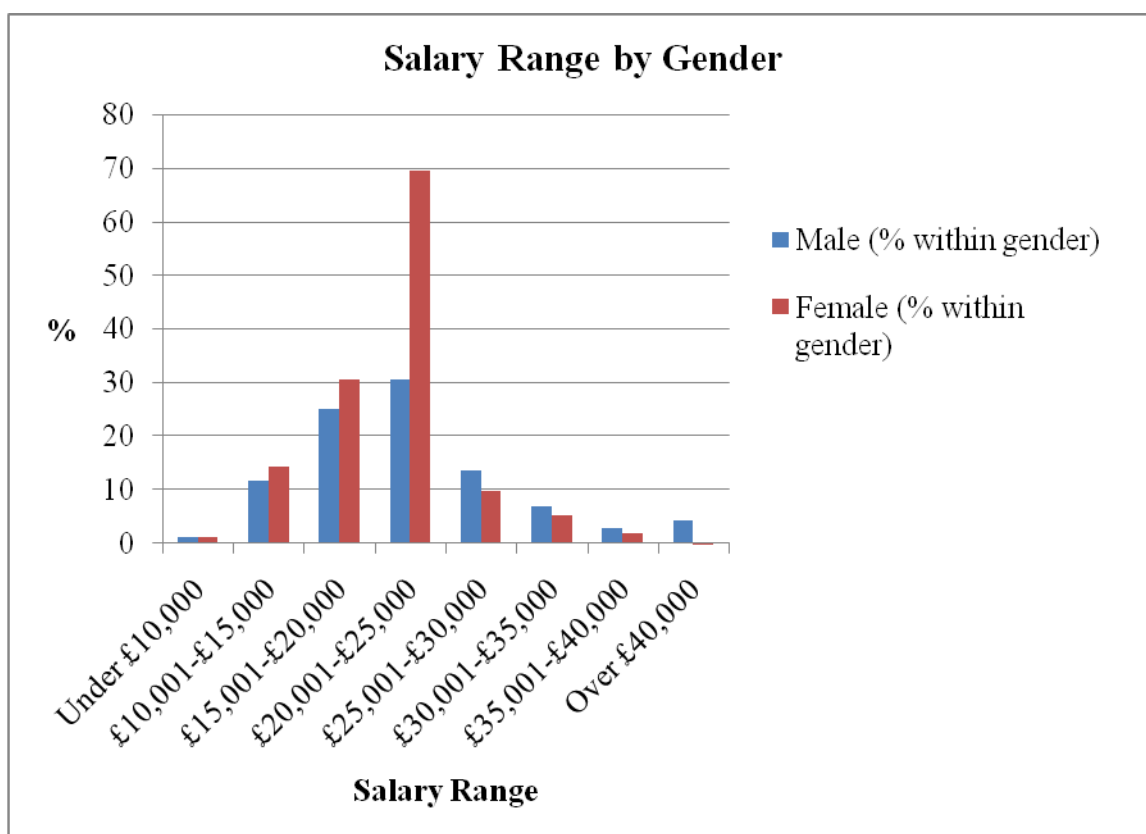
Table 6:5 gives graduates’ earnings in the Manager, Professional and Associate professional Categories.

Table 6:5 Salary range by SOC major group

Salary Range	Managers	Professionals	Associate professionals	% in salary band
Under £10,000	0	7.7%	30.8%	38.5%
£10,001 - £15,000	8.6%	23.8%	18.5%	50.9%
£15,001 - £20,000	10.3%	44.7%	30.6%	85.6%
£20,001 - £25,000	9.5%	47.2%	38.7%	95.4%
£25,001 - £30,000	18.9%	47.5%	31.1%	97.5%
£30,001 - £35,000	16.9%	32.3%	43.1%	92.3%
£35,001 - £40,000	36.0%	36.0%	24.0%	96.0%
Over £40,000	56.3%	18.7%	25.0%	100.0%

Table 6:5 demonstrates that higher salary levels are associated with the Manager and Professional categories. Associate professionals are also well represented in the higher salary bands that may be because of age differences but may be because the skills and knowledge these graduates have are valued in the labour market. There are more graduates in the professional category with relatively low earning than might have been expected. This shows evidence of a transition bargain where the costs of further (professional) training are offset by reduced salaries at an early career stage. This table shows that salaries above £15,001 tend to be in the Manager, Professional and Associate Professional category.

Figure 6:7 Salary distribution by gender



From Figure 6:7 it appears that the male to female ratio does not show significant differences across salary ranges except that 61.0% of females earned between

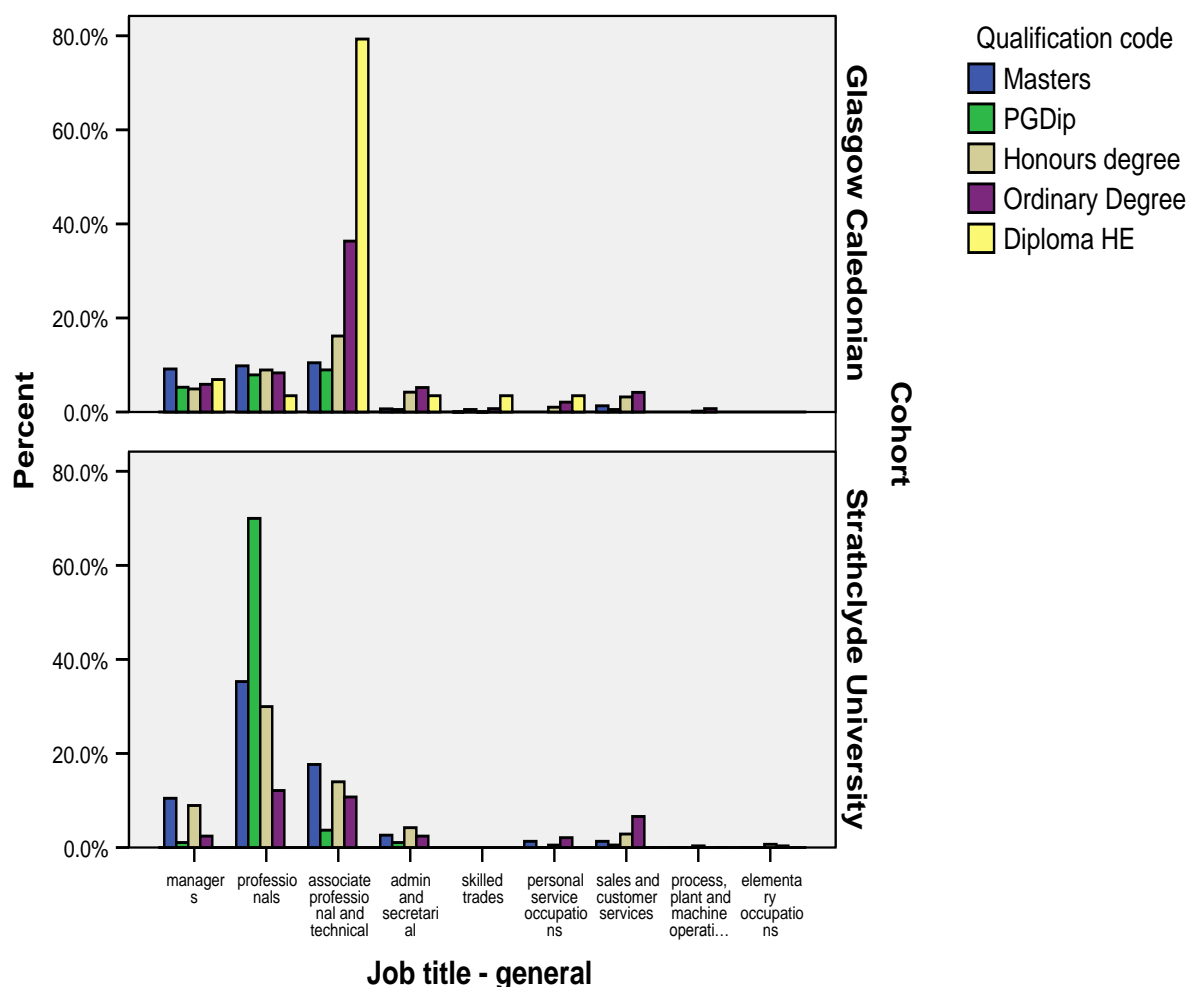
£20,001 and £25,000 as opposed to 39.0% of males. Males were slightly more likely to be in the upper salary levels but not to any great extent. Consequently, this table shows that there is not a gender pay gap for respondents to this survey.

Whilst this section has revealed some interesting findings both in levels of salary but more particularly in salary levels between cohorts demonstrated in Figure 6:5. It is not, however, particularly helpful to evaluate graduate employment and again does not establish a causal connection between qualification and salary levels. Salary levels are attached to jobs and whilst qualifications may be needed to access these jobs, it is not possible to argue that graduation necessarily produces an increase in salary. Indeed the gradient across the SOC(HE) categories identified by Elias and Purcell (2004b) may actually confirm that this is not the case.

6.5 Qualification levels of the sample

Smetherham (2006), in her detailed study of qualification levels and graduate destinations identified that there is not necessarily a correspondence between the two. So, for example, graduates with first-class degrees do not necessarily achieve better jobs than their peers with 2:2s. This evidence presents an outright challenge to human capital theory, worthy of investigation in this study. Figure 6:8 shows differences in the qualification levels across occupational categories.

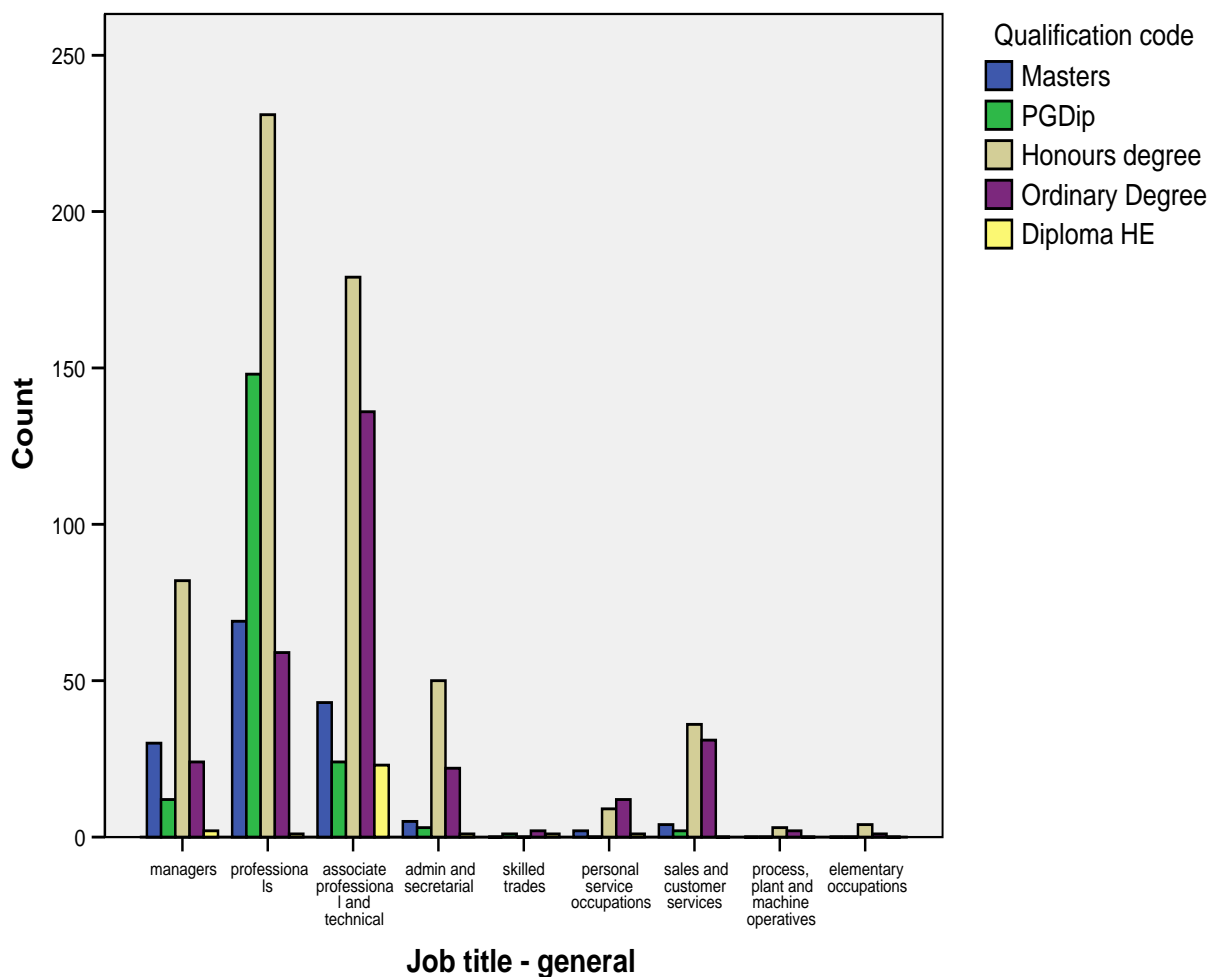
Figure 6:8 Qualification level across job categories



The spread of qualification levels across job titles again reflects that more graduates from Glasgow Caledonian are in the Associate professional category. When we look at the whole sample (Figure 6:9), it is notable that Honours degrees are represented in all categories. Although Ordinary degrees appear less in the Manager and Professional categories, there is not any clear evidence that these degrees have less value than higher qualification levels in the labour market, as suggested by human capital theory. This evidence seems to suggest that there are other criteria for recruitment in addition to qualification level (Smetherham 2006). For example, Postgraduate and Masters qualifications may be vocationally oriented or it may just be that they have a kind of “degree level” capital that would confirm Human Capital

theory where more years of schooling produce greater returns. However if this were true, then it might be expected that ordinary degree holders would be less successful overall. It is suggested then, that qualification level remains important but may not override other graduate attributes in certain situations. Moreover it may be that some occupations stipulate higher level qualifications. Teaching, for example, is generally accessed by a post-graduate diploma, although Honours degrees in Education are also accepted. This implies that the level of degree required may be as important as the type when access arrangements are scrutinised.

Figure 6:9 Qualification level across job title (whole sample)



Although the foregoing has suggested that levels of qualifications do not neatly correspond to occupational categories, qualification requirements are as yet unclear. Table 6:6 shows responses to this question in the survey and is analysed according to the SOC categories from both cohorts combined. In general terms qualification requirements are attached to particular occupations.

Table 6:6 Degree requirements (%) by SOC category¹⁴

SOC category	Formal Requirement (%)	Expected to have qual (%)	Qualification Gave advantage (%)	Qual not needed (%)	Don't know(%)
Manager	28.0	18.7	33.3	18.7	1.3
Professional	79.8	7.7	7.7	4.4	0.4
Assoc Prof and Tech	52.8	10.6	20.5	14.9	1.2
Admin and Secretarial	4.9	14.8	37.0	39.5	3.7
Skilled Trades	25.0	0	25.0	50.0	0
Personal Services	5.9	0	29.4	64.7	0
Sales and Customer Service	6.1	1.5	25.8	65.2	1.5
Process, Plant Operatives	0	0	20.0	80.0	0
Elementary Occs	0	0	20.0	80.0	0

Table 6:6 largely confirms expectations so that professional occupations require (or expect) degree education whereas occupations in the lower categories (Admin and Secretarial and below) do not. The more even distribution in the Manager category perhaps reflects the aforementioned diversity of occupations in this category and the difficulties associated with assigning according to job title. Table 6:12 also indicates that degrees are required or expected in the Associate Professional category, supporting Teichler's (2007) claim that supplying degrees for such occupations has become a regular function of some sectors of higher education.

¹⁴ It should be noted that numbers in some of these categories were low: Skilled trades (N4), Personal service (N17), Process, Plant Operatives (N5), Elementary (N5).

Interestingly it also appears that a fairly substantial proportion of graduates believe that although their qualification was not required, it gave them an advantage in securing work. This is particularly apparent in the manager (33.3% N50), Associate professional (20.5% N85) and Admin and secretarial categories (37.0% N30). Put simply, 18.3% of respondents to the surveys are subject to opportunistic use of degrees by employers. This finding is consistent with Elias and Purcell's (2003) observation that, for example, graduates who are employed as Personal Assistants often do not need a degree to access the job, yet degree skills and knowledge are used. Regarding the manager category, it is perhaps more likely that these graduates are in low-level managerial positions that would not otherwise require degree level education.

In order to probe the "cascade effect" further, where graduates displace non-graduates (Brynin 2002), respondents were asked why they decided to take their current job. The results are shown in Table 6:7.

Table 6:7 Occupational choice

Why did you decide to take job?	Strathclyde (% within cohort)	Glasgow Caledonian (% within cohort)
Exactly type of work I wanted	59.4	59.8
Best/only job offer	15.9	9.2
Opportunity to progress	3.2	9.4
To gain experience	10.1	9.2
To see if I liked the work	2.3	2.9
To broaden experience	4.8	6.1
To pay off debts	1.0	1.1
Better than being unemployed	3.4	2.3

On the whole the responses to this question were generally very positive, suggesting that graduates between two-and-a-half and three-and-a-half years into their careers were satisfied with their employment. This evidence may tentatively suggest an instrumental attitude towards degree education so that degrees were pursued as a "stepping stone" to a particular occupation. It also appears that Glasgow Caledonian graduates were more likely than Strathclyde graduates to have been

offered an opportunity to progress, suggesting some upward movement in the early careers of these graduates. Yet 6.1% of Glasgow Caledonian graduates and 4.8% from Strathclyde were in jobs which they had taken to broaden experience which perhaps indicates that they were still to achieve what they felt was appropriate employment.

The question of why graduates decided to take their job is related to intent to remain with the present job and the responses to this question are shown in Table 6:8. These are not disaggregated by cohort, given that this question is related to work and not to educational differences.

Table 6:8 Intent to remain in job

SOC Category	Same Job (% within SOC Category)		Same Employer (% within SOC Category)	
	Yes	No	Yes	No
Manager	43.4	56.6	49.0	51.0
Professional	66.4	33.6	66.4	33.6
Assoc Professional	42.4	57.8	37.5	62.5
Admin & Secretarial	48.1	51.9	46.8	53.2
Skilled Trades*	75.0	25.0	66.7	33.3
Personal Service*	46.7	53.3	42.9	57.1
Sales and Customer Service	42.9	57.1	46.0	54.0
Process, Plant Operatives*	40.0	60.0	80.0	20.0
Elementary*	25.0	75.0	25.0	75.0

*These categories contain very few graduates (N < 16 and therefore results are not generalisable

This data indicates that graduates in the Professional category are reasonably satisfied with their present job and employer. Slightly over half of those in the Manager and Associate professional categories expressed an intention to move job and/or employer which perhaps shows that there may be opportunities to progress for graduates in this category. As noted, the manager category of the SOC is fairly diverse and it may be that a proportion of graduates in this category are not in graduate level occupations. Surprisingly, almost half of those in the Admin and Secretarial and Sales and customer services categories also intend to remain

suggesting that these graduates are satisfied in their jobs or perhaps that they appreciate labour market restrictions on moving employment.

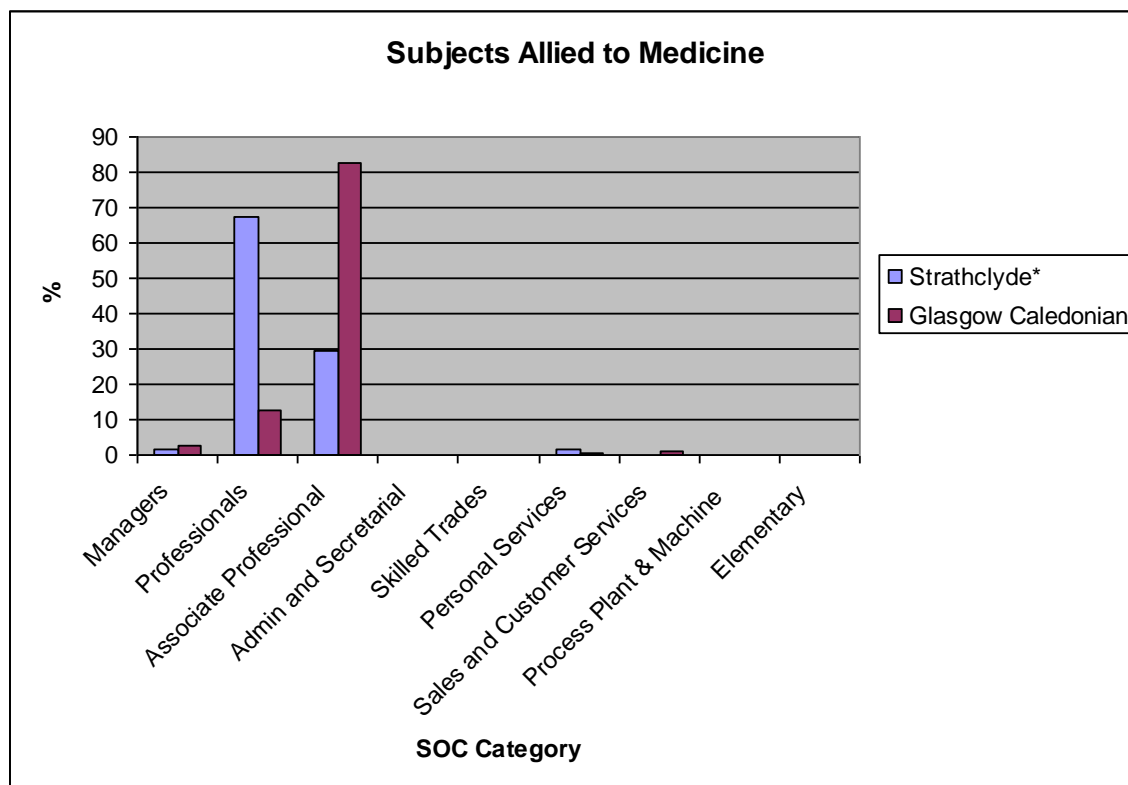
6.6 Field of study and graduate employment

It was suggested in the literature review that mismatch is perhaps over-stated without attention to connections between degree and occupational knowledge. In order to establish links between graduates and the jobs that they enter, Figures 6:10 and 6:11 consider connections between field of study and occupational outcomes¹⁵. Indeed the HESA Longitudinal Survey notes that, in general terms, graduates with vocational degrees such as medicine and dentistry, subjects allied to medicine, architecture, veterinary science, education and law are substantially more likely to be in graduate occupations than those with creative arts and design, historical and philosophical degrees. Regarding the present study 8.5% from Strathclyde and 36.2% from Glasgow Caledonian held degrees in Subjects Allied to Medicine (SAM) and 14.9¹⁶% of the Strathclyde sample had Business and Administrative degrees with the figure for Glasgow Caledonian being 29.7%

¹⁵ In order to obtain a reasonable sample, Business Studies and Subjects allied to medicine have been selected as sub-samples. Unfortunately the response from Arts and Humanities graduates is not substantial enough to make any clear links.

¹⁶ This figure would be much higher if Combined degrees were included but these are considered separately in the HESA categories and in the present study.

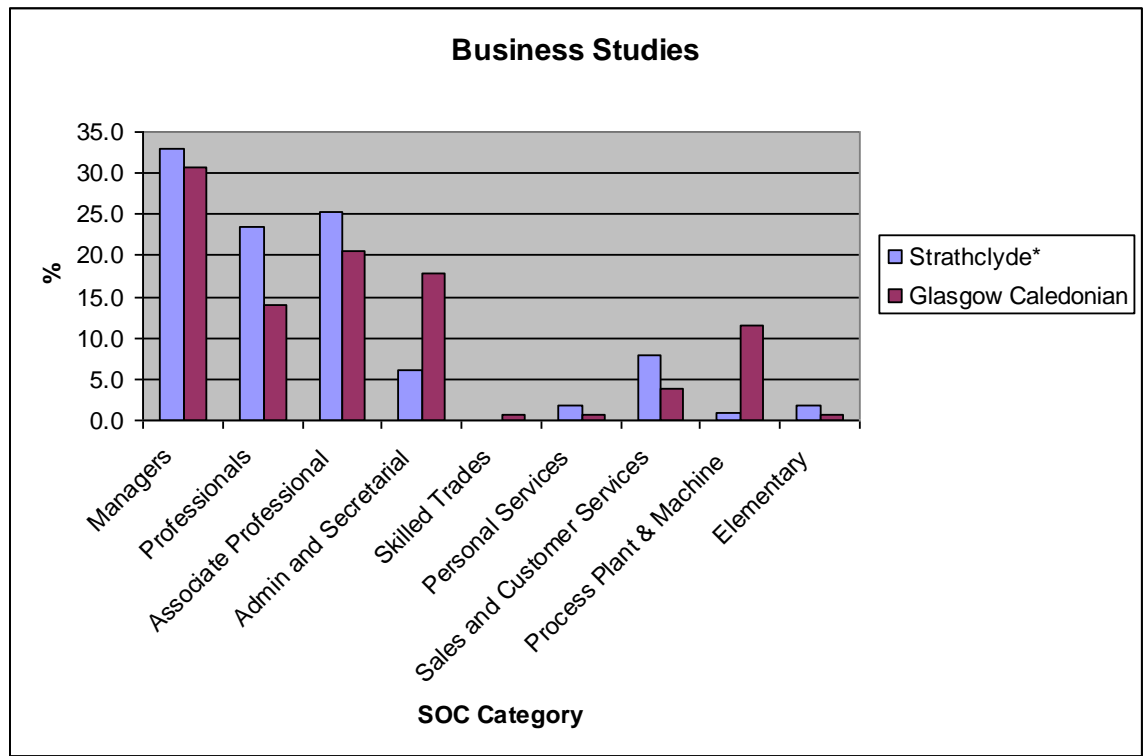
Figure 6:10 Occupational Outcomes for Subjects Allied to Medicine (SAM)



* % within subject area

In general terms it appears that the graduates in the sample with SAM degrees are employed in occupations appropriate to their qualifications. There are more professionals from Strathclyde as Pharmacists are categorised in the SOC as Professional and Nurses appear in the Associate Professional category. This evidence supports the HESA survey and also suggests that degree subject is an important factor in matching graduates to jobs.

Figure 6:11 occupational outcomes for business graduates



* % within subject area

Figure 6:11 shows that Business graduates are more evenly spread across categories than the SAM graduates. Most were in the Manager, Professional or Associate Professional categories. The spread between Professionals and Associate Professionals is perhaps a function of categorising by job title alone so for example a Marketing and sales executive could be placed in a number of categories and without reference to job content it is difficult to be definitive.¹⁷ This finding is consistent with existing research on Business graduates (Nabi and Bagley 1998, Wilton et al 2004; Wilton 2008) and there are a greater number of potentially mismatched graduates in the lower SOC categories. There are a number of possible explanations

¹⁷ In order to ensure consistency the Computer Assisted Structured Coding Tool (CASCOT) was used. This is available at www.warwick.ac.uk/go/cascot. However even with this tool, a degree of judgement was necessary.

for this diversity in employment outcomes for these graduates. It could merely be that there is an oversupply of Business graduates, differences in the quality of knowledge and skills in the degrees, differences in selection criteria so that social skills may be more important in securing employment for this group. Admittedly business and administration degrees cover a wide range of subject disciplines and may or may not be general or specific which itself makes it difficult to analyse employment outcomes and suggests that occupational case studies may be more illuminating than aggregated data. Nevertheless, it raises questions on the extent to which business degrees are in reality vocational or more particularly whether employers perceive them to be such.

For other degree subjects, Engineering graduates also seem to be spread across the occupational categories and are represented in Manager, Professional, Associate Professional and in non-graduate categories whereas 98% of Education graduates are in the Professional category. Computer science graduates are largely in Professional and Associate Professional occupations although Glasgow Caledonian graduates are more likely to be in the Associate Professional category. In the Sales and Customer Service category, 55% have Business or Combined degrees with the remainder being spread over other fields of study. This evidence does not suggest that these graduates should be discounted in analysis. Rather it seems to add weight to the suggestion that there may be different processes apparent in the utilisation of degrees and also in selection of graduates. On the one hand, a relative scarcity of graduates with particular occupational knowledge enhances opportunities for employment, on the other, oversupply in certain degree subjects reduces the chance of success. The distribution of Business graduates across categories suggests that an intensified form of positional competition (Hirsch 1977) may be apparent in this group of graduates, based not only on the degree but the type of degree. The spread of Engineering graduates, however, is a reminder that graduates do not necessarily enter the occupations that their degree might suggest. Occupational choice may also be constrained by high levels of debt or by wishing to remain in a particular location.

6.7 Training and early career mobility

This section considers the relationship between training provision and early career mobility. As noted in the literature review, work readiness may be an emergent feature in demand for graduates, reinforced by diversity in the degree subjects on offer. In order to evaluate the extent to which degree-level education might substitute for occupational training, Table 6:9 presents evidence of the training received by graduates in the two cohorts. It should be noted that these responses relate to their present job and does not necessarily capture training received in previous positions.

Table 6:9 “Was formal training provided when you started work?”

	Strathclyde (% within cohort)	Glasgow Caledonian (% within cohort)	Combined
A formal training programme lasting a year or more	28.4	10.2	20.6
A short induction course	20.4	29.2	24.2
Formal on-job training	21.8	26.0	23.6
No training	29.4	34.5	31.6

Table 6:9 demonstrates that Strathclyde graduates were more likely to be, or have been, in “graduate trainee” positions with a formal training programme. Although the figures are distributed fairly evenly across different types of training, they reveal that a substantial proportion of respondents (55.8%), irrespective of their employment, have received only a short induction course or no formal training. This is somewhat surprising and does provide evidence to support the contention that graduates are expected to be work-ready on entering employment. The data in Table 6:9 may indeed suggest that higher education does, in some occupations, substitute for training. The data does, however, raise questions on which occupations might be using higher education to demonstrate work-readiness. Whilst it may be possible in occupations where there is a single supplying degree and indeed a single employer such as the NHS, it is more difficult to assess the extent to which training and education are substitutable elsewhere. To an extent because it

may be feasible to use higher education as training, it may not be desirable or indeed possible in other areas of employment.

Returning to features of personal capital, Brown and Hesketh (2004) suggest that work experience is one of the hard currencies with which graduates enter the labour market. Whilst some may acquire work experience as part of their degree programme, for others it may be a feature of early careers and be part of the “transition effect” noted by Elias and Purcell (2004b). Regarding early career mobility for this sample, and bearing in mind that graduates from Strathclyde were surveyed two-and-a-half years post-graduation and Glasgow Caledonian graduates at three-and-a-half years, respondents were asked whether this was the first job they were in post-graduation. The data shows that 43.4% of Strathclyde graduates and 51.3% from Glasgow Caledonian had already moved jobs at least once in the period since graduation. Generally speaking, movement was from the non-graduate category of the SOC(HE) into a graduate category. The data shows that 43.9% of graduates began their careers in non-graduate jobs and then moved into graduate jobs. Interestingly, 23.5% had also moved within the New category, presumably to more attractive jobs. Early career job-hopping is, of course, dependent on a buoyant labour market and perhaps on the quality of experience that graduates have gained in their first job. If the first job was an administrative position which led to a manager position, then it could be argued that work experience was relevant which again suggests the importance of the “narrative of employability” in labour market success. Nevertheless, the evidence suggests that graduates may be using the labour market to gain practical experience. Work-readiness therefore becomes the individual graduate’s responsibility and a degree may not be the only feature in demand, even where it is occupationally relevant. This is supporting evidence for the “transition effect”, and is worthy of further investigation in the qualitative element of the fieldwork. Despite this, it is possible to interpret these findings as only corresponding to a reduction in overall levels of training for graduates. It may also indicate that there is an element of “market crowding” in the early careers of graduates. The transition effect may be produced by a large number of graduates all entering the labour market simultaneously and may consequently reflect the capacity of the labour market to absorb these numbers.

6.8 Discussion and conclusions

In summary, although there were some notable differences between the two cohorts, the overall results show limited evidence of mismatch from the surveys. Nor have significant inequalities emerged in the data regarding gender or age in relation to other studies of the GLM (Elias and Purcell 2004b; Smetherham 2006). Regarding the occupational mismatch it is difficult to exclude Associate Professional and Technical occupations from analysis of the GLM, given that many of these occupations may now have “feeder” degrees, particularly in technical areas of expertise. Rodgers and Waters (2001), for example, state that “the growth in the number of graduates employed in associate professional occupations has been driven largely by the increase in supply... rather than being caused by an increase in demand from employers”. Whilst this may be true for some sections of the category, the evidence from the surveys shows that it does not hold for *all* Associate professional occupations. In addition, diversity in salary levels of different SOC categories perhaps indicates that salary is an imperfect measure of “graduate jobs”, particularly at an early career stage.

The surveys also show limited evidence of an educational mismatch in the professional and associate professional categories where the majority of graduates reported that their degree was required. The manager category demonstrated more evidence of possible mismatch with a substantial proportion of graduates responding that their degree was not required but gave them an advantage. This evidence may indicate credential inflation in the manager category but it perhaps more likely to reflect diversity in the occupations labelled “manager”. It is, for example, unclear whether this category contains occupations that represent re-labeling of “Supervisor” to “Manager” without any change in job content. Moreover it could be that graduates are given a kind of honorary manager title, merely because they are graduates.

Tentative evidence of a skills and knowledge mismatch has been detected by using type of qualification as a proxy for knowledge and skills. Whilst there was some evidence of matching according to field of study particularly within the SAM group, this was counterbalanced by a somewhat confusing picture amongst other fields of study where graduates were represented in all categories. In general terms, this evidence suggests that field of study can provide a match, particularly where the degree is occupationally targeted. However, given the assertion that degrees cannot be separated from their holders, it also indicates that demand for graduates requires further scrutiny. The absence of significant numbers of arts and humanities graduates may in itself be revealing given that unsuccessful graduates may be less liable to respond. A wide range of degree subjects was represented in the non-graduate categories of the SOC so that it cannot be argued with any great authority that any particular group is necessarily disadvantaged in the labour market.

Regarding the components of personal capital, one of the major objectives of the surveys was to consider whether there were differences according to institution attended. The results showed that Strathclyde graduates were indeed more likely to be in the professional category and Glasgow Caledonian graduates in the associate professional category. This would perhaps suggest reflection on how ranking of universities by graduate destinations is interpreted. If it is accepted that new academic disciplines are more likely to be located in new universities whereas the ancient universities continue to provide traditional disciplines, then it is unsurprising that there may be differences in the overall distribution of occupational outcomes and in the utilisation of degrees. Diversity in skills and knowledge within each degree level perhaps begin to make aggregate data less meaningful. Of course, such claims would be reinforced by further comparative evidence from a Russell-group university or by using comparative evidence across universities within a particular discipline. Whilst the literature on the GLM assumes that differences in occupational outcomes are as a result of differences in the quality of education or in the social skills of graduates, it could also be that occupations seeking to locate training in the higher education sector, do so in the newer universities. For example, graduatisation of nursing does not mean that nursing is available in all universities.

In addition, the higher proportion of mature graduates at Glasgow Caledonian might indicate that higher education is a location used to upgrade skills.

In conclusion, the surveys have provided some useful evidence of some of the general characteristics of graduates and employment. They have shown that graduates are in a wider range of occupations and that degrees are required to access these occupations. Whilst such preparatory work is necessary to establish destinations, it is limited in the extent to which it can provide evidence of the causal processes underlying these links between education and work. Whilst the surveys appear to support the SOC(HE) typology, particularly if it is used as an indicator of graduatisation, the reasons for this process remain unclear. Moreover, the surveys support the proposition that analysis of the GLM requires to clarify features of personal capital reflected in demand. In order to build a complete picture of the GLM, it is necessary to understand what employers seek from graduate employees and how degree education is perceived and utilised. There are indicators of close connections between degree subject and occupation. However, unless further evidence is gathered, this finding may reflect qualification inflation, or that increasing supply has produced a different form of closure in the GLM.

The evidence in the survey indicates that diversity in the type and level of skills and knowledge that graduates possess is reflected in occupational outcomes. Inconsistencies between qualification levels and field of study required to access occupations and occupational outcomes suggest that the relationship between higher education and work is perhaps more complex than strict matching of degrees and occupations might indicate. Teichler (2007) notes that there is a tension between specialists and generalists in the GLM: the former may have appeal only for a specific occupation and the latter a greater range of options, accompanied by the need for occupational training. In general terms the surveys have identified some areas that will be probed further in the qualitative data. In particular, it would seem relevant to evaluate not only whether a degree was required but also the type of degree. Training, or rather lack of training is also an area for further research in this study as is the notion of “job-hopping”. Although the surveys were designed to interrogate models of the GLM, neither the SOC(HE), nor varieties of mismatch has

proved entirely “fit for purpose”, suggesting that a deeper level of analysis is required. The survey evidence may replicate weaknesses in existing research which relies on event regularities from large samples without an occupational reference point. The following two chapters begin to address possible weaknesses by presenting the findings from the qualitative evidence, sourced from occupational sub-samples derived from survey respondents who indicated a willingness to participate.

CHAPTER SEVEN: GRADUATE EMPLOYMENT, PATHWAYS, GATEWAYS AND TRANSFERS

7.1 Introducing the qualitative data

This chapter presents findings from the qualitative element of data collection. A major objective of the thesis is to explore utilisation of graduates and this chapter is concerned with the transition between university and work. As indicated in Chapter five, the data is organised thematically and the themes covered in this chapter are entry requirements, recruitment and selection and transfer of skills and knowledge. The survey findings provided some useful data on the occupational distribution of graduates and established a base from which to proceed. It is apparent that the range of occupations that graduates do is expanding. Yet the underlying processes in matching are under-developed in the survey data. The surveys did, however, reveal that more occupations require degree-level education, a process also referred to as graduatisation. Several possible reasons for graduatisation emerge from the literature: it may be prompted by supply where universities are keen to attract students and offer new types of degrees, by demand where occupations are upskilled or engaged in professional projects. Furthermore, graduatisation may merely represent a change in the locus of skill formation. Consequently reasons for graduatisation become an important influencer on the type of qualifications required. Whilst the circumstances of graduatisation may reveal pathways between education and work, they do not indicate which graduates are successful and why. For this reason the recruitment and selection process will be examined. Finally, utilisation of knowledge and skills is a key indicator of matching in the case of the SOC(HE) or mismatch elsewhere. These findings, however, will enable connections between education and work to be examined using occupational reference points, in turn allowing comparison across the five occupations (Chartered Accountants, Building Surveyors, Risk Managers, Environmental Health Officers, Active-schools Co-ordinators).

The chapter firstly proposes a method of operationalising the research, given that there is little existing research on the GLM which uses qualitative case studies

(although see Nabi (2003); Wilton (2008) on business graduates). Wilton (2008: 153), for example, found mixed results for transference of knowledge and skills with graduates tending to value “personal development and growth” from their degrees. He concludes that further qualitative evidence should be gathered from graduates “at the sharp end” in order to aid educators in their preparation of future employees. It could also be argued that qualitative evidence will contribute to understanding utilisation of graduates more generally. For example, the extent to which employers value personal development or restrict assessment to the contribution graduates make to employing organisations. Nevertheless the value attributed by graduates to their degree education remains an important avenue of research. The chapter concludes by outlining broad similarities and differences within the case study occupations that will provide a platform for the next chapter which explores the work that graduates do in more detail.

7.2 Themes from the research

According to the methodology the findings are organised thematically. The first section considers gateways to the occupations in terms of degree requirements and the second, recruitment and selection. The second presents evidence of transfer of knowledge, and of skills. The evidence compares and contrasts the five graduate occupations selected from the surveys. These are Chartered accountants, Building surveyors, Risk managers, Active-schools co-ordinators and Environmental health officers. The five occupations provide a broad spectrum of graduate employment with an emphasis on more recently graduatised occupations, which are in turn at different stages in the professionalising process. In preparation for the findings, there follows a categorisation of the case study occupations according to existing models of graduate employment.

7.3 Pathways between education and work

This section makes some general observations on categorising the case study occupations. In previous chapters, the SOC, SOC(HE) were explored as classification tools: in this chapter they are applied to the selected occupations. As noted, occupational classifications attempt to combine characteristics of work and workers with qualifications as the preferred method of linking the two. Table 7.1 categorises the case study occupations according to the SOC, SOC(HE) and also gives details of degree requirements and associated professional bodies. Each classification is considered in turn and thereafter salaries are discussed, given that this is a major factor in analysis of graduate employment.

Table 7:1 Case study occupations - categorisation

Occupation	SOC 2000	SOC(HE)	Requirement	Professional Body
Chartered accountants	Major Group 2 Building and Public Service Professionals (Business and Statistics Professionals)	New	Honours degree at 2:1	Institute of Chartered Accountants of Scotland (ICAS), ICAEW in England and Wales (Established 1854)
Active-schools co-ordinators	Major Group 3 Culture Media and Sports Occupations n.e.c.)	New	Ordinary level degree	No (Occupation established 2001)
Environmental health officers	Major Group 3 Public Service and Other Associate Professions (Environmental Health Officers)	New	Honours degree in environmental health	Royal Environmental Health Institute of Scotland (REHIS) (Established 1983)
Building surveyors	Major Group 2 Business and Public Service Profession (Architects, Town Planners, Surveyors)	New	Honours degree in building surveying	Royal Institute of Chartered Surveyors (RICS) Established 1854 Chartered Institute of Builders (CIOB) Established 1980
Risk managers in finance	Major Group 2 Business and Public Service Professions (Business and Statistics Professionals)	Traditional	Degree required	Institute of Risk Management (IRM) Established 1986
Risk managers in health and safety	Major Group 3 Public Service and Other Associate Professionals (Occupational hygienists and safety officers)	New	Degree required	Institute of Safety and Health (IOSH) Established 1945

Source: SOC 2000, CASCOT (www2.warwick.ac.uk)

Table 7:1 highlights the difficulties associated with categorising graduate occupations, particularly in new areas of employment for graduates. For example, categorising Risk managers in finance as a profession and a traditional graduate job is surprising. The difficulty of categorisation new graduate occupations by job title alone is also evident, even with this small sample. Active-schools co-ordinators, for example, do not readily fit into a specific category and Risk managers could be classified as Associate professionals or functional managers.

The SOC(HE) also exposes some inconsistencies in categorisation. It appears anomalous that Chartered accountants are placed in the New category when they are elsewhere regarded as a profession, which results from the SOC(HE) methodology. Elias and Purcell (2004b) assessed change in the proportion of degree-holders within two age groups (25-34 or 45-54). Table 7:2 gives figures for the occupations in this study.

Table 7:2: Occupations according to SOC(HE)

Occupation	% graduates in 21-35 agegroup	% graduates in 40-54 agegroup	Category in SOC(HE)
Chartered accountants	46.1	26.1	New
Building surveyors	61.7	32.5	New
Environmental health officers	61.7	32.9	New
Health and safety managers	42.9	28.5	New
Risk managers (= consultant)	68.7	60.6	Traditional
Active schools co-ordinators	42.2	26.1	New

(Source: Elias and Purcell (2004b))

Table 7:2 demonstrates that the new category appears to chart graduatisation resulting from expansion of higher education. The figures for Chartered accountants given in Table 7:2 are in sharp contrast to ICAS figures for 2004 where 96% of the intake were graduates¹ (www.icas.org.uk). The same is true of Surveying and Environmental health which are now require degrees for entry (www.rics.org; www.rehis.org). More specifically these occupations are not placed in the traditional or modern categories because the older age group do not have 50% or

¹ It could of course be that these figures are for the UK and not Scotland.

40% of degree holders respectively. It would be interesting to discover whether a re-evaluation of the SOC(HE), using different age groupings would produce a different picture.

Table 7:1 begins to explain why a robust definition of graduate jobs has proved elusive. Different pathways emerge which are, to an extent, independent of position in the SOC or SOC(HE). There is some variation in both level and type of degrees required so that Accountants require a good honours degree although subject is not specified. Environmental health officers and Buildings surveyors require a specific honours degree and the remaining two occupations have no level or subject requirements, merely asking for graduates. The status element within both classifications seems to incorporate an element of longevity: in general more established graduate occupations are those that have survived the longest, indicated by dates of professional formation.

Whilst it was noted in Chapter four that there is no hard and fast definition of professions, processes of professionalization are evident in the selected occupations. Professionalisation is particularly apparent in establishing jurisdictional boundaries and professional organisations create links with higher education. Surprisingly, all except Active-schools co-ordinators have at least one associated professional body, suggesting that they may be important actors in the relationship between education and work.

Despite this, the occupations selected appear to support Friedson's (1994) assertion that even where features of professionalism such as a professional body and graduate entry are present, they are not sufficient to secure professional status. For example, Environmental health officers remain associate professionals even though they require a specific degree and are licensed by the state. The emergence of Active-schools co-ordinators, which incorporates aspects within the work of teachers, health and sports professionals, offers the opportunity to study processes of professionalization in a completely new occupation. Abbott's (1988) system of professions is also relevant to the associate professional occupations: it appears that fragmentation of areas of expertise from teaching and health has stimulated the formation of a body of knowledge for Active-schools co-ordinators. The

occupation has also been formed as a result of a “political project” whereby the government are keen to address childhood obesity and lack of physical education in schools. According to one of the co-ordinators,

“we are really changing the culture in Scotland in this job. We are changing teacher attitudes to PE and sport and physical activity” (SP541)

Creation of this new occupation was accompanied by a decision to make it all graduate, in part influenced by the fact that Active-schools co-ordinators would be interacting with other professional groups such as teachers and health professionals.

Environmental health officers follow a professional model where the supplying degree is required to access a year-long training programme. Professionalization for Environmental health officers is by amalgamation of a disparate group of trading standards officers, meat inspectors and health and safety officers. As part of the process of professionalisation the occupation has created an area of expertise and closed boundaries by using the degree programme for entry.

Risk managers in health and safety are also in the process of professionalization. This is patently not a new area of expertise, rather a process of closure via graduatisation, driven by greater legislative regulation in health and safety. Risk management in finance is a new area of employment for graduates, and arguably a new profession, hence the difficulty in categorisation. Risk managers provide an “internal consultant” role in private and public sector organisations. The job description notes that “Corporate governance initiatives and a more restrictive and expensive insurance market have given risk analysts a higher profile within organisations” (www.prospects.ac.uk). To an extent, Risk management may have professionalised because of the growing importance placed on its activities rather than any intrinsic or new area of expertise. In part, professionalization may reflect a successful strategy to close knowledge by the related professional body. The professional body (IRM) styles itself as a professional *education* body and states that,

“Members have backgrounds in many different risk-related disciplines: accountants, project managers, insurers, chartered surveyors, health care professionals, lawyers, bankers, auditors, health and safety professionals and engineers are among those represented” (www.theirm.org).

This quote is typical of a “systems” approach to defining and controlling an area of expertise (Abbott 1988). Formation of a single profession designated to deal with risk assessment relates to occupational control. Risk assessment as an area of expertise is not “new” and has been part of work in a number of existing professions. What is new is the formation of a specific occupation, consolidated by the requirement for degree education at entry.

Building surveyors and Accountants, although established professions, have opted for different strategies in relation to educational requirements. The former requires a specific degree and the latter more general education at degree level. Both, however, have additional requirements before admission to the profession. Accountants spend three years training and sitting professional examinations. They also have to complete a logbook to show relevant work experience. By contrast, surveyors with a relevant degree are not required to pass examinations but before admission to the profession, must demonstrate two years relevant experience, examined orally by a panel of experts.

The occupations are therefore at different stages in the professionalizing process. Whether or not they would be described as professions is, to an extent, less relevant to the present discussion than pathways between education and work. According to the schema suggested by Konzelmann et al (2007) Active-schools co-ordinators and Risk managers are emerging professions in the process of acquiring professional status. Chartered accountants and Building surveyors as established professions have already achieved professional status and awarded legal protection. Environmental health officers are midway between these two extremes, described as occupations aspiring to professional status. Significantly, all five occupations use higher education, but for different reasons. Emerging professions appear to be engaged in defining jurisdictions in order to create a monopoly over the service they provide. Established professions also use higher education as a means to locate

initial training away from the workplace and the traditional apprenticeship model (Eraut 1994). Aspiring professions use degree occupation to enhance status. Significantly, associated professional bodies also detail alternative entry routes, via their own professional examinations suggesting that although degree education may now be required, it may not be the only way of accessing the occupation. The traditional “apprenticeship” model followed in Accountancy and Surveying is perhaps being supplanted by all-graduate entry although it is unclear if this requirement is necessarily driven by necessity or produced as a result of the availability of graduates.

The final classification with which to assess the case study occupations is salary levels, used in studies of the GLM to monitor rates of return to higher education and to test human capital theory (Sloane 2002). There is also an implicit salary hierarchy in the SOC categories where prestige, and therefore reward, is attached to higher status occupations in the professional category. Available evidence suggests that although the differential between graduates and non-graduates is sustained, there is a growing difference in earnings within the graduate population (Elias and Purcell 2004a; Walker and Zhu 2005). Regarding the present study, the survey evidence revealed some differences in salary levels between the two cohorts. Although Strathclyde graduates were more likely to be in professional jobs, status was not reflected in higher salaries. Given that the case study occupations are located in different categories of the SOC, differences in reward might be expected. Table 7:3 shows salaries of graduates in the five occupations.

Table 7:3 Salary range of jobholders

Occupation	Salary Range
Chartered accountants	£12,500 - £22,500
Environmental health officers	£23,000 - £26,000
Active-schools co-ordinators	£19,000 - £25,539
Building surveyors	£25,000 - £40,000
Risk managers in finance	£25,000 - £50,000
Risk managers in health and safety	£21,000 - £30,500

Table 7:3 shows differences within and between occupational groups. It should be noted that although graduates in the sample are 2.5– 3.5 years post-graduation, the value attributed to their education may also be influenced by career stage. For example the Risk manager who earned £50,000 was a mature graduate who had returned to university to change career. Trainee accountants earn less than in other occupations at the same stage, but sacrifice high earnings during training for a high level of reward after they become qualified.

The previous sections have made some observations on categorising the case study occupations and highlighted the difficulties associated with categorising graduate occupations. All are recently graduatised and require degrees for entry. Yet different underlying reasons for graduatisation emerge which in turn impact on where each occupation is placed in the SOC and SOC(HE). The next section looks more closely at pathways between education and work in the case study occupations.

7.4 Gateways and access

As noted there are a variety of degree requirements in the occupations studied. This section looks more closely at the qualifications possessed by graduates in the sample. Literatures on the relationship between education and work suggested that qualifications can be used to signal occupational knowledge and skills, as a screening device to exclude the unqualified, or as a general indicator of ability to learn. It was also suggested that where control over work was within an occupation or profession, it was more likely that specific degrees would be required. By contrast, under bureaucratic or organisational control, occupational knowledge is less amenable to codification and therefore more general qualifications are required (D Brown 1995). In all the case study occupations, excepting Active-schools coordinators, professional associations have a role in governing degree requirements. Specific degrees are required for Environmental health officers and Building surveyors and the remaining occupations have “open” access requirements although professional bodies provide exemptions from their own examinations by accrediting

degree programmes. However employers or occupations, as gatekeepers, may make particular choices on the graduates that they employ.

In general, the advantage of professional control over work, and the use of specific degrees, is that employers can be more certain of what entrants to the profession know. This is, however, dependent on arrangements for further training and the expectations placed on graduates. The survey evidence suggested that there may be a reduction in overall levels of training in graduates' early careers. Table 7:4 shows the degree profiles of entrants to the occupations in each of the case studies.

Table 7:4 Degree profiles

Occupation	Degree Profile	Professional entry	Employing Organisations
Chartered accountants (11)	Honours degrees in Accounting, Accounting and Finance, Accounting and Business Studies, Law, Technology and Business Studies, Economics and Finance, Mathematics, Masters in Investment Analysis	6 fully exempt, 5 partially exempt 3 rounds of examinations plus logbook detailing work experience.	8 “Big 4” 2 medium sized firms 1 private sector organisation
Environmental health officers (5)	Honours Degrees in Environmental Health Masters in Waste Management	All required to sit oral examination for entry to profession	4 local authority 1 government body
Active-schools co-ordinators (9)	Ordinary degrees in sport in the Community (3), Honours degrees in Sport in the Community (3), Sport and Exercise Science (2), Masters in Sport and Exercise Medicine,	No further qualifications needed.	9 local Authorities
Building surveyors (6)	Honours Degrees in Building Surveying (4), quantity surveying (2)	Exemptions for RICS membership Logbook required	1 private practice 2 local authority 3 construction companies
Risk managers in finance (6)	Honours degrees in Risk Management (4), Business Studies (1), Masters in Risk Management (1)	Graduate Membership of IRM Full membership with two years work experience	1 local authority 5 private sector organisations
Risk managers in health and safety (3)	Risk Management (2), PGDip Health and Safety Management (1)	Grad. Membership of IOSH Logbook of work experience required	1 consultant engineering company 1 education 1 retail sector

Table 7:4 reveals that there is a closer match between degree and occupation than requirements suggest. Even where there is ostensibly “open” access, degree profiles indicate connections based on relevant, or partially relevant, occupational

knowledge. Accountants generally have business or accountancy degrees, Active-schools co-ordinators have sports-related degrees and Risk managers in both sectors generally possess risk management degrees, suggesting an emergent trend towards field of study as a labour market advantage.

The findings also reveal that labour market conditions have a significant impact on employment opportunities. Although Environmental health officers are required to possess a specific degree, there are only nine training places available in Scotland each year and therefore a substantial proportion of relevantly qualified graduates have to search for work elsewhere (www.rehis.org). Despite this, there is also a shortage of qualified officers in the labour market more generally. This evidence indicates a mismatch between supply and demand which can be partially explained by budgetary constraints on local authorities who are reluctant to invest in the training year required for professional membership, creating a “bottleneck” at port of entry. By contrast, demand for graduates in the Risk management group is high. One graduate reported,

“a lot of us [with risk management degrees] have gone on to better careers than they would have if they’d done another degree of a similar level it’s as though there’s something specific about this degree that actually makes it more valuable than a standard business degree.” [GC411]

This quote suggests that specialist knowledge may be an important differentiator for employers. Although the Risk Management degree is not stipulated for employment, it clearly advantages graduates. According to the Graduate Recruitment specialist interviewed,

“I don’t know anyone in risk that doesn’t have a risk degree. We have people in accountancy that do have other degrees and it does happen to help if you do have an accountancy degree, but risk is one of those areas where it would be quite difficult to get into unless you had some sort of disciplinary education in risk.” [RECCONI]

This quote indicates a gap between degree requirements and success. Although this is a relatively new occupation, the Risk management degree has already acquired a cachet in the labour market.

The labour market for Active-schools co-ordinators is also driven by an over-supply of relevantly qualified graduates. Although there is no specific degree requirement,

the occupation appears to have been colonised by graduates with sports-related degrees to the extent that a degree programme at Strathclyde University has recently been re-designed with input from the occupation. When asked why Active-schools is a graduate job, an employer responded,

“We want to maintain a very high standard of person for two reasons. One is because they are doing a job with other professionals – they are working in the education environment, they are working with teachers, they are working with so-called professionals in a professional environment. That did two things – the degree obviously cuts out a whole tranche of HNDs, HNCs and there are thousands and thousands of applications from them. But really the other thing we were looking at is to give it an academic basis so that they are working with a peer group. We have absolutely held the line of it being a graduate job. What we said was an appropriate degree that is slightly vague – what we are looking at is generally something to do with either sport, physical activity or health and nutrition” [ASCYER1]

This quote exemplifies the essence of strategic professionalization and of closure via credentialism. Notably, actual job requirements are absent in the quote. Instead, degree education is required to enhance the status of the occupation and to screen out less qualified applicants. Initially, a teaching qualification was also required, but this was subsequently abandoned because qualified teachers did not apply for this position which also suggests qualification requirements may be altered according to the labour market.

In terms of established professions, different strategies are evident in Accountancy and Surveying. Accountants, although not required to have a specific degree, largely possess at least partially relevant qualifications. Unsurprisingly, graduates appear to think having an Accountancy degree will advantage them in applying for traineeships. Typically they reported,

“I think chartered accountancy is just the way people go. When you finish and you have done that [Accountancy] degree, I think people think it is the next stepping stone to go into an Accounting firm” [ACC051]

Despite the instrumental attitude displayed by this graduate, employers are divided on the subject of relevant degrees. A Partner in one of the “Big 4²” Accounting

² The Big 4 Accounting firms are KPMG, Ernst and Young, Deloitte and PriceWaterhouseCoopers

firms was adamant that relevant degrees were not necessary and that employers assumed no prior knowledge of Accountancy in recruiting trainees. Indeed, in his view, a high number of relevantly qualified trainees would be a disadvantage for the profession, inducing “a blinkered outlook”. Another employer stated,

“in the [accounting] profession it is almost a negative rather than a positive having a finance degree or an accounting degree because we want people who have got a bit more breadth of experience and once we have that breadth, we can narrow it down” [ACCYER2]

Another employer was more willing, or honest, to recognise the benefit of relevant degrees saying, “we do get all kinds of degrees but more often than not it is more of a kind of analytical type of degree rather than English or some sort of Arts subject. [ACCYER3]

Opinion is therefore divided on the advantages of knowledge in Accountancy which also suggests that the perspective of individual employers may influence selection where there is leeway in criteria for entry. There is, of course, a major advantage for graduates and employing organisations in employing relevantly qualified trainees because these graduates attract exemptions from professional examinations, and do not require time away from work to attend training and sit examinations, particularly in the first year.

As training progresses, however, any initial advantage diminishes so that, “at the start you can tell who did Accountancy, just because of their level of knowledge but now [second year trainee], if somebody came in I think they would be hard pressed to tell.” [ACC372]. This quote supports the proposition that relevant degree education may give first year trainees an advantage. However, it also appears that non-relevant graduates acquire appropriate knowledge during training.

The training programme for accountants is well-developed and rigorous which perhaps explains why specific accounting knowledge is not required for entry. Moreover, there appears to be a somewhat strained relationship between higher education and the accountancy profession. This was mentioned by employers and

confirmed by an educator in accountancy who was very clear that the degree was not training for the profession. In discussing the relationship between education and the profession, he stated,

“we are teaching people to be much more rounded and to look at the world of Accounting which is much broader, more about business – and to understand how the whole area of decision-making works – the decisions they [graduates] will be making are based on more than number, they are based on people” [ACCEduc1]

This can be explained in terms of the indeterminacy of accounting knowledge and what Abbott (1988) terms “the separation of academic and practitioner knowledge”. It may also be that the critical approach adopted in business schools is not welcomed by practitioners (Khurana 2007). The strength of the training programme for accountants may indeed be equivalent to completing a further degree and that the initial requirement for a degree signals “trainability” and subsequent suitability for the training programme.

Risk managers in health and safety are a sub-group of risk management and placed in a lower SOC category than those in finance. The professional body in this occupation is in the early stages of setting educational standards and accrediting degree programmes. An employer indicated that the occupation is moving towards more relevantly qualified entrants. The combination of newly achieved charteredship and the creation of distinct occupational boundaries in health and safety follow a typical “professionalization” strategy. Again this appears to be a typical professionalising strategy which in turn, takes advantage of the supply of relevantly qualified graduates. Instead of health and safety being an “add-on”, further and more complex legislation in this area has prompted a jurisdictional boundary.

In summary, there are a number of differences in access to these occupations, related to labour market supply and demand, control over entry and professionalization. Active-schools co-ordinators are the only occupation that is not influenced by a professional body but for the others, entry to the professional body varies. Accountants and Environmental health officers are required to undertake further training and examinations before they are licensed to practice. Risk managers and

Buildings surveyors have an umbrella organisation that provides chartered status but only where graduates or their employers choose or demand this route. In all cases charteredship requires evidence of postgraduate work experience, between two and three years duration. Whether or not professional membership is required or seen as an “add on”, accredited degrees in a related subject offer exemptions from examinations.

In general, pathways in these occupations seem to be driven by the availability of occupationally-targeted degrees. However they are not only supply-driven and the influence of professional bodies and employers is clear. Closure strategies appear to dominate in the labour market for these graduates and there is evidence that the basis of closure is connected with ostensibly useful skills and knowledge. Occupations appear to graduate “because they can”. Yet evidence from the Accountants suggests that specialisation at degree level may be resisted by some employers, dependent on the status and nature of the profession and the strength of the connected training programme. It could be argued that the more amenable occupational knowledge is to codification in a degree programme, the more likely that professionalization via higher education will be. In other words work-ready graduates who have a codified body of knowledge may themselves aid in establishing jurisdictional boundaries, in turn creating and reinforcing an occupational identity. Where the profession has already established status, perhaps by successful defence of its jurisdiction, there is more debate on the relevance and outcomes of restricting the knowledge base. It should be noted that Accountancy is perhaps anomalous in its approach to initial education, given that a hallmark of traditional professions is a supplying degree. Indeed it is more usual for established professions such as law and medicine to attempt to directly influence university education (Robley et al 2003). In Accountancy, however, it is perhaps less clear exactly what trainees require to know, in turn producing disharmony between educators and practitioners.

7.5 Gatekeepers: the recruitment and selection process

Once it has been established that access to occupations may be at least partially limited to those with some apparently relevant occupational knowledge, this section examines the recruitment and selection process and introduces some of the other features of personal capital. Institutional differences are said to be a major differentiating factor in graduate employment which were considered more fully in the survey evidence. However, there was no evidence from graduates in the case studies that the university attended had influenced employers, confirmed by interviewing graduate a recruitment specialist. When asked if there was any bias towards any particular university in Glasgow she replied,

“Definitely not. I think that employers realise there is different content in a lot of disciplines across a lot of different universities but we never really get that at all. It’s more about the content of the degree and the work experience that’s been cited and the actual individual as a person. [...] Certainly in Glasgow we’ve never had an employer say that they must be from any particular university. Generally what we find is a lot of employers come to Glasgow because there’s a number of universities within reasonable distance that they could pool talent from.” [RECCON1]

This quote indicates an emphasis on degree subject and personal attributes rather than university although without comparative evidence from a Russell-group university the claim is not generalisable. It was noted in the literature review that newer universities may attempt to combat the reputation attached to ancient universities via useful specialist degrees and it appears from the evidence that, in Glasgow, this strategy may have been successful. It is, however, interesting to note from this quote that employers recognise that the content of degrees varies, suggesting that they may use other measures to assess suitability.

The recruitment process for graduates in the sample was different across the occupations, again influenced by labour market conditions. The process for trainee accountants is perhaps most stringent. The “Big 4” accounting firms have a centralised national recruitment function which involves an initial online application including literacy and numeracy testing. UCAS points are also taken into consideration in the selection process. Successful candidates attend an assessment centre in the recruiting organisation where they undertake interviews, participate in role plays, in-tray exercises and group discussions. Representatives from the HR

department and senior managers assess competencies such as career motivation, teamworking and interpersonal skills. Despite the competency approach, graduates perceive that selection is based on personal attributes and general skills, after the initial screening. Typically they report,

“The only thing they are interested in is whether you are an intelligent person and then beyond that, what they are looking at, what they are looking for, are people who can communicate, who are likeable and will get on with clients and who can pick things up quickly and learn” [ACC682]

This evidence supports more general findings by Brown and Hesketh (2004) in graduate traineeships. Recruitment for Big 4 firms is designed to select appropriate candidates from a pool of equally qualified applicants. The final interview for trainees is with a partner in the organisation and incorporates a social event, again to establish interpersonal skills. It seems that personality perhaps overrides other criteria in selection. An employer noted that first-class graduates were often rejected at the interview stage, “because they had not done anything else”.

Active-schools co-ordinators are also recruited by an assessment centre, less rigorous than accountants. After an initial screening from the application form, candidates are asked to give an unseen presentation in front of a panel of five assessors, who are made up of local authority representatives, managers and an officer from SportScotland. Co-ordinators also require post-graduate work experience with children or in a sports related occupation, irrespective of their degree. It was fairly common for graduates to have previously applied for these posts, been rejected and then to have been successful on reapplication with some work experience. Typically they reported,

“I think it was a combination of both [work experience and degree]. The fact that I had a degree and it was a relevant sports degree but also the fact that I was already working in schools [on a temporary project] and that experience really helped” [SP699]

From an employer perspective, relevant work experience was more important than the degree. An Active-schools manager stated that, in general terms the educational profiles of co-ordinators in her area were fairly diverse,

“Well, I have got someone with a degree in Arts who then left and went into environmental art and became a countryside ranger. I have got PE people who are also excellent. I had somebody who had a degree in Engineering but who had a lot of experience working with vulnerable and disadvantaged young people. I have even got someone who has a degree in Philosophy and has experience with children and sports development” [ASCYER2]

Although graduates in this sample were all from a sporting background, the quote demonstrates that this is not the only educational biography for Active-schools coordinators. It confirms the *requirement* for a degree and indicates a preference for certain relevant degree knowledge. However work experience is the key criterion. This evidence also highlights the difficulty of relying on supply-side information to evaluate graduate level occupations. According to the presenteeism approach adopted by Elias and Purcell (2004), Active-Schools would be a graduate job with 100% of occupants possessing degrees. The employer quote, in contrast, demonstrates that the reasons for stipulating degrees for entry can be completely disconnected from the actual requirements of the job. Active-schools co-ordinators with degrees in Sport in the Community had completed at least one placement as part of their degree programme. They were, in general very positive about their placement experience. For example, *“the biggest help was my placement experience. I was out in schools doing that so at the time that was probably where I learned most” [SP699]*

The influence of work experience is also relevant in the building surveying and risk management graduates from Glasgow Caledonian. Here it is not postgraduate work experience, rather experience incorporated in the Building surveying and Risk management degree programmes. Although placements are not compulsory in these degrees, all the graduates interviewed from these courses had undertaken placements. As an educator in Risk management commented,

“We encourage them [undergraduates] to get practical experience through the placements and we try to give them as much practical knowledge as we can in the degree. It’s very, very vocational. It is really tailored towards what organisations want. We generally get feedback saying that graduates are equipped to hit the ground running, as much as they can be straight from university. We try and maintain relationships with employers as much as we possibly can.” [RMEduc1]

This quote demonstrates two features of recruitment for these graduates. Firstly gaining work experience during higher education is actively encouraged and employers have influence over the content of the degree programme. Secondly, and this was supported by evidence from graduates, work experience becomes a contributory factor for accessing employment. In effect, the placement experience becomes a type of informal recruitment. Several surveying graduates mentioned that they had established contacts during placements and been recruited into the organisation after graduating. Notably, graduates who had undertaken a placement felt that this was the reason for their success in the labour market. Two Surveyors had remained with their placement organisation and returned to university to complete their degree on a part-time basis. Another was employed by his placement organisation, during and after his degree. He reported,

“I wrote to all sorts of companies and local authorities to see if I could get any kind of work, unpaid or otherwise, I just wanted to get the experience rather than have to go back to university and do a couple of courses. [employing organisation] came through and they said that they would be interested in taking me on, and I did my six-month placement with them. They asked me back the following summer between third and fourth year, so I worked again for three- and-a-half months, and went back as soon as I graduated” [GC164]

The evidence therefore suggests that relevant work experience is an important differentiating factor for graduates in Surveying, Active-schools and Risk management. If placements are used as a covert recruitment strategy, they are also a method of reducing applications and minimising the risks involved in recruiting graduates. Both Surveyors and Risk managers, however, were recruited via interviews rather than assessment centres and generally felt that organisational fit was the major criterion for employment. The Risk management graduates, more than any other group, reported that employers were interested in the content of their degree. Interestingly, all but one of the Risk group had already moved employment at least once since graduation and so post-graduate work experience also influenced recruitment.

Keep and Mayhew (2004) have suggested that demand for graduates is influenced by “work-readiness” and that employers increasingly recruit graduates in order to

reduce training costs (see also Berg 1971; Brown and Hesketh 2004), supported by this study. Work experience quickly over-rides degree skills and knowledge at recruitment for some of these groups and the evidence also provides support for Elias and Purcell's (2004b) assertion of a protracted transition effect in the GLM. Nevertheless it should be noted that the labour market risk is borne by graduates with no guarantee that jobs will be available. It may indeed indicate that the level of knowledge possessed by graduates is not actually necessary for performance in the job.

In summary the case study occupations show some differences in terms of pathways and barriers to success. These emerge in the type of occupations that graduates are qualified to enter and in how they are assessed. Although an emphasis on field of study would suggest that signalling is the dominant function of qualifications, there are also indicators that screening is used, largely to discriminate amongst applicants. Pathways between education and work are influenced by labour market opportunities and degree requirements. There is evidence of Hirsch's (1977) theory of positional competition within the sample. Where relevant degrees are required, competition may begin during education so that work experience gained during undergraduate degrees becomes a major differentiating factor amongst graduates. In the occupations where there is "open" access, certainly within this study, it appears that graduates with some relevant knowledge and skills are preferred. This may derive from "niche" degrees as is the case with Active-schools and Risk managers. Alternatively Accountants show that, despite an open recruitment policy, in reality graduates with some relevant knowledge and skills from their degrees are selected.

More generally, the recruitment process within all these occupations is designed to assess suitability and test social and interpersonal skills. This evidence supports Brown and Hesketh's (2004) findings although without a control group of unsuccessful graduates, it is difficult to assess whether this is a weakness in recruitment or a result of oversupply. The way in which the labour market operates for these graduates shows that employers have the upper hand. It could be argued that recruitment is designed to "select out" that may again suggest oversupply. Degree knowledge is perhaps taken for granted and employers select on criteria that

they are comfortable with. However, it may also be that social and interpersonal skills are required within work, a point that will be returned to in the next chapter.

7.6 The salience of knowledge and skills

Whilst the previous sections have demonstrated that increasing numbers of graduates may have produced altered forms of closure so that relevant degrees are preferred at port of entry, it has also been shown that recruitment and selection is designed to assess interpersonal skills. This section seeks to understand if closure strategies in the labour market are translated to work. In theory, if classic credentialism is the dominant labour market strategy, then we might expect that knowledge and skills are less relevant than the qualification and closure becomes an artificial mechanism to reduce applications. Collins (1979) for example argues that medical students study areas of knowledge at university that are largely redundant once in work. In contrast, to confirm the knowledge economy thesis, it might be expected that graduates would use high-level, theoretical knowledge in their jobs, and that graduatisation is driven by increased complexity in the nature of work. The relationship between technical and social skills is also relevant, particularly in terms of the extent to which either of these are gained in higher education and transferred to work. Already the different elements of hard and soft currencies within personal capital are evident. It is also important to separate skills and knowledge in analysis (Warhurst and Thompson 2006). This section looks at each occupation in turn and then makes some general observations on the salience of degree knowledge and skills.

7.6.1 Accountants

The consensus from accountancy graduates is that the theoretical elements of the Accountancy degree do not transfer to work. Typically, they reported, *“I have not always felt that the background was as practical as I might have liked it to be”*

[ACC255] and “a small proportion of the degree was technically orientated. I think we did one class in auditing, one module in my whole four years” [ACC180]

It should be noted, however, that trainee Accountants are engaged in the auditing function which is only one component of the profession. The majority of graduates were fairly scathing about the applicability of some of their degree knowledge, such as social and environmental accounting. However this knowledge may become more relevant as careers progress and cannot be discarded as irrelevant, despite what graduates say. These quotes also demonstrate an instrumental attitude on the part of accountancy graduates and an expectation that the accountancy degree would prepare them to become accountants. Surprisingly, partially-relevant graduates were generally more positive about transfer of knowledge and take a much broader view than the accounting graduates. “Business awareness” was frequently mentioned as necessary in order to understand the workings of client organisations. A law graduate stated,

“my degree has been of use to the point of knowing how to do things – being able to cope with the research side of things, but obviously from a technical side, it has not really been much use” [ACC199]

Significantly, when asked about the most useful parts of their degrees, the majority of graduates mentioned the Management development programme at Strathclyde. This programme runs in each of the first three years of business degrees and develops a range of skills delivered in the context of solving real business-related problems. Emergent differences amongst graduates emphasise the divide between practitioner and academic knowledge and the influence of the employability agenda on university curricula. They also reflect variation in graduates’ perception of applicability of knowledge. Indeed the law graduate quoted above said that her law degree had only made her realise that she did not want to become a lawyer.

With reference to skills, communication, unsurprisingly was perceived to be the most important transferable skill. Typically trainees reported, “communication is really important. You want to stay on their [the client’s] good side because it makes your job so much easier if you want to get information from them” [ACC198]

Although technical skills are important in the auditing function, it is interesting that interpersonal skills were reported far more frequently than numeracy, computer-literacy or indeed teamworking. Again it appears that these skills have been assimilated and internalised so that they are perhaps “taken for granted” by graduates. The emphasis on communication is indicative that this was not a skill that trainees necessarily expected to use, confirmed in the interviews. When teamworking, for example, was presented to interviewees as a skill, it was felt to be very important. However it was articulated by graduates with reference to communication, in respect that it was necessary to communicate with other trainees and managers on the audit. Presentation skills were also mentioned by all trainees as being necessary and transferred from their degree course. Computer-literacy also appears to be taken for granted and it seems that this is particularly important for accountants, given that specific software packages are increasingly used in auditing.

In effect, the three year training contract is designed as a gentle introduction to the profession. The major objective for trainees is to gain practitioner knowledge from their professional training, at the Institute and within the firm. During the three years, trainees are gradually given more responsibility, both in supervising junior trainees and in controlling audits and in this way acquire management skills. Training is also geared towards establishing and maintaining client relationships which may explain the emphasis on social skills for selection. Graduates with accountancy degrees were also quick to recognise that they “knew the jargon” more readily than their peers. The patchy evidence for knowledge transfer with relevantly-qualified graduates is surprising, but may be as a result of the early career stage or graduates’ perception of what is relevant knowledge. Richardson (1997) for example, argues that the indeterminacy of accounting knowledge and diversity in employment contexts means that the professional project in accountancy is incomplete. In his view, it would be impossible to design a degree programme that would satisfy all potential employers.

The pathway for accountants follows an ideal-typical professional model, where degree education is the first stage, supplemented with extensive training before admission to the profession. Yet there is some evidence that the degree is merely a

“ticket to entry” and its utility measured in terms of ability to cope with professional training and examinations. Indeed an employer noted that UCAS points were considered in the application process because accountancy examinations are more similar to A-level than university examinations. Although Accountancy is considered a “graduate job”, it adheres to the credentialist model so that there is, in theory, little connection between occupational and educational knowledge. Despite this, in practice, relevant or partially relevant knowledge is preferred at port of entry which perhaps also reflects the diverse range of clients that accountants service. Moreover, it appears that graduatisation of the profession has been aided by the readily available supply of graduates reducing the uncertainty connected with the traditional apprenticeship model of employing school leavers and in-house training.

7.6.2 Active Schools Co-ordinators

Transfer of knowledge and skills for Active-schools is not entirely straightforward and shows within-group differences. Although it was noted that there was no specific subject requirement for Active-schools, all graduates in the sample possessed sports degrees of one sort or another. Nevertheless, there is a distinct split between co-ordinators who have Sports science and Sport in the community degrees with the former suggesting that their course had not given them transferable skills or indeed much relevant knowledge for their job and the latter being much more positive on both skills and knowledge transfer. According to the Sports Science graduates, *“Sports science itself is way above and beyond what I am doing here.”* [SP541]. Another graduate was more explicit about transfer stating,

“you need management skills, being able to network with all the different people, head teachers, teachers, parents, kids and coaches. People skills but obviously a knowledge of physical activity and health and a knowledge in sport is key – but you still have to have a passion for doing the job, otherwise you wouldn’t try and promote it. These are the key factors which, to be honest, you don’t really get from university” [SP022]

This graduate is fairly candid about what is required to do the job and clear that his university education did not equip him with the required knowledge and skills. It should be noted that he was fairly disenchanted with the labour market opportunities for sports graduates and wished that he had pursued another degree.

By contrast, Sport in the community graduates were more positive about transfer.

“that is where the degree has come into play – it is quite diverse and covers all aspects of sport, physical activity, health – that helps when you are trying to take into account all these different factors in relation to the job” [SP496]

This quote shows that the targeted degree has delivered relevant education for the occupation, allowing graduates to make clear connections. Differences within graduates in this occupation may reflect the attitude of educators. Sports scientists pursue an academically-based science degree, whereas Sport in the community is vocationally orientated. Indeed an educator in Sport and the community commented,

“we see ourselves very much in that role, as trainers and educators. We have certain job markets in mind whenever we think about what we do and where students will end up. For the future we may be moving towards a much more direct link between what they [students] do at university and what they do in sporting jobs.” [SPEduc1]

Despite differences in knowledge use, sports graduates reported that they were using skills gained at university. Many mentioned skills such as presentations, report writing and overall confidence were invaluable in the workplace. Finance and computer-literacy were also mentioned as being important transferable skills, given that Active-schools co-ordinators are required to manage budgets and also apply for funding. In common with accountancy graduates, Sport in the community graduates indicated that they had undertaken their degree with the labour market in mind. It is also notable that confidence was felt to be an outcome of degree education.

Active-schools demonstrates the tension between the objectives of higher education and the workplace. In terms of mismatches, there is mixed evidence according to the field of study. It seems that there is a close match between actual and required skills and knowledge in the case of Sport in the community graduates, whereas the link is tenuous with sport science graduates who are, it could be argued, under-employed in the role. However all graduates appear to understand that labour market opportunities for sports graduates are limited and some reported that degree knowledge made them better co-ordinators.

Given that this is a completely new occupation, Active-schools co-ordinators provide some interesting evidence on the changing nature of graduate employment. There are several features in this occupation that might suggest that it could be adequately carried out by non-graduates, particularly because work experience is required to secure employment. Graduates do not appear to require substantial theoretical knowledge which perhaps explains why Sport science graduates are less positive about knowledge transfer. Nevertheless, the Sport in the community graduates are clearly being educated to secure jobs in this occupation and report strong links between occupational and degree knowledge and skills.

It also seems that there is a complex relationship between what these graduates need to know in order to secure the job, and what they actually do within the job. Thus, coaching qualifications are advantageous and the majority of graduates held such qualifications. However because SportsScotland deliberately set out to create a “professional” occupation, co-ordinators are not allowed to use their coaching expertise, save to assess and employ staff to deliver coaching. Indeed much of the co-ordinators’ time is spent sourcing funding, and in the administration and marketing of the programme. It could therefore be argued that Active-schools co-ordinators are a good example of status-led credentialism: the occupation was made graduate to exclude the less qualified and to give jobholders some authority with teachers with whom they interact. It is perhaps merely co-incidence that Sports graduates are beginning to colonise the role and it remains to be seen whether the availability of a supplying degree will have an impact on occupational requirements.

7.6.3 Environmental Health Officers

A close fit between degree and occupational knowledge might be expected for Environmental health officers. There are two phases in knowledge and skills transfer for this group. Officers are initially recruited to a graduate training programme culminating in a set of examinations in seven principal subject areas of Environmental Health, set and examined by the professional body. Nevertheless, graduates did not feel that their degree had particularly prepared them for the examinations. For example,

“graduates come in [to the training contract] and they are expected to have a certain amount of knowledge and they don’t. You know a little bit about for example food legislation and science but there are seven subject areas and you don’t know an awful lot.” [ENV531]

“I think the Environmental Health degree gave you a firm footing in the basis of the whole science as opposed to just the profession. I think they should maintain it because if it were to become more vocational, you would become so blinkered to other avenues for environmental health and all you would become is a local authority inspector” [ENV554]

Although officers were not equivocal on knowledge transfer this is perhaps because of their orientation to their degree rather than any intrinsic disconnection between actual and required knowledge. As with Accountants, the breadth of knowledge provided in the degree may well become more salient later on in careers. It appears that although the degree is specialised and vocationally oriented, occupational knowledge is acquired by practical experience gained during the year of training. The qualification is used to ensure that graduates have a wide theoretical knowledge base, which is not necessarily used in work.

There is also evidence of different agendas of academia and the occupation. Educators, it seems, are aware that the labour market cannot absorb all graduates into the profession. For Environmental health officers, specialisation was also mentioned as a factor in the transference of knowledge so that the degree gives theoretical background knowledge on all aspects of the profession whereas most officers will tend to use one or perhaps two areas of expertise in their careers.

All graduates reported transference of skills between education and work, particularly computer-literacy, communication, presentation and report writing. Presentational and negotiation skills were prominent, given that Environmental health officers interact with businesses in the local authority area.

It appears then that there is no clear evidence of work altering as a result of being graduated. Graduates appear to understand the benefits of being taught the theoretical basis of their occupational knowledge and appreciate labour market restrictions may mean that they have to search elsewhere for employment. Nevertheless, the theoretical base is not central to performance and it is more likely

that the degree programme has been developed in order to fulfil academic rather than occupational criteria. In essence, it is the qualification that is important, typical of credentialism and professionalization strategies. Although graduates report transference of skills and knowledge, they acknowledge that it is the work experience gained during the training year which enables them to do their job. The connections between education and work for this group are more a “marriage of convenience” than borne of necessity. Environmental health officers demonstrate that evaluating relationships between education and work are more complex than a functional correspondence between occupational and educational knowledge and skills.

7.6.4 Building Surveyors

Building surveyors were selected as a comparator for Accountants, the major difference being that surveyors require a relevant degree. It might therefore be expected that there would be a close match between occupation and education. However it appears, again, that this is not necessarily the case. For example,

“it’s such a specific degree it touches on a lot of different things. You do law for modules in first and second year, and there probably are parts that are helpful, but it’s not really what I do, there was even a module that covered dilapidations and it uses a Scottish schedule, but actually in practice you don’t use that. So there are a lot of things you do at university that you don’t do in practice. Most of what I know, I’ve learnt from work experience” [BS157]

“you do get a basic understanding of things from university, but you learn a lot more when you are out, when you see things getting built [...] I’ve known quite a lot of the stuff that maybe wouldn’t have any relevance to what I’m doing.” [BS105]

“with building surveying, it completely depends on what type of job you end up with. Because it could be completely different and it varies widely. So the most learning is going to be on the job, and it’s even when you’re going from job to job. If I go as a building surveyor in a local authority to a small private firm, it would be a world of difference. They can’t prepare you for everything, they can only touch on topics that are common to all and just try and give you a decent enough basic knowledge of what surveying’s about, what the construction industry is about and what everyone else does in relation to a building surveyor.” [BS164]

These quotes clearly demonstrate the distinction between academic and practitioner knowledge. Graduates are not saying that what they learned at university is irrelevant, rather it seems that even within one profession, the range of employment contexts means that universities provide a broad education and that work experience is required for application. Research on the future of surveying education, commissioned by the RICS, noted several issues arising within the connections between education and work in the profession, particularly in the assessment and accreditation of universities and the teaching of future professionals (Ellis and Wood 2006). It appears that teaching on building surveying courses is largely conducted by ex-professionals who are not interested in pursuing research that, in turn, causes problems in assessment of departments.

Surveyors offered some surprising evidence in terms of the links between education and work. Surveying is an established profession where it might be expected that degrees provide initial professional knowledge and this is the case. The body of knowledge, however, is not based on high-level theory and is practically orientated. Whilst Surveyors generally carry out the same tasks, the evidence shows diversity in employment contexts means that only a proportion of education is reported to be relevant. This supports Collins (1979) view that educational and occupational knowledge can never neatly correspond, even in circumstances where there are close connections. Abbott (1988) also suggests that the separation of academic and practitioner knowledge is necessary, so that the research function of universities allows the body of knowledge to expand, whilst also informing practice. However this argument poses some problems in surveying. The shift from a traditional apprenticeship model of training conducted within a firm has been replaced by a more general education that conforms to academic standards. The relatively recent formation of surveying as an academic discipline in turn presents difficulties in attracting teaching staff who can also fulfil academic criteria³. It may also explain why achieving professional membership is assessed by means of demonstrable work experience, rather than the possession of a related degree. The evidence certainly

³ Lees and Ashworth (2005) note that “the first independent schools of construction can be seen developing through the late 1960’s and into the 1970’s and the majority of these schools are located in the newer universities that received incorporation in 1992.”

suggests that graduates in this profession require work experience to perform, although this is gained once in employment and not, as in Accountancy, within the protection of a training programme which may explain why placements are incorporated within the undergraduate degree. Although the nature of work means that communication skills are important within surveying, there is less importance placed on assessing such skills in the selection process than in other groups, suggesting that in a tighter labour market, relevant education becomes more important than interpersonal skills.

The relative scarcity of surveying graduates is also salient although this may change if the downturn in the construction industry continues which in itself presents a problem for an industry that is sensitive to fluctuation in the economy (Langlands 2005). Full-time graduates effectively decide to enter the construction industry four to five years before they become employed. The education to work pathway is based on relevant knowledge and it could be argued that surveyors demonstrate that initial education has been shifted to higher education, instead of a strategic professional project. Building surveyors have already achieved professional status without forging links with higher education. Yet these links have been made retrospectively which may consolidate professional status, or perhaps reduce the uncertainty and costs associated with training apprentices.

7.6.5 Risk managers

It was noted that Risk management graduates are attractive to employers and that their degree appears to advantage them in Risk management jobs. It has been shown that the pathway between education and work, particularly with relevant degrees, is in part dependent on relationships established between employers and higher education. This group show evidence of a consensual relationship: educators, employers and the professional body have developed a degree that is mutually beneficial, resulting in good employment prospects for graduates in this subject. The educator interviewed adopted a very pragmatic view of the degree and was quite candid in her assessment stating,

“Risk management isn’t an academic subject, it’s grounded in academic literature, it’s got academic theory but it’s not really a complex academic subject, I mean at the end of the day it’s the practical job that you do.[...] A lot of it is to do with people, and having personal qualities are quite often a lot more important than being able to write an academic essay. [...] I think because it is quite practical, it makes it more accessible for people that maybe aren’t academically brilliant but have all the people skills and all the drive and motivation to do well.” [EducRM]

This quote demonstrates that Risk management education is geared towards the requirements of industry and the occupation. It is notable that the educator emphasises “personal qualities” as important and it seems that training for employment is high on her agenda. She also noted that employment is a measure of success for the academic department. This is perhaps only possible in a small department: only fifty graduates per annum graduate with Risk management degrees and there are a number of “occupational streams” within the degree. Undergraduates can therefore choose to complete elective modules on health and safety, insurance, financial risk as well as their core risk management subjects. On the whole, graduates were also positive in their assessment of skills and knowledge transfer. For example,

“It involves using different risk analysis techniques that we learned at university. [...] When we were at uni, we learned for the health and safety side of it all about fire safety, all the bits about health and hygiene. All about managing health and safety risks and a lot of that’s quite practical, with different regulations like the Health and Safety at Work Act and I use that in my every day job. I think that probably one of the best things was that they sort of geared you up for those sorts of things, it wasn’t just theory, theory, theory, they were quite practical with some of the things that you did” [HS248]

Although graduates were generally positive about transfer, several also emphasised that their degree had provided them with basic knowledge and that postgraduate work experience was crucial to learn how to do their job. This feeling was evident across occupational context. For example a Risk manager working in a London borough noted,

“Risk management [degree] gives you a base level of understanding of what risk management is and how it works. But it’s only through actually getting out and getting into a job that you actually gain knowledge and practical experience of

managing risk.[...] I think the degree is perhaps the foot in the door but it's not until you actually get into the organisation and gain experience so that you can help them manage the risks. A lot of stuff from uni was about why you should have a business continuity plan, the benefits of having one but I don't think they ever actually showed us what one looked like!" [RM411]

In line with the evidence presented from graduates with occupationally-targeted degrees, and despite the best efforts of educators, graduates in this occupation are provided with specific occupational knowledge. Nevertheless in order to perform, they also need work experience. As with the Surveyor group, it appears that they leave university with the tools to be “work ready” but have to learn to put their knowledge into practice. It may also be that some graduates are more adept at contextualising their degree knowledge than others.

In summary, the evidence from Risk managers demonstrates some of the core credentialist arguments against locating initial training within universities that returns to the wider relationship between education and work. Credentialist writers might interpret evidence that work experience is required as being indicative that qualifications are an artificial device. Berg's line, for example, would be that Risk management could be adequately performed by non-graduates, with sufficient training (Berg 1971).

Nevertheless, Risk managers do appear to use their degree education in the jobs that they are in. Whilst these graduates are provided with the tools to conduct risk management, ultimately these will be applied according to the employment context. It may therefore be appropriate to interpret the relationship between education and work in terms of closure. When the interests of educators, professional associations, employers and graduates are considered, it becomes apparent that a relationship has been developed based on relevant knowledge and skills which appears to advantage all actors within this particular pathway. Close links have been established with several professional bodies, all of whom have accredited this degree. Whether by accident or design, the professional project in Risk management has coincided with an increase in demand for these graduates, driven by external and internal governance regimes in all sectors of work. The emergence of a “niche” degree has benefitted the professional project but this has been dependent on the willingness of

a particular higher education institution to accommodate and accept the influence of employers and professional associations. Nevertheless, because professional knowledge for this group is intimately associated with the context in which they work, and the knowledge base is accessible to other groups, it is doubtful whether the degree will become the only way to access this occupation.

7.7 Utilisation of graduates in the labour market

This chapter set out to explore utilisation of graduates at the interface between education and work. It has revealed some interesting differences between and amongst the occupations studied which have theoretical and methodological implications for research on graduate employment. The findings indicate that, as graduate numbers increase, closure may be increasingly oriented towards relevant degrees. This trend is despite access requirements and may suggest that labour market segmentation is a result of increasing numbers of graduates. Expansion in higher education has facilitated closure strategies by creating and developing new degrees. Yet when transfer of knowledge and skills is examined, it appears that there are some complications in interpreting closure. Transfer of knowledge, in particular, demonstrates that despite the best efforts of educators, higher education may not necessarily be able to impart relevant practitioner knowledge. The reason may be because of tensions in identifying what graduates need to know and the separation of academic and practitioner knowledge. However the major barrier to substitution of training for degrees is also connected to context of employment. Employers may assume that graduates with relevant degrees do not require training and graduates may not wish to disavow them of this belief.

The evidence in this chapter shows a clear distinction between what graduates need to get the job and what they need to do the job. This suggests examining the tension between required and acquired skills and knowledge may be inadequate to explain the workings of the GLM. More specifically, there is evidence that computer-literacy, analytical and communication skills are primary in demand for graduates. It is also noted that the confidence-boosting effects of merely attending university

cannot be underestimated and this seemed to cut across occupations. For accountancy graduates, confidence came with knowing the jargon, for other occupations it appears that the possession of a degree confers status, certainly in terms of how graduates feel about themselves and in how they relate to colleagues.

Furthermore the evidence suggests that graduatisation cannot necessarily be attributed to any single mechanism. Whilst professionalization via higher education appears to be dominant in aspiring and emerging professions, established professions are also making use of the expansion in higher education. This strategy may consolidate professional status or viewed as a of shift responsibility for initial education onto higher education. In any event, it represents retrospective graduatisation in terms of professional status. For aspiring and emergent professions, there are indications that a professional model is being adapted. Consequently the utilisation of graduates establishes jurisdictional boundaries in Risk management and Environmental health. Moreover, whilst all of these occupations might be recently graduatised, they do not necessarily represent new forms of knowledge.

The use of occupational case studies also raises some interesting points in relation to differences within occupations. These relate both to graduates' perceptions towards transfer of knowledge and skills and to material differences according to the supplying degree. Both raise questions on the interpretation of skills and knowledge and educational mismatches. Firstly, it appears that self-report of skills and knowledge transfer may be related to what graduates perceive as relevant knowledge. This was particularly evident with trainee accountants where graduates with partially-relevant degrees were more positive about transfer than Accountancy graduates. Consequently graduates who have pursued their degrees as part of a career strategy may assess transfer from that perspective and subsequently report "useless" knowledge. Secondly, without data on particular pathways, it is difficult to draw conclusions on the level of education required to perform. For example, it could be argued that the Sports scientists would be categorised as over-educated whereas Sport in the community graduates matched as Active-schools co-ordinators. Finally, the apparently matched Building surveyors reported that in certain contexts,

only a proportion of degree knowledge was transferred. The next chapter develops the core objective of graduate utilisation by looking more closely at work content, training and career progression.

CHAPTER EIGHT: GRADUATE WORK, CONTENT AND CONTEXT

8.1 Introduction

The findings presented in the previous chapter on pathways between education and work began to explore utilisation of graduates but left some questions unanswered. It suggested that there is a differentiated relationship between occupational and educational knowledge, not always related to position in the occupational hierarchy. There are clear indications of transfer in occupations placed in the Associate professional category of the SOC. In other words, transfer of knowledge and skills is a partial measure of job quality in graduate employment. This chapter develops analysis by examining features of graduate work and employment more generally. Strictly speaking, a labour process analysis would focus on task range (Littler 1982). However findings in the previous chapters coupled with the comparative nature of this study suggest a wider perspective. Review of literatures on the professions proposed that traditional professions are ideal-type graduate jobs and the professional category of the SOC is definitively graduate. Therefore distinctive features of professional work such as further occupational training and career progression will be explored.

The chapter is structured according to these themes. A comparison of tasks was begun in the previous chapter in terms of transfer and will be revisited here in relation to discretion over work. The previous chapter revealed that context of employment was an influencing factor on transfer of knowledge and differences emerged within the same occupation. The first section of this chapter will therefore make some general observations on the impact of context on work content for occupations in the study.

8.2 Context of employment

Context of employment was found in the previous chapter to have an effect on the extent to which knowledge was transferred, particularly in the Surveyor and Risk

manager groups. The size and type of employing organisation appear to be significant and these will be examined in turn. In general, size is more relevant in relation to breadth of tasks and specialisation in work and applicable to Accountants, Environmental health officers and Active-schools co-ordinators. The type of organisation affects the range of tasks undertaken and is apparent in Surveying and Risk management.

To an extent it is unsurprising that the size of employing organisation affects the work that graduates do. In general terms, the larger the organisation, the more specialised job content becomes, supported in the data. For example, trainee Accountants in professional firms work in the Audit department. In large firms, the Audit department is sub-divided by sector so that, for example, Financial sector audit deals with banks, building societies and other financial organisations. Larger branches of professional firms tend to service large companies. There is some flexibility within the structure so that clients are serviced according to geographical location and the size of the branch office, irrespective of branch size. In general, graduates in small and medium-sized firms service small and medium sized clients and task range is therefore broader. More specifically trainees in smaller firms also undertake accounts preparation alongside their audit work, albeit with smaller sized clients. Nevertheless, the audit process remains the same for all graduates.

Similarly, breadth of tasks and specialisation affect Environmental health officers who are employed in local authorities. In larger local authorities, Environmental health departments are structured according to specialism so, for example, in Edinburgh there are seven specialised areas and trainees are attached to one of these. Smaller authorities, by contrast, have perhaps two broad areas. As one graduate commented, *“in (small LA) you have got two distinctions and the one that I am in would be Food Hygiene, Health and Safety and Government Licensing. The other department is Pollution, Housing and Public Health” [ENV531]*

Active-schools co-ordinators who are part of the Active Schools Network, a Scottish Government initiative rolled out in 2004 (Scottish Executive 2004), are also directly affected by the size of the local authority in which they are based. Within the employing local authority, each Co-ordinator is responsible for a cluster of primary

schools supplying a secondary school. The number of schools in each cluster varies across according to the size of the local authority and the way in which the Active-schools initiative¹ has been locally interpreted. For example,

“Although the SportsScotland manual is very explicit, each local authority interprets it in a different way. I suppose because if you are in a rural authority, the schools are maybe 20 miles apart and that is different from city authorities”. [SP022]

Some rural authorities, for example, might have a secondary school with 105 pupils with ten feeder primary schools and the Co-ordinator is responsible for two clusters of primary schools. In urban authorities with large primary schools, there may only be three schools in each cluster. As one graduate stated,

“there are some people with three or four schools and it goes up to nine or ten so sometimes you feel that you can’t really give them all as much as you would like. But with ten schools you are really just giving wee taster sessions” [SP699]

The work of Co-ordinators involves the implementation of a whole school approach to promoting the physical, social, spiritual, mental and emotional well-being of all school age children in Scotland. More specifically, the creation of the Active-schools co-ordinator² role demonstrates the application of public policy in health, social welfare and education without any long-term commitment to the occupation. As previously noted, the programme was devised by SportsScotland, the national agency for sport, in partnership with local authorities and the Scottish government. Control over the content of the programme, and recruitment, is retained by SportsScotland but co-ordinators are placed in local authorities, and managed by Active-schools managers, also funded by the programme. The partnership approach causes some confusion amongst co-ordinators about who they actually work for. For example,

¹ The Active Schools initiative is set out in great detail in a Resource Pack that outlines strategy, partnership working, management including sample advertisements, job profiles, induction arrangements, planning and implementation of the initiative, monitoring and evaluation process and administration, support and training provision.

² There are two Active Schools jobs: Primary and Secondary. The latter is part-time and usually incorporated within an existing teacher position. For the purposes of this case study where all ASCs were involved in Primary schools, the generic term ASC is used.

“It is quite confusing at times – generally any kind of work issues will be dealt with by our boss (Active-schools manager) or by the Council. The only real problem was recently when we had a job evaluation and our pay was being evaluated but there was an argument with us because Sportscotland pay our wages so why should they be up for evaluation by the Council?” [SP699]

The effects of employing organisation’s size, it appears, are twofold. Firstly size creates differences in the breadth of tasks. In general terms, the larger the employing organisation, the more specialised each worker’s area of expertise. Yet the nature of work essentially remains the same. Even though Accountants in smaller organisations prepare as well as audit accounts, this does not mean that employees in large firms cannot prepare accounts, rather they are not required to. Similarly Environmental health officers have knowledge of all seven of the areas within Environmental health but in practice those employed in large local authorities, will gain experience in one or two areas. Secondly, size affects the type of clients, a distinguishing and relevant factor in professional work more generally, although not necessarily in the same way across occupations. For example, Accountants in large firms typically service large clients and are likely to encounter more complex audits than their peers in smaller organisations. Small accountancy firms simply do not have the resources to audit the accounts of large organisations.

For Active-schools co-ordinators, the client group is defined by the number of schools in each cluster which in turn affects the service that they can give to each school. In rural authorities schools are more widespread, decreasing face-to-face time co-ordinators spend in each school. This feature of work also occurs in urban authorities who may have fewer co-ordinators to service the number of children in each school. Finally, the client group for Environmental health officers is dependent on the type and size of businesses in the area. Typically there will be a mix of large and small clients in each, reflected in the structure of the local authority Environmental health department.

It was noted in the previous chapter that organisation type has an impact on transfer of knowledge and skills. Context in this sense affects the range of tasks undertaken and appears to connect work to a specific type of business environment. Building surveyors, for example, are employed either in private practice, in construction firms or in local authorities. Context of employment alters the client group and the type of tasks undertaken. In private practice, for example,

“Being in private practice is different from housing builders in that we’re working for private clients, for companies who are looking to move, or for pension funds that own buildings and we’re refurbishing them to attract new tenants, or when a lease expires for a company, we’re involved in dilapidations to look at lease obligations” [BS157]

Surveyors who are employed in construction companies, either in housing or commercial construction, tended to discuss their role in terms of specific projects. For example, *“we’ve just won a £12 million pound job in [...] and I am going to be doing that myself” [BS137]*. Within bigger projects, there will obviously be more surveyors and each is allocated a “package” of trades to oversee within the whole project. In general terms, the core business of the employing organisation dictates the type of specialist knowledge that surveyors use, split according to new build or refurbishment projects.

In common with other management functions, the work of Risk managers is influenced by the context within which the employing organisation operates. Whilst the core processes within work are connected to the function, application is related to sector and type of business. In general terms Risk management can be integral to the business and provided in, for example, insurance companies. Alternatively the management of risk is peripheral to the core business and associated with compliance. Risk managers in the public sector, for example, formalise the process of risk management in order to comply with regulatory procedures and legislation. Their role is to predict trends arising from internal and external threats and opportunities. The core business of the employing organisation determines how central the risk management function is to activities and whether the function adopts a compliance or proactive role. Differences also emerge in terms of the client group. Where Risk management is central to the business, work is organised around

the client base. In financial institutions, in order to carry out the role, the specialist risk function is accompanied by in-depth knowledge of a particular business function. The internal consultant role is also evident in the public sector but perhaps more disconnected to the core services provided by the local authority. In the public sector, for example, a Risk manager commented,

“I am generally helping other services identify and manage their risks. Our employer is a local authority, so we’ve got a lot of different services and there are a lot of risks within those services. So there’s training members of staff who are exposed to the risks, so they can identify them. It’s really about designing and developing a framework and this kind of constant maintenance of that framework that is my day-to-day job. I don’t have enough knowledge to go into the Adult Services and say to them what their risks are but what I do is provide them with a framework for identifying their own risks.” [RM411]

The heightened profile of managing risk, driven by corporate governance means that the body of knowledge, and jurisdiction, becomes closely connected to the context of employment. Consequently, risk assessment procedures in a financial institution might have different implications for the business to those in a local authority. Whilst there are similarities in the work content of Risk managers, largely due to the fact that they are employed to administer and assess risk, context of employment and the importance placed on the function means that work content is either embedded in a business function or a separate function.

The foregoing indicates that boundaries between organisational and occupational control are less clear cut than is often assumed (Ackroyd and Muzio 2007). Blurring of boundaries may be an outcome of utilisation of graduates as part of a professionalising strategy. Examining the context of employment reveals that graduates in this study enter the labour market with a body of knowledge which is connected to the occupation. Thereafter the size and type of employing organisation shapes work content and the extent to which degree knowledge is applied. It appears to transcend boundaries imposed by stage of professionalization. For example, the impact of size of the employing organisation means that specialisation occurs earlier in large organisations. The type of employer has a marked effect in Risk manager and Surveying groups so that both have to learn to apply knowledge according to the core business of their employer. This evidence perhaps explains

differences in perceptions of knowledge and skills transfer and provides a more nuanced account than merely evaluating transfer across the whole graduate population.

8.3 Task complexity and discretion

Although tasks have been discussed in previous sections, related to appropriate themes, this section examines work content and discretion over work more closely. In general terms the tasks undertaken by each occupation are set out as follows (adapted from SOC2000).

8.3.1 The work content of graduate jobs

Accountants

Chartered accountants provide accounting and auditing services and advise clients on financial matters. Chartered accountants:

- Plans and oversees implementation of accountancy system and policies
- Prepares financial documents and reports for management, shareholders, statutory or other bodies
- Prepares tax returns, advises on tax problems and contests disputed claims before tax officials
- Conducts financial investigations concerning insolvency, fraud, possible merger etc

Management Consultants - (Risk Managers)

Workers in this unit group advise industrial, commercial and other establishments on a variety of management, personnel, computing and technical matters, and apply theoretical principles and practical techniques to analyse and interpret data used to assist in the formulation of financial, business and economic policies. Risk managers:

- Assess the functions, objectives and requirements of the employer seeking advice.
- Identifies problems concerned with strategy, policy, markets, organisation, computing facilities, procedures and methods.

- Determines the appropriate method of data collection and research methodology and analyses and interprets information gained and formulates recommendations.
- Advises organisation and internal clients in light of research findings
- Addresses seminars to present results of research activity or to express professional views.

Chartered surveyors

Chartered surveyors conduct surveys related to the measurement, management, valuation and development of land, natural resources, buildings, other types of property, and infrastructures such as harbours, roads and railway lines. Chartered surveyors,

- Surveys, measures and describes land surfaces to establish property boundaries and to aid with construction or cartographic work
- Surveys mines, prepares drawings of surfaces, hazards and other features to control the extent and direction of mining
- Surveys buildings to determine necessary alterations and repairs

Sports and fitness occupations combined with aspects of sports coaches, instructors and officials – Active-schools co-ordinators

Workers in this unit group instruct and supervise clients in a variety of recreational activities such as climbing, canoeing and mountaineering. Sports coaches, instructors and officials work to enhance performance, encourage greater participation in sport, and organise and officiate sporting events according to established rules. Sports and fitness occupations,

- devises programmes of activities to suit the needs of clients with varying levels of strength, fitness and ability
- understands different forms of recreational activity and ensures that any statutory requirements are met
- monitors and analyses technique and performance, and determines how future improvements can be made

- deals with administrative aspects such as arranging matches, contests or appearances for athlete or team, and organising required transport and accommodation
- provides information and develops facilities to encourage greater participation in sport, and to enhance the standards of participants;

Environmental health officers

Environmental health officers undertake inspections and investigations to verify and ensure compliance with government acts, orders and regulations relating to environmental hygiene and the general health of the public. Environmental health officers,

- inspects and investigates housing and working conditions, conditions under which food, drink and drugs are manufactured and stored, atmospheric pollution, drainage, sewage and refuse disposal, noise levels, etc. to ensure compliance with government regulations
- makes visits and inspections in accordance with a planned programme or in response to complaints
- Advises on ways of rectifying conditions that contravene regulations
- prepares reports and recommendations on all inspections made
- recommends legal action in cases of persistent contravention of regulations

As noted previously, categorising the occupations in this study presented some problems, particularly for Active-schools co-ordinators and Risk managers as newly-formed occupations. It should also be noted that graduates are between two-and-a-half and three-and-a-half years post graduation and are therefore in the early stages of their career. Time to become proficient is an indicator of job complexity (Felstead et al 2007) and the influence of relevant degrees, it is proposed, may have an impact on this feature of work. The data shows that of all the occupations in the study, Chartered accountancy the only one where job-holders, at this stage, do not carry out the full range of tasks associated with the profession. Nevertheless, and despite data on incomplete knowledge transfer, it appears that degree education and any subsequent work experience have enabled graduates to perform the full range of tasks required in the other four occupations. It is difficult, however, to ascertain whether this finding indicates appropriate matching or inappropriate education for

the occupation. Given that Accountancy assumes no prior knowledge, it could be argued that it takes more time to become proficient precisely because graduates are given low-level tasks such as reconciling bank statements during their first year of training. By contrast, employers in the other occupations expect more of graduates on entry. This point will be revisited in revisited in the section on further training.

There is little congruity across occupations in terms of the tasks undertaken by graduates, apart from providing a service to internal and external clients. Whilst comparisons on connections between education and work can be conducted within and across occupations, in order to compare task level and complexity, discretion over work is used as an appropriate measure. A major factor in analysing graduate employment more generally is the extent to which graduates have control over work content and the way in which tasks are carried out. Moreover, critics of the expansion of higher education introduce the notion that a new feature of graduate employment is reflected in employer demand for “work-ready” graduates (Keep and Mayhew 2004). Whilst it has been suggested that transfer of knowledge may be incomplete without work experience, it is as yet unclear the extent to which graduatisation means that graduates have discretion over tasks in early careers: “within work” discretion. However, exploring work-readiness also requires consideration of the nature of work across graduate occupations: the relative dimension of discretion. Work-readiness may, in some circumstances, indicate reduced complexity in graduate work. The key question is not what discretion graduates have, rather what do they have discretion over? Within this task control issue, is also the question of how, and why, (graduate) work is monitored.

The findings in this section present a mixed picture, largely unrelated to SOC categories. Within work discretion is highest for Active-schools co-ordinators who are in control what they do on a day to day basis. Key responsibilities include managing and implementing the Active Schools initiative and leading the recruitment and ongoing training of coaches, leaders and volunteers. In practice, this means that co-ordinators are responsible for playground activities at break and lunchtimes and after-school clubs. They also design holiday activity programmes

and sports “festivals”. The emphasis on activity rather than sport is important: co-ordinators are also tasked with targeting vulnerable and disadvantaged sections of the community. In addition, part of the philosophy of Active Schools requires co-ordinators to become involved in healthy eating initiatives. Overall co-ordinators are afforded a high degree of task discretion within this remit. Typically they reported, *“you are pretty much left to your own devices so if you wanted to, I am sure you could sit here for a couple of hours a day and not do anything and just kind of cruise through”* [SP050].

Nevertheless, there is extensive monitoring of work output which is fed back to Sportscotland and causes some concern for co-ordinators. For example,

“Sportscotland want “bums on seats” and they are very quantitative but my managers want the qualitative feedback as well – it doesn’t go to Sportscotland, we keep a record of it to see if it is worthwhile” [SP050] and *“it [the monitoring] is quite thorough but what it doesn’t account for is that the same ten kids are playing netball, going to athletics and doing all the after school activities”* [SP541]

Because the occupation is at an early stage in its development, monitoring and evaluation of the activities undertaken by co-ordinators is extensive and places a heavy administrative burden on co-ordinators so that *“we have to produce reports for our local authority as well to show that we are trying to meet the local authority’s targets, as well as Sportscotland’s”* [SP496]

Monitoring and evaluation is also affected by the number of schools in the Co-ordinator’s cluster so that those with ten schools appear to spend more time reporting participation in activities than they do in stimulating new activities. In addition, the quotes above demonstrate that appropriate evaluation is perceived by Sportscotland in quantitative terms. By contrast, Co-ordinators and their managers are more concerned with qualitative measures such as trying to target “problem children”. If quantitative measures are employed, then it could be argued that monitoring fails to deliver the fundamental objectives of the programme which may be a result of managerialist attitudes in the public sector. However it may also work to the advantage of Co-ordinators so that if they can establish an impact quantitatively, they will be allowed to pursue the qualitative element of their jobs. The tension in

monitoring featured in the Evaluation Report of the Active-schools programme (Kay et al 2008). Sportscotland's response to this concern is as follows,

We do recognise that a breadth of work is not included within these evaluation forms, and that those efforts are not collated at a national level. While we appreciate that this work is critical, sportscotland's focus for monitoring has been on measuring outcomes. It is important that co-ordinators understand how their day-to-day activities impact on these outcomes in order to maximise the effectiveness of their training and other activities. (Kay et al 2008:43)

It seems ironic that an initiative designed to improve the quality of life for schoolchildren is being measured in this way. However, the evidence suggests that whilst Active-schools co-ordinators have discretion over their day-to-day activities, tasks are not particularly complex which in turn explains why some of these graduates do not report significant transference of knowledge between university and work. To an extent, it is not that sports graduates do not use their knowledge in work, rather that the nature of work is such that their degree knowledge is not required.

Surveyors also report a relatively high level of discretion over what they do on a daily basis. Tasks are driven by the nature of the project surveyors are involved in although support is available from managers. Building surveyors also have authority to call on expertise from other related professions which implies that judgement and discretion are integral to work. For example,

“Being a building surveyor is all about knowing your limits, you're competent in many fields but you're not an expert at anything, and you've got to know your limitations. If you go out and do a survey on a property that you're going to refurbish and find some significant cracking somewhere that you are concerned about, you think, I'm going to get a structural engineer involved to give me an expert opinion on what is causing that, has it stopped or is it continuing and what do I need to do to stop it. I always say it's a jack of all trades, expert at nothing.[...] I'm not going to pretend I am a quantity surveyor, I do quantity surveying roles and have those kind of responsibilities, but only a wee bit and I need to know where to draw the line, where it borders on what somebody more expert should be doing” [BS164]

This quote demonstrates that the surveying role is akin to consultancy and expertise is concerned with providing a service by liaising and managing projects along with

other professionals such as architects, design consultants and structural engineers. The quote seems to exemplify systems of professional expertise, outlined by Abbott (1988). Jurisdictional boundaries amongst professions involved in property and construction at times overlap and there is continual negotiation and co-operation within the confines of each distinct profession.

Given complexity in work and the sometimes enormous budgets dealt with by surveyors, it might be expected that the graduates in the sample are closely monitored. There were, however, mixed results on this proposition, dependent on the context of employment and on individual trust relations. In local authorities for example,

“we have a QA system that operates within our department that ensures that all our projects are managed in a certain way, to a certain standard and everything has to be signed off at all gateways. They’re always closely monitoring what you’re doing, there’s never a time where my boss wouldn’t know what I was doing within a project or what was happening. But on a day-to-day basis, I’m the project officer and what I decide generally goes” [BS164]

This quote indicates that the way in which work is organised impacts on how tasks are carried out and may indeed limit autonomy. If the building surveyor role is to project manage, then it appears that his supervisor’s role is to oversee how the project is being managed, which may only be a function of the hierarchical nature of local authorities.

By contrast, in construction companies in the private sector, monitoring of projects, and therefore surveyors’ work, is conducted on a regular basis by way of weekly and monthly meetings where targets, timescales and problems are discussed and resolved where necessary with senior colleagues. On a daily basis, however, it appears that early career surveyors are largely in control of decision-making and their superiors afford them a comparatively high level of autonomy. There is evidence that building surveying graduates are indeed “work-ready” within a relatively short time. Although surveyors are also in the professional category of the SOC, different degree requirements in surveying and accounting indicate that some professional forms of knowledge may be more amenable to codification than others. Surveying

education is perhaps designed to be practical rather than theoretical, in turn enabling a more complete product upon graduation than with Accountants.

Risk managers also report a high level of “within work” discretion. This finding may be a product of the relatively new status of Risk management and the specialist knowledge contained in the degree programme. In the public sector, the rise in demand for specialist risk managers has been driven by compliance with monitoring and accountability procedures set by central government (Hood and McGarvey 2002) For example,

“at the end of the day it’s down to me and my manager to decide exactly what we are going to be doing over the next year but we do get some influence from what is going on within the authority. For instance if there’s any large projects that they want a risk management resource attached to, we’ll make our time available to deal with that. We have got this thing called a Comprehensive Performance Assessment and it details exactly what we need to do as a local authority to ensure our business risks are managed.” [RM411]

Overall, Risk managers appear to be afforded a substantial degree of task discretion in their roles. As noted, the position of Risk management within an organisation is dependent on its centrality to the core business of the organisation and how the function is perceived. It could be argued that in local authorities, the function is imposed whereas in the financial sector, the value of risk management makes it integral to the core business which in turn affects tasks and the way they are carried out and perceived by other organisational members. Although the work of early career Risk managers is monitored by superiors, it is generally not checked or “signed off”. The majority of graduates mentioned that they had control over projects or a specific area and were themselves responsible for the day-to-day allocation of work and tasks. So, for example, the Risk manager in a large bank reported that she was often “called in” as an expert to attend policy and strategy meetings in the function she was attached to. In general support for Risk managers is available although accessed only when there is a specific problem. The evidence indicates that Risk managers are seen as experts in their field so that autonomy and discretion are related to specialist knowledge of risk management. Work is relatively complex and involves substantial decision-making and responsibility.

Unsurprisingly for the Accountants and Environmental health officers, during the training contract, work and tasks undertaken are extensively monitored. Environmental health officers “shadow” a qualified officer during training although immediately after qualifying they begin to carry out inspections on their own. Even after qualifying, reports are checked by managers, perhaps an indicator of the way work is organised in the public sector rather than complexity. However, there is a degree of responsibility attached to the work conducted so that enforcement powers are fairly extensive and non-compliance allows officers to shut down business operations. In terms of allocation of work, much of what Environmental health officers do is according to a programme of inspections as a regulatory requirement. Although no notice is given by law, inspections have to be carried out within specific time periods and dictate the day-to-day activities of officers. Within work, Environmental health officers have a dual role of advice and enforcement. In practice it appears that the majority of the officers’ time is spent conducting site visits and ensuring compliance with regulations, particularly in the food industry, extending to health and safety in all businesses in the local authority area. Yet they also provide a service to the public and deal with enquiries regarding noise pollution and waste disposal which have to be dealt with and reported in conjunction with the police and other local authority departments. As soon as they become qualified, and licensed to practice, Environmental health officers are expected to carry out inspections on their own. Support is available from other members of staff and newly qualified officers are not entirely left to their own devices. For example,

“for the section I’m in, it is just sort of a running assessment – your boss just keeps an eye on you. The job that I’m in [Public health] is quite old-fashioned, you are dealing with Acts of Parliament that could be 100 years old. [.....] When you are inspecting businesses, any report you bring back, any notice I have to serve has to be seen by a boss and they have to make sure that, legally you are allowed to do what you are saying you are going to do.” [ENV554]

Allocation and monitoring of work and tasks is heavily reliant on interpretation and compliance with legislation in a specific area of environmental health which perhaps explains the sub-division of local authority departments.

Trainee accountants experience the highest level of monitoring throughout their training contract although there is a gradual increase in responsibility and task discretion year on year. They are gradually given more complex areas of the audit to prepare as they progress although have little choice over which audits they become involved in. However continuity within the client/firm relationship is important for professional firms. The “ideal model” is for trainees to remain on the same audits throughout their contract where the previous year’s audit becomes the base from which they start. This method of allocating work also encourages a relationship to develop between the firm and client and is an important aspect of the service accounting firms offer. Firms compete on the basis of client relationships and continuity provides an advantage. As one trainee commented,

“once you have ongoing clients, on the bigger clients the managers will take responsibility for most of the client relationship but as you move through and get more experienced, there are a lot of jobs where you are essentially taking over in terms of arrangements for visits and following through before and after the audit. So it just builds up as you go along.” [ACC682]

In relation to tasks, it was noted that these vary according to the size of the employing organisation. The hierarchy in professional firms is also evident in the way in which trainees’ work is assessed and monitored although again varies according to the size of the organisation. Whilst it may at first appear that trainees have a degree of autonomy in the sense that they are out in client offices actually doing the audit work, at all stages their work is checked by managers. Figures and data are input to specialised software packages and sent back to the firm for analysis by senior managers. In addition a job review after each audit gives trainees feedback on their technical and interpersonal performance on the job. Although both Environmental health officers and trainee accountants have postgraduate training, the nature of work of is quite different. Accountants are involved in complex audits and require substantial levels of analytical and problem-solving skills, based on the body of knowledge acquired during training. The nature of work for Environmental health officers on the other hand, does not appear to require the same level of complexity in knowledge or analysis.

The evidence in this section shows differences amongst occupations in terms of autonomy and discretion. Active-schools co-ordinators may have discretion over what they do but the scope of their remit is restricted. In effect the nature of their work, although important in fulfilling a wish to make school children more active, is not a measurement criterion for the success of primary school education. Surveyors and Risk managers, in contrast, have a relatively high level of autonomy and discretion over complex areas of work fairly early in their careers. This evidence seems to support the idea of “work-readiness” as an emergent trend in demand for graduates. The specialist knowledge that graduates possess reinforces their autonomy within the employing organisation. Accountants and Environmental health officers are indicative of a traditional professional model, where autonomy and discretion is gradually assumed throughout the period of training, albeit that the required time to become proficient differs. It is perhaps no co-incidence that these two occupations incorporate a license to practice. To an extent the findings suggest that autonomy afforded to graduates is connected to accountability and the effects of making mistakes. The next section considers how opportunities for training impact on the work content of graduate jobs in order to develop understanding of work-readiness

8.4 Examining graduate work: further training and work-readiness

If it is assumed that traditional professions provide a model of the relationship between higher education and work, then postgraduate occupational training is an integral part of the model. For some professions such as medicine, training is in the form of monitored work experience. Other professions such as Accountants are required to pass examinations before they are licensed to practice their profession. The professional pathway accepts that graduates emerge from higher education equipped with general theoretical understanding and knowledge but require work experience in order to learn how to apply their knowledge. Yet this is done with the protection of a structured professional route. By contrast, work-readiness implies a reduction in training. If graduates are expected to be work-ready, outside traditional professions, the nature of higher education is altered and becomes the

only means of protected occupational training. This section explores these contrasting perspectives in order to evaluate the extent to which whether the traditional pathway is being superseded or circumvented by the use of connected degrees. In view of the fact that all these occupations are relatively recently graduated, albeit for different reasons, they are ideally suited to identify patterns in further training. Evaluating transfer of knowledge and skills identified that, irrespective of how close the links between education and work are, work experience is vital for performance. It was also suggested that work experience may in reality be a substitute for training.

Perhaps the major influencing factor on patterns of further training is the impact of professional qualifications which may be stipulated as a condition of employment or undertaken as an optional extra that graduates can pursue to enhance their qualification profile. Environmental health officers and Accountants are both initially employed on a training contract. Formal training, provided and controlled by the professional association, standardises professional expertise irrespective of the employing organisation and subsequent specialisation. In effect, it is typical of occupational control over work which in turn offers guidance on, and monitoring of, ethical and professional behaviour. In addition to professional training, Accountants are also provided with substantial organisation-specific training within their employing organisation. As one graduate commented, “*they teach us how [employing organisation] does things.*” [ACC203]. Training courses cover a broad range of skills including teamworking, report-writing and firm-specific accounting procedures. Some courses are enforced for all trainees and others accessed by mutual consent of trainee and manager. The extensive training programme for Accountants reinforces the claim that, for these graduates, a degree is no more than a “ticket for entry”. Both Accountants and Environmental health officers report that the knowledge they use on a day-to-day basis is as a result of the postgraduate training they have received.

In terms of the other occupations, Building surveyors are generally employed on the condition that they will complete their two year logbook of work experience and be admitted to the profession. Typically they reported,

“I’m doing the RICS because my job description says that is what I have to do. It’s for personal development as well because it is a good accreditation to have and it demonstrates your professional competence to the private sector. So if I wanted to move out of here, it would really benefit me to have that.” [BS164]

Despite the instrumental attitude of professional membership as a career advantage, there was a feeling that charteredship is an artificial qualification, and another hurdle for graduates to cross. For example, a Building surveyor in construction noted,

“a lot of people have mixed views about charteredship because what does it really do once you have got it? It only gives you the charteredship, and a lot of guys say, well I’m, paying out £500 per year out of my own pocket for what? To carry a title. But an employer will see you are chartered and that’ll be one of the things that if you’re to go for a job they’d expect you to be chartered.” [BS137]

This quote demonstrates a distinction between professional membership as a requirement or choice in different occupational contexts. Where professional membership is required for a license to practice, it is accepted unquestioningly by graduates. In other occupations, notably, professional membership seems to represent typical credentialist arguments so that the benefits are seen in the labour market rather than in work itself. Building surveyors also have the option of joining the Chartered Institute of Builders and where RICS membership was not stipulated as a condition of employment, some interviewees, particularly those in construction companies noted that this was an easier and more relevant route to becoming chartered. One graduate stated,

“I’m an ICIOB which is an incorporated member but it’s slightly easier to become a member of the CIOB but they realise.... for the older guys and generation, there is exams required but because I’ve done a degree I’ve got an exemption to go for interviews and I basically just talk about what I do in the industry which I think is a fairer way of doing it” [BS105]

Surprisingly the Building surveyors did not report any firm specific training, other than general induction and health and safety training. However a number were undertaking or considering further university qualifications which, it could be argued, is a form of self-directed training. Qualifications undertaken were unsurprisingly vocationally-oriented, for example, MBA, Masters in Law and Construction Management. All were undertaking or considering further

qualifications with the knowledge and support of employing organisations and the reasons given were uniformly said to be career advancement. It appears, from this evidence, that although the Building surveying degree may have prepared graduates for a career in surveying, in order to advance they require skills and knowledge that are lacking in the degree and perhaps those that are available to Accountants during their training contract. In effect Building surveyors have to externalise their training by acquiring further qualifications, particularly because the next career stage may involve managing which their degree does not prepare them for.

Risk managers also noted the importance of joining the professional body, although the Institute of Risk Management is not Chartered. Other associated bodies are the Chartered Institute of Insurers and the Chartered Institute of Occupational Safety and Health. According to a Risk manager in health and safety, joining the CIOOSH is a protracted process,

“I’m now doing a postgraduate diploma in safety risk management to go on the road to be Chartered IOSH. There are other avenues that you can go through to enter it and the bars change every year, it used to be if you had five years experience you could become chartered but now you have to have qualifications and then do CPD.” [HS044]

Significantly membership of IOSH is moving towards qualifications-based entry, aided by the availability of specialised post-graduate degrees in this case. If this is a trend, then it could be argued that universities are also assuming the training role of professional associations. Furthermore, this role is adopted with the consent of professional associations who then assume responsibility for overseeing and accrediting courses and reduce their own overheads in terms of training provision. All Risk managers in the financial and public sectors had applied for, or achieved membership of the IRM which is unsurprising given that the connected degree automatically confers graduate membership. This evidence is another indicator that professionalising occupations may use relevantly qualified graduates to reinforce a jurisdiction and consolidate professional identity.

Professionalization via degree qualifications also means that existing professional members understand that possession of a degree becomes necessary or advantageous

in the labour market. Within this sample, there are three mature graduates who already had professional membership but who also recognised that without a degree, their prospects for career advancement were limited, adding weight to the credentialist view of qualifications. Whilst these mature professional members might have been capable of advancement, all-graduate entry in, for example, health and safety management jobs means that they will be rejected on application. Professional membership via the traditional work experience route is therefore not sufficient to re-enter a labour market increasingly governed by qualifications. For younger graduates, gaining professional membership is seen as the next stage in career development, either because the profession demands membership in order to practice, or because they are inculcated into a culture of acquiring qualifications. Consequently professionalization strengthens utilisation of graduates that in turn boosts graduate numbers.

It has already been noted that Active-schools co-ordinators is recently formed and although the occupation is graduate, in contrast to other occupations, does not have an associated professional body. This raises questions for defining graduate jobs by means of professional status. At entry, Co-ordinators complete a four-week induction programme where they meet key partners in the local authority and attend training courses. According to Sportscotland's Manual, areas where training may be required are Coaching and Leadership, Inclusion, Physical Activities, Sports Development, Volunteer Managers Start Up, and Volunteer Managers Continuing Professional Development. This evidence explains why Sports graduates are preferred in this occupation: many of these areas are covered in the Sport in the community degree. Co-ordinators reported mixed experiences of training. For example,

“We had a two week initiation which was mainly a case of teambuilding – we had a lot of things to read and bits of information but, to be honest, it was more to do with the council and what was going on here. There wasn't a lot of learning from previous people, it was just a case of finding out what we might be doing.” [SP699]

Because graduates in this occupation work within local authorities, occupational training is confined to sports' governing body awards and specific schemes geared towards implementation of the Active-schools initiative. The validity and

applicability of some of these courses is treated with some derision by the Sports graduates. For example, *“I found it hilarious that two weeks ago, we were doing skipping training – we spent a whole morning skipping and doing jump rope. Sometimes people from the outside look in and think we are “at it” a little bit”* [SP050]

This quote demonstrates a disconnection between the level of knowledge that the Sports graduates possess and that required in the occupation. These graduates may feel that they are “at it” but the training was provided for Active-schools co-ordinators. In general, Co-ordinators were fairly scathing about their training, reporting that they often knew much more than the trainers.

In assessing levels of further training, there are some differences across occupations. Formal training ranges from an intensive and prolonged training programme in the case of Accountants to “ad-hoc” and largely irrelevant programmes for the Active-schools co-ordinators. There are however, several points to note with reference to training. Firstly, training may be undertaken as a condition of employment rather than to address a skills or knowledge deficit. In general terms, training is connected to the nature of work and legal protection of activities for Accountants and Environmental health officers. Charteredship is sometimes, but not always, a condition of employment for Surveyors, dependent on context of employment so that in the construction industry, gaining chartered membership of the RICS is generally by choice. Risk managers also seek professional membership by choice and generally see it as enhancing their attractiveness to employers. Secondly, the nature of training can be sub-divided into occupational and firm-specific training. Whilst graduates in all occupations have undergone some induction training, only Accountants and Environmental health officers are provided with protected and substantial occupational training. Thirdly, evidence suggests that graduates have undertaken or are considering further degree qualifications, with the support of their employers. This was particularly evident in the Surveyor and Risk manager groups, and to a lesser extent with Active-schools co-ordinators. This evidence may represent the disadvantage of specific degree education so that the knowledge provided in the degree may allow access to a particular occupation but more general

opportunities are correspondingly limited. Interestingly Surveyors and Risk managers were generally pursuing further qualifications to progress within their organisation and Active-schools co-ordinators were generally looking to exit the occupation altogether, a point which will be revisited in the next section.

Finally, the influence of work experience as a form of training cannot be understated. Irrespective of links between occupation and education, few graduates reported that they were “work-ready” when they left higher education. Yet employers seem to expect that they are. More generally, it could then be inferred from the evidence that the “ideal type” professional pathway exists only for Accountants and to a lesser extent Environmental health officers. Differences in the means by which professional membership is achieved indicates that, outside of licensed professions, pathways are largely connected to individual status-enhancement and career advancement. In such cases, chartered status, or professional membership, does not signal exclusion for non-members of the profession, rather it verifies a standard of competence and adherence to professional ethics (Konzelmann et al 2007). In emerging and aspirant professions, it is in the interests of professional associations to encourage membership of the body both to consolidate the jurisdiction and reinforce occupational identity. Moreover if universities are prepared to provide targeted degrees, then the burden of professional education is reduced to accreditation rather than provision. In general terms, evidence indicates that in occupations where formal training is not provided, responsibility for gaining practitioner experience is devolved to graduates who may have to “job-hop” and acquire more qualifications during early careers.

8.5 Career paths for graduates: upwards, sideways or “dead men’s shoes”

This final section of the findings on work content and context in graduate jobs assesses opportunities for career progression. The notion of career is central to professional work and generally signals an orderly sequence of development involving progressively more responsible roles. Indeed, Abbott (1988) notes that the central idea of career is remaining within a single occupation throughout working

life. Career progression is also used as a method of distinguishing degrees of professionalization (Freidson 2001). In established professions, the postgraduate training period is followed by opportunities to specialise and progress throughout a prescribed hierarchy within the profession. It follows a regular pattern and advancement is based on demonstrable criteria of achievement. Associate professions, however, become proficient in a shorter time, whether or not they are required to have a degree, and the associated career progression may have fewer stages and the ceiling reached more quickly. Generally speaking, progression in traditional professions reaches a level where opportunities are narrowed to assuming management roles within the occupation. Both types of career patterns are under the control of the profession and may or may not require further qualifications and training. Typically, the area of expertise in professions is transferable and independent of the context of employment.

By contrast, where employment is under organisational control, opportunities for career progression are more permeable and controlled by managers within the organisation, rather than occupational members. (Freidson 2001). Organisational hierarchies are defined by position rather than person. In theory, career advancement can be within the organisation, or across organisations. Bureaucratic labour markets are organised both hierarchically and functionally. The former implies job ladders whereby an entrant to the firm can achieve promotion and the latter refers to different kinds of work involving separate job ladders. Each job ladder has its own entry level and its own ceiling (Freidson 2001).

Within the knowledge economy literature, traditional career lines are said to be dissolving in favour of the “new” career. According to King (2003:5), the new career “is said to consist of a greater frequency of lateral moves and employer changes” and as a result, employees need to focus on employability as a source of security and take responsibility for managing their own careers. Barley and Kunda (2004) note that with knowledge work, continual upgrading of knowledge is required. They note that employability is related to creating networks with potential employers and employment agencies in order to increase marketability.

With reference to the present study, it has been noted that type of degree determines which occupations or professions graduates are qualified to enter. Ports of entry are however placed at different levels in the occupational hierarchy. It was also suggested that demand for graduates may be shifting towards relevant degrees. Moreover, the distinction between occupational and bureaucratic control may be blurred by restricted ports of entry, as more occupations rely on a professional model. Although graduates in these occupations are at an early career stage, examination of perspectives on their potential career progression may also shed light on the validity of distinctions between bureaucratic and occupational control. If bureaucratic control is being replaced by the “boundaryless career” (Burton-Jones 1999), then fewer structured career plans might be expected and there would be evidence of self-managed careers. Although much of the data from graduates at an early career stage will be speculative, it is instructive in terms of potential change in graduate employment. This section will explore such questions, whilst also considering how graduates perceive career opportunities in their respective occupations.

Discussion begins with Active-schools co-ordinators, who are the least secure of all occupations, both in present conditions of employment and in progression. All Co-ordinators communicated that insecure employment contracts are a major concern, given that they are employed on fixed-term contracts ranging from one to three years with no guarantee of renewal after 2011. The reason for this, according to Sportscotland, is an expectation that local authorities will mainstream Co-ordinator posts after that date with a guarantee that if mainstreaming does not materialise, co-ordinators will be given an 18-month notice period. Job security is therefore a major pre-occupation for co-ordinators. For example, *“when I first came into post, I was told I had a three-year contract due to run out in March [2008] but we have been told that Sportscotland are giving us an extra year.” [SP496]*

In view of the recent formation of the occupation, it is perhaps understandable that Sportscotland have adopted this approach. However, insecurity also has an impact on graduates’ perception of career progression, a feature also noted by the evaluation of the Active-schools programme (Kay et al 2008). Several co-ordinators stated

that they were actively looking for another job or considering re-entering higher education. For example,

“I think a career plan is what’s missing from this job. I think everyone, well they don’t like to think about it but the fact is there are 500 people doing the same job and if the money was cut, they are all going to be going for the same few jobs” [SP699]

Realistically, the only opportunity for career advancement is for Co-ordinators to become managers. However this would fundamentally alter job content, a fact that was not lost on Co-ordinators. Indeed, none of the graduates showed any enthusiasm for this career path. The two options for graduates in this role, appear to be moving sideways or returning to university to acquire more qualifications. Typically,

“I don’t think I would enjoy management, because you are stuck in the office and not getting any practical work, you are not in touch with any of the schools or anything. But I would say PE teaching is a step sideways to go forwards because you obviously have to go back to being a student for a year and you are taking a big wage cut but then it builds up and there is much more scope after that.” [SP022]

In effect there is no career plan in place for Active-schools, and Co-ordinators are realistic about the future. Indeed, the evidence indicates that a “sideways” move is what most graduates perceive to be their next career stage, with or without more qualifications. “Sideways” is, however, a subjective term: if, for example graduates undertake further training to become teachers, they would then be categorised as professionals. Although funding for posts has been extended until 2011, employment remains precarious and Co-ordinators are clearly considering other options.

Regarding Environmental health officers, the role exhibits many features of a profession, including licensing and a postgraduate training contract. However it remains in the Associate Professional category of the SOC. According to the data, differences emerge in opportunities for career progression, dependent on size of employing organisation. In large local authorities for example,

“As soon as you get your year’s training out of the way and pass your exams you are a qualified officer. From there after a degree of experience you become a Senior

Environmental health officer, then Section Head, then from there you go to divisional officer and then manager, all the way up really. [ENV550].

By contrast, in small local authorities, the hierarchy has fewer levels. For example, “you are really limited as far as career goes because it is the old “dead man’s shoes” situation.” [ENV401]. Despite career barriers within local authorities, Environmental health officers are aware of other opportunities, largely in the private sector. These are within specialist areas of Environmental health. As one graduate noted,

“There are a lot of jobs in industry – they do tend to be in more specialist areas such as health and safety or air pollution. There are a number of organisations, a number of people who used to work here, who now work for, it tends to be bigger multinational that require an Environmental health officer within their organisation, just to look after health and safety, to look after the visiting officer from the local authority and as a general rule of thumb, when you go into private industry, the pay gets a lot better as well. [...] It is rare that that any job in industry would ask that you must be a practicing Environmental health officer, they usually look for someone who has a firm grounding in environmental health, so if you have got the environmental degree and a NEBOSH qualification then obviously you are going to be attractive. [ENV550]

In effect, opportunities in the private sector are concerned with ensuring compliance with legislation that the Environmental health officer enforces. Careers in this occupation are “bounded” by the initial job and whilst the quote above demonstrates that the degree qualification may be useful in the wider labour market, it is significant that he also mentioned professional qualifications. This evidence indicates tensions within careers and progression more generally. Whilst these graduates have achieved employment related to their degree education, they understand that future opportunities may be restricted. Graduates report that barriers to progression are offset by security of employment in the public sector and the quality of work/life balance, ultimately a matter of personal choice. Although the occupation is, on the face of it, said to be engaged in professionalization, in reality it appears that professionalisation has only caused changes at entry level. It has not altered work to any great extent and opportunities for progression are correspondingly limited.

Entry level for Risk managers is dependent on the specialist area of Risk, both in employment and to an extent on the employing organisation. Consequently some differences in career lines might be expected. Beginning with the Risk managers in health and safety, graduates see two distinct career lines, one within health and safety and the other into a broader Risk management role. It should be remembered that these graduates are employed in large organisations. Typically, career ladders are dependent on organisational structure.

“If I was going to move anywhere within the company, it would be within consulting. Down south they do a lot of risk management work as well, so if I decided that I wanted to do a broad risk management role, there are opportunities there to go back to that field but at the moment I want to stick with health and safety.” [RM044]

Although graduates are working within health and safety, they also appear to consider that there is opportunity for them to move into a Risk management role in other areas of the business. It has been noted that Risk management is a growth occupation which may affect graduates’ perceptions of labour market opportunities. The evidence reflects typical bureaucratic career patterns insofar as graduates do not see careers as necessarily limited to a particular function and general management roles are an option. The quote above demonstrates that the Risk management role is such that it allows jobholders to gain in-depth contextual knowledge of the business which is, in itself, valuable for future career paths.

Risk managers in the financial sector also perceived a variety of opportunities to progress. For example, within a large bank,

“I think there are thousands of risk roles within the group so you kind of have your pick and it really just depends what area you want to go into. Do you want to be business facing, do you want to be in a central analysis role, do you want to go into governance and policy setting areas for risk or go into businesses that deal with customers, financial actuarial money-type risk? You could change jobs here every two years and still be in a different area of risk.” [RM517]

This graduate clearly sees her career as being within the specialist area of risk, perhaps because of the large organisation that she works for and the variety of available internal opportunities. She noted that it was unlikely that she would be able to get a better job outside of the organisation where she is presently employed.

By contrast, in local authorities, Risk managers voiced restricted opportunities to progress,

“Well I would say that in my current position the only place that I could go up is into my manager’s job. But then once you get to that level, there’s nowhere really else to go within local authority risk management. The risk function is not large enough to be a senior member of staff. You can’t go on to be anything else.” [RM411]

Again context of employment is an influential factor for differentiating amongst graduates within an occupation. Whilst there is some evidence of typical bureaucratic progression up an organisational hierarchy, particularly in large organisations, in local authorities the career ladder is limited to “dead men’s shoes”. There is also evidence that graduates are reluctant to move out of what they see as their occupational area of expertise which may be, in this occupation, related to the perceived advantage of possessing a Risk management degree. Whilst occupational control is exerted at entry level and the relationship between university and professional body is close, career progression is not within the occupation, it is rather influenced by the way in which the employing organisation is structured. Although Risk management graduates may be attractive to a wide range of employers, port of entry may also constrain careers within an organisation, albeit that there are some elements of expertise that might suggest transferability across organisations. Career progression, in this occupation, seems to conform to the bureaucratic model of control and dependent on the importance placed on risk management within the organisation. Very few graduates were contemplating moving from the job they were in.

The remaining two established professions should exhibit clear career lines. The first stage in career development for Surveyors, as noted, is to gain chartered membership and most of the graduates in this group were preoccupied with this objective, rather than future career paths. Nevertheless, according to a graduate employed in a local authority, opportunities in the public sector are limited,

“it is the goal to become a chartered surveyor. In terms of further progression, at the moment it’s limited in that there are two senior surveyors who are not going anywhere right now, and that would be my natural progression, to become a senior surveyor and then a surveying manager, either here or in another council

department. That's the problem with staying in the council because the size of the technical department, there's not much unless you go into more management type roles. [...] It depends what your career aspirations are. You could go and join a private practice or another council or set up your own business." [BS164]

Within building companies, size of employing organisation is also relevant. The surveyor employed in a house building company noted,

"I've discussed it [my career], I mean nothing is guaranteed, it's basically I've said where I want to be and they said where they would like me to be, but I've got to work for it and it gives me an aim. [...] My organisation is part of a larger group and they constantly say they have a vacancy somewhere but it wouldn't be direct, like taken from one into another part of the group. It's basically what would happen within the company but you'd have to apply along with everybody else. [BS058]

Again it appears that local authorities offer limited opportunity for progression and filling "dead men's shoes" seems to be well-understood by Surveyors in this sector. Although Building surveyors are classified as a profession, they do not necessarily follow typical professional career paths. Even in professional firms, Building surveying is one of a number of professions within the firm, including chartered valuation surveyors and quantity surveyors, in contrast to accountancy or law firms where the core business is within the control of a single profession. It may be that perception of career progression is limited in surveying because graduates have not yet accrued enough knowledge to become entirely proficient and are therefore not ready to think about the next stage in their careers until professional membership has been secured. It has been more important for these graduates to secure and maintain their first job than to think about moving jobs.

Chartered accountancy most closely resembles an ideal-typical profession and provides a structured and well-defined career path for trainees. None of the trainees had actually secured chartered status but most were in the final stages of their training contract. Muzio and Ackroyd (2007) note more generally that the structure of professional firms may be changing so that there is less opportunity to reach partner level and more qualified staff remain as salaried employees. Amongst other factors, this is said to be a form of "defensive professionalism" partially explained by increasing numbers of qualified professionals. In the present study, several distinct career options for trainee accountants in the "Big 4" were articulated.

The first is to remain within the audit function, secondly to move into another specialist area within the firm, thirdly to remain with the firm and move abroad and finally, to leave the professional firm and enter industry. These options, taken together, mean that large numbers of trainees are recruited each year and there is an assumption that many will leave post-qualification. This is accepted by employers. Typically,

“after they qualify, some of them choose to go, some of them stay on for a while, quite a few now stay on for another busy season and some of them go abroad. So long as you keep two or three going through, then it is OK” [ACCYER2]

Trainees also understand this practice noting, *“most people tend to leave once they qualify, just because of the way the firm is set up – less and less people as you get to the top” [ACC372]*. Whilst it is accepted that there will be some movement post-qualification, employing firms do attempt to retain trainees and career progression is the focus of appraisals for final year trainees. The reason for this strategy is to be found in the apprenticeship model. An employer noted that large numbers of trainees were required in the audit function to carry out the “grunt work” and that firms would actually be hard pressed to find jobs if all trainees did decide to remain. Secondments abroad are also a career option for trainee accountants, facilitated by the globalisation of accounting standards and firms. Broader experience and internal training comes post-qualification and can be located in a number of specialist functions within the professional firm. Other factors influence where newly qualified accountants choose to take their career. According to one trainee, remaining within audit involves a substantial increase in the workload,

“The year after you qualify is undeniably the hardest work. That is the year, if any, that you will be working 60 hours a week and at weekends because all of a sudden you get landed with a lot more work and responsibility.” [ACC682]

Workload and lifestyle choices were also mentioned as a reason for moving to another department where the hours might be less demanding. For example,

“It’s more of a life change as they are settling down, maybe they have got a child and they think the kind of lifestyle that you lead within audit where you are travelling all the time, you are away and you are likely to be working longer hours, maybe they

want to move into a different department which is office based and it is really 9 to 5.30” [ACC255]

Whilst these quotes demonstrate that career options may be limited by personal choice, it also appears that all options can be accommodated within the firm. The alternative option for newly qualified accountants is to move out of professional firms into industry, either via existing contacts made during the training contract or by being headhunted. This is done quite openly as one trainee stated, *“once you are newly qualified, your phone keeps going because recruitment firms call you up” [ACC016]*

Whilst a move into industry is perceived as lucrative for trainees and the workload is less in industry, there is also a perception that it is a big decision to leave the professional firm, largely because there is a one-way transfer of expertise. Although the partner interviewed stated that “the door was always open”, trainees themselves understood that if they left to go into industry, they would only be able to return to the same level in the professional firm as they were at when they left. This seemed to be the major factor influencing trainees to remain with the professional firm once qualified. Typically trainees stated,

“You typically have to do a year and a half to two years after you qualify to get promoted to manager and once you get promoted, you would have a lot more options about what you do.” [ACC180]

Options for trainee accountants are well articulated by employing firms. Employers do, however, cede that they may lose a percentage of their trainees that may also have an indirect benefit to the firm. It is likely that if newly-qualified accountants leave to join industry, then they may also retain links with their peers within the professional firm where they trained which creates networks to establish or reinforce client relationships. The global nature of the Big 4 firms creates opportunities to work abroad that are attractive for newly qualified accountants and allow trainee numbers to be rationalised across the professional firm. Irrespective of whether newly-qualified Accountants remain with their training firm or leave to pursue careers within industry, their knowledge and experience is transferable across a wide range of organisational settings. Within professional firms a move into another

department is accompanied by extensive training. The importance of the accounting function also gives qualified accountants an advantage over other management functions (Armstrong 1992) so that, of all the occupations, there are fewer limits on career progression for graduates who have been trained in the Big 4 accounting firms. This can perhaps be seen as a reward for the years that it has taken for trainee accountants to become qualified.

In general terms, there is little persuasive evidence within the case study occupations to support claims of the demise of bureaucracies (Thurow 2001). In all groups, graduates report hierarchical structures within their specific occupation which enable or constrain progression. It appears that constraints on progression are most obvious in the public sector, irrespective of occupational group. Risk managers and Accountants have the widest range of opportunity to move out of their original field of expertise. However both also have a structured career within the profession or function. There is limited evidence of self-managed careers in these occupation, although a proportion of graduates have undertaken further qualifications. Arguably such graduates are perpetuating and reinforcing a qualifications-based approach to selection and advancement which is facilitated by the availability and willingness of higher education institutions to provide distance learning and part-time postgraduate courses. For Active-schools co-ordinators, acquiring further qualifications results from the poor labour market opportunities for sports graduates at entry level and the insecure nature of Active-schools posts. The intention to exit is most clear in this group, where most of the graduates interviewed are actively seeking alternative employment.

8.6 Utilisation of graduates: work content

This chapter sought to explore utilisation of graduates by considering work content and context and developed some of the issues raised in the previous chapter. The findings in this chapter add weight to the proposition that graduates cannot be treated as an homogenous group, given that differences emerge between and within occupations. This study which is, to an extent, exploratory in that it begins at the

occupational level, also attempts to provide a cross-case analysis of five areas of employment where degrees are required. This in itself presents some problems, particularly in relation to assessing and comparing work content. In a sense, cross-case analysis reveals that the work content of graduate jobs is better understood when it is connected to a specific occupation.

Nevertheless, the findings go some way to advance analysis of graduate employment which transcend and confirm where the occupations are placed in the SOC. It is not the intention of this discussion to provide an overall ranking of the occupations under scrutiny. Yet within each element of analysis, similarities and differences emerge across and within occupations. Firstly context of employment considered the size and type of employing organisation and found that this feature of work shapes the type and extent of knowledge, transferred and used. Secondly, task range related to discretion and autonomy, connected to definitions and assessment of professional work revealed that autonomy is dependent on the complexity of work. Accountants, for example, have limited discretion but acquire more complex skills throughout their training contract. Active-schools co-ordinators, Risk managers and Building surveyors, by contrast are expected to be work-ready at an early career stage. Thirdly opportunities for training are limited outwith Accountants and it appears that employers see higher education and relevant degrees as substitutes for training. Yet graduates themselves, and perhaps some professional bodies, recognise that work experience is required to apply knowledge. Finally opportunities for career progression differentiate occupations according to the SOC although this again is qualified by context of employment.

CHAPTER NINE: INTERPRETATION OF THE FINDINGS

9:1 Synthesising the conceptual framework and empirical work

The objective of this chapter is to synthesise the conceptual framework with the empirical work, using a critical realist approach to guide interpretation and analysis (Sayer 2000). In line with the logic of discovery, discussion will abstract core elements from the findings and evaluate their implications for theory and existing research on graduate work and employment. In common with existing research, this study seeks to explore the effects of expansion in graduate numbers on graduate work and employment. The research explores the utilisation of graduates by incorporating work content in analysis. Graduate destinations and varieties of mismatch provide important indicators for understanding the effects of an increased supply of graduates. However they are less successful in explaining how the interests of actors in the relationship between education and work may cause the structure of the GLM to alter. Moreover, there appears to be little empirical research on the nature of graduate work. Whilst there is a tendency to reduce research on the GLM to a tension between what universities produce and what employers want, literatures on the matching process indicate that several different processes may influence demand for graduates. This research focuses more particularly on tensions between qualifications required to access work and work itself. In attempting to reconcile emerging patterns in the graduate labour market with work and employment more generally, the thesis adopts a novel approach, drawing on a variety of theoretical resources and using qualitative case studies in the research design. Operationalisation of the research is articulated by way of the following research questions:-

- How applicable are existing models of graduate employment?
- What key actors and interests seek to shape new areas of employment for graduates?
- What is the salience of knowledge and skills in graduate work and employment?

- How are graduates utilized, once in work?

The chapter will be organised according to these research questions, and interpretation of the findings related to appropriate literatures. The first question interrogates the data collected in the two cohort surveys, in terms of the policy model and other, less optimistic, perspectives on the GLM. Broadly speaking this question explores the mismatch debate. The second question focuses on connections between higher education and work more generally and identifies how the expansion of higher education and graduate numbers is interpreted. In line with a critical realist approach, answering this question proceeds from the assumption that GLM is an existing structure, governed by qualifications as a matching mechanism (Archer 1998). However, by exploring new areas of employment for graduates, the extent to which the structure is changed by an influx of graduates will be explored. The final two questions explore utilisation of graduates in order to assess changes in the nature of graduate employment and their implications for trends in the nature of work. Interpretation of the evidence is sequential: as each section unfolds, it adds another element to re-conceptualising graduate work and employment.

9.2 Models of the Graduate Labour Market: the range and scope of graduate employment

In order to interrogate models of the GLM, research began by establishing graduate destinations using two cohort surveys from universities in Glasgow. The surveys were a necessary tool to explore the GLM, designed to interrogate models identified in Chapter two. Two surveys were conducted to gather sufficient evidence on the labour market in Scotland and also to allow comparison between graduates from different sectors of higher education, Strathclyde being a newer university and Glasgow Caledonian, a post-92 institution. The surveys provided some interesting material on graduate destinations, the connections between education and work and transitions from university to employment. It emerged that graduates are indeed in a wider range of occupations although the models used to categorise graduate

employment raise a number of issues. In particular, there is some confusion in existing categorisations on the qualifications required to get a job and to do the job resulting in different conceptualisations of the occupational mismatch. On the one hand the SOC has a narrow definition of occupations where graduates are required, confined to the professional category. On the other, the SOC(HE), although derived from the SOC, proposes an expansion of graduate employment, based on the presence of graduates in occupations.

Consequently, evaluation of the findings on graduate destinations is dependent upon the definition of graduate employment used to interrogate the data and perhaps the intended purpose and recipients of research. By applying both the SOC and the SOC(HE) to data from the surveys, it becomes clear why the policy model might be challenged and also why the occupational mismatch has emerged. Analysis according to the SOC(HE) revealed that 89% of graduates from Strathclyde and 85% from Glasgow Caledonian were employed in graduate categories confirming the optimistic policy-maker claim that increased supply is matched by demand. The SOC, by contrast, produced a different picture, demonstrated in Table 9:1

Table 9:1: Findings according to SOC2000

SOC Category	Strathclyde (%)	Glasgow Caledonian (%)
Manager	12	13
Professional	55	20
Associate professional and technical	20	48
Other occupations (Major groups 4-9)	13	19

Table 9:1 reveals the tension inherent in evaluation of graduate-level employment. Significant proportions of graduates from both universities and particularly Glasgow Caledonian, are in associate professional and technical jobs. If the SOC descriptors are followed, which indicate that associate professional jobs require vocational education at sub-degree level, it could be argued that these graduates are mismatched. It is, however, unclear whether occupational outcomes are due to the quality or type of education provided in each of the two universities. Post-1992 universities were previously known as technical colleges (Hallinan 2006) and it is unsurprising that education in such universities services this type of work. Notably

Glasgow Caledonian graduates were also more likely than their Strathclyde counterparts to be in the non-graduate category of the SOC(HE) which perhaps provides limited support that Strathclyde graduates have a slight advantage in the labour market.

Interpretation and explanation of the apparent disconnection between graduate categories in the SOC(HE) and SOC returns to the literature review. Evaluation of the graduate labour market according to destinations hinges on preconceived judgements of graduate-level employment, and the extent to which a shift from elite to mass higher education has caused corresponding changes in employment outcomes (Trow 2005). It appears that the definition of graduate jobs is contested, and indeed contestable. Yet the occupational mismatch is central to interpretation of the survey results.

Policy-makers, unsurprisingly rely on the SOC(HE) to provide evidence that education policy is working as intended (FSS 2007). To an extent the dual drivers of educational policy in the form of economic transformation and social mobility present some conceptual and methodological problems in interpreting the findings. Firstly, evidence based purely on employment outcomes can be countered by the argument that education may perform a social good. Although the *knowledge economy* is emphasised in policymaker discourse, widening access to higher education, irrespective of employment outcomes, is a laudable intent. There is also a temporal element within the policy model which becomes central to evaluation and interpretation of the findings. Increasing numbers of graduates are required to *create* a knowledge economy although the timescale in which this is to be achieved is conspicuously absent from the model. Yet it provides a loophole where counter-evidence can be discounted by policy-makers in favour of a longer-term approach.

Leaving aside the dual drivers of policy, and returning to graduate destinations, there is a convincing argument that three or more years of higher education should be rewarded by high-level employment, given the substantial personal and financial investment involved in completing a degree (Breen 2003). This prompts a claim that graduates in associate professional occupations are victims of a “cascade” effect (Brynin 2002; Rodgers and Waters 2001). Because there are insufficient jobs

available in the professional category, graduates begin to colonise occupations previously held by non-graduates.

In part confusion over how to categorise graduate jobs arises from contrasting perspectives on the division of labour (Fevre 1992). Fevre notes that the social division of labour produces a hierarchy of who does which job. The economic division of labour orders the hierarchy in terms of the value of jobs. Given that there is no economic value placed on education itself, social and economic hierarchies are conflated in the GLM. Interpretation of the constituent factors of graduate-level jobs rests on the characteristics of jobs and the rewards that they attract. Yet it is unclear whether status attracts reward or the vice-versa. To an extent the status/economic value of work is beyond the scope of this thesis, it is, however, noted as a potential barrier to evaluating graduate work and employment. The findings reveal that graduate employment is expanding, yet graduate-level work requires further investigation.

In order to interpret the findings, it is apparent that the range of occupations that graduates occupy can be placed on a spectrum ranging from definite, and traditional areas of employment through to low level occupations where no qualifications are needed or used, leaving a fairly large number of “could be” graduate occupations between the two extremes. Indeed the hierarchical structure of the SOC(HE) suggests that some occupations are more graduate than others. Leaving aside reservations associated with the SOC(HE), it does help to identify the occupations where further research is required. Notwithstanding difficulties associated with defining graduate-level work, it is possible to make some observations on the “ideal type” model of graduate employment from the survey evidence. Without a reference point, explanation of change in graduate employment is rendered meaningless. Whilst the surveys identify that graduates are in a wider range of jobs, they leave unanswered the question of whether graduates should be in such occupations.

Analysis of the conceptual framework for the SOC(HE) exposed some weaknesses in its assumptions and proposed that the model may be more appropriate as an indicator that a process of graduatisation is underway, facilitated by expansion of

higher education. The pragmatic approach adopted by Teichler (2007) supports a view that it is unsurprising to find graduates more widely distributed across the occupational hierarchy, given that entry requirements for some sectors of higher education have been reduced to accommodate more entrants to a differentiated higher education system. Consequently, discussion moves from evaluation of tensions within models of the occupational hierarchy according to graduate destinations to exploration of graduatisation and connections between education and work.

Graduatisation speaks directly to the tension between the qualifications required to get a job and do the job. This tension is also related to models of the occupational structure, where the SOC indicates the level of education required in occupations within each category and job family, and the SOC(HE) prefers knowledge and skills utilisation as an indicator of graduate level occupations. In literatures on the GLM, the tension is articulated in the educational and skills and knowledge mismatches, and often evaluated by quantifying levels of over-education, generally across the graduate population. Measurement is either by means of a systematic job evaluation that relies on the level of qualifications required in a particular job, akin to the SOC descriptors. Alternatively, subjective measurement is by means of worker assessment of the level of education required to do the job, as in the SOC(HE). According to Sloane (2002:13), both have weaknesses, leading to the conclusion that “a substantial part of what is referred to in the literature as over-education simply reflects the heterogeneity of individual abilities and skills within particular educational qualifications”. What is perhaps neglected in both forms of analysis, is differentiation within the higher education system related to particular occupations. On one interpretation, honours degrees provide the same level of qualification but the knowledge and skills contained within each degree are less certain or comparable without an occupational reference point.

Some differences emerged in the present study, related to respondents’ perceptions of whether their degree was required. Predictably, graduates in the professional category were required or expected to have their qualification (87.5%) and would therefore not be classed as over-educated. Surprisingly, 63.4% of graduates in the

associate professional category responded positively to this question and 20.5% indicated that the qualification gave them an advantage. This evidence suggests that degree qualifications are either required or advantageous in associate professional occupations. The corresponding figure in the manager category for degree requirements is 46.7% but again 33.3% of graduates responded that their degree gave them an advantage. Although this finding suggests that in addition to expansion in the range of graduate employment, degree level education is required in more occupations, it does not explain the underlying reasons. Again there are different possible explanations, sourced from the literature. Graduation may merely be a result of qualification inflation or it may be that expansion of higher education, particularly in post-92 universities, means that vocational education previously categorised at sub-degree level is now awarded degree status.

A key contribution of the survey analysis led to the proposition that there are horizontal and vertical approaches to conceptualising the GLM. Whilst the range of jobs that graduates do is of interest, connections between education and work also feature in interpretation. The data suggested that field of study may be an important differentiator in the GLM, certainly within the universities surveyed. If, for example, the substantial proportion of graduates employed in associate professional occupations have an occupationally-relevant degree, then it becomes difficult to conclude that they are mismatched because specific degrees are required. It may be, however, that respondents to the surveys largely comprise graduates with vocational degrees and these results should be treated with a degree of caution. It is also notable that graduates in the “non-graduate” category of the SOC(HE) were predominantly those with degrees in arts and humanities, business and social sciences. This data suggests that field of study is also a labour market issue: other studies of the GLM indicate that an over-supply of business graduates makes them particularly vulnerable to positional competition (Nabi and Bagley 2003; Wilton 2007).

Incorporating the associate professional category of the SOC into graduate employment may appear to support the SOC(HE). However, this thesis proposes that further evidence on the utilisation of graduates is required. The implications of

closer links between degree and occupation are supported by other findings from the surveys. Firstly, overall levels of training appear to be reduced: a substantial proportion of graduates had received only a short induction course (24.2%) or no training at all (31.6%). This evidence may indicate that degree education is seen as a substitute for training. Secondly, and relatedly, it emerged that significant numbers of respondents had changed employment at least once since graduating, generally to a higher level job. This evidence introduces “job-hopping” as a feature of graduates’ early careers. Although the transition effect is identified in Elias and Purcell’s work, it is not successfully explained. It is unclear for how long the transition effect can be used as a justification for graduates being in the non-graduate category, or if it is a result of labour market crowding. Nevertheless tensions between the qualifications required to get the job and do the job remain. On the one hand, there is evidence of labour market segmentation at port of entry and, on the other, it appears that graduates may have to acquire work experience to access graduate jobs. This is perhaps a weakness of survey evidence which seeks to establish constant conjunctions from large populations. Yet it is noted as a feature of graduate work and employment that requires a deeper level of analysis.

The foregoing suggests that interpretation of the survey findings is dependent on pre-assigned conceptions of appropriate employment for graduates and the subsequent measurement criteria. The data can be interpreted negatively or positively according to which perspective is adopted. Both the policy and mismatch models could be supported by the empirical evidence in this study, depending on the measurement criteria and occupational categorisation applied. There is evidence of graduatisation within the associate professional category of the SOC. Several useful areas for further research emerged from the survey findings, notably that separating qualifications and their constituent skills and knowledge may aid analysis of the GLM (Dolton and Silles 2001). Recruitment and selection is also an area of interest, in tandem with the level and type of training offered to graduates. Although there is evidence that qualifications are used to match graduates with jobs, this does reveal much about the ascriptive element of selection which, for some writers, assumes heightened importance in circumstances of oversupply (Brown and Hesketh 2004; Hirsch 1977).

In general terms, the survey findings suggest labour market segmentation and tentatively identify some features of graduate employment that require further investigation. It appears that a focus on one particular type of mismatch could attract criticism based on the features that have not been included in analysis. Knowledge and skills mismatches, for example, neglect that qualifications can function as a screening device. Overall, it is proposed that research on graduate employment requires to make explicit which model of graduate employment is being used in analysis. Notably, the weakness of this, and other surveys on the GLM, is the absence of any data on utilisation of graduates. In order to develop the theoretical and methodological issues raised by the survey evidence, the next section turns to interpretation of the qualitative element of the fieldwork.

9.3 Actors and strategies in the graduate labour market

This section begins to unpack the utilisation of graduates, although it is still largely confined to labour market analysis. It examines connections between education and work and the process of graduatisation in relation to the expansion of higher education. Existing research on the GLM tends to assume that the relationship between education and work is based on tensions between what universities produce and what employers want. From an employer perspective, universities are found lacking when there are skills shortages in graduate employees. Alternatively, academics suggest that the purpose of higher education is to educate rather than train. However findings in the previous chapters revealed that correspondence theory is perhaps inadequate to explain how actors involved may shape the labour market. Interpretation of the findings is conducted at separate levels of analysis. More specifically, the literature reviews suggested that at the macro level, explanations for the relationship between education and work are concerned with wider conceptions of how society is structured and the types of worker needed in the division of labour. For example, does the economy need more graduates and which forces shape demand? At the meso level, the reasons for choices that occupations and organisations make on the type and level of qualifications required for entry are the subject of investigation. In circumstances where there is an increased supply

why might occupations choose to graduate and how are such decisions made? Moreover how do universities as suppliers of graduates respond? At the micro level, the object of enquiry is the ways in which processes of matching according to qualifications are manifest in employer practice, particularly during the recruitment and selection process. Whilst clear connections between education and work can be made, this thesis proposes that when the interests of all actors are incorporated, different versions of matching may be the result.

More generally, the potential generative mechanisms for graduation, identified from the literature, are upskilling, professionalization and credentialism/closure. Upskilling suggests changes in complexity of work or the emergence of new high-level occupations. The latter two mechanisms may produce match or mismatch dependent on perspective¹. If, for example, professionalization is found to be dominant in new areas of employment for graduates, then it could be argued that it is merely a euphemism for qualification inflation. Closure and credentialism, are made separate given that credentialism as a form of closure is based on qualifications. However the principal forms of closure via race, gender or class also operate within the labour market for graduates. What is yet to be discovered is the extent to which the requirement for graduates is driven by substantive use of knowledge and skills or strategic utilization of qualifications in order to exclude the non, or inappropriately, qualified. Clearly, this is not an either/or scenario and closure may itself be based on relevant knowledge and skills. However the purpose of this part of the analysis is to make some observations on new areas of employment for graduates as sites where change in the structure of the GLM may be most apparent. Although a proportion of analysis relies on secondary data, given that the actors involved in decisions to graduate have not been interviewed, interpretation of the data is largely connected to gateways to the occupations, and pathways between education and work.

¹ A distinction is made between professionalization and credentialism because, theoretically, professionalization is a strategic choice and may not be related to upskilling (MacDonald 1995). Nurses, for example, are typical of a professionalization process that shifts training to higher education. Credentialism is a critique of the process of matching by qualifications. Both are derivatives of the general theory of closure.

Essentially this section examines the reasons for graduatisation, identified in the survey results and demonstrated in degree requirements at port of entry. All occupations appear to make use of relevantly qualified graduates. According to the rationale set out in Chapter five, the occupations were categorised according to professional status. However differences in the reasons for graduatisation are apparent. Emerging professions are engaged in defining occupational jurisdictions, operated by newly formed professions. Neither Active-schools co-ordinators, nor Risk managers have stipulated a relevant degree for access but both have employed graduates with connected degrees. Sports graduates have, to an extent, begun to colonise Active-schools posts as a result of the plentiful supply of such graduates and few alternative employment opportunities. Risk management graduates are attractive to employers because their degree is designed specifically with the occupation in mind. It was suggested in Chapter six that the use of relevant degrees may offer the opportunity to establish the jurisdiction and aid formation of an occupational identity in Risk management. The aspiring profession (Environmental health officers) is engaged in upward mobility: amalgamation of several existing inspectorates is achieved by requiring a degree for access. More generally, occupations appear to have made use of the availability of a supply of graduates by establishing close links with higher education institutions.

Established professions, by contrast, have used higher education as a means to locate initial training away from the workplace and a traditional apprenticeship model (Eraut 1994). Yet there are some interesting differences between the two professions, given that the level, rather than type of degree is stipulated for Accountants whereas Building surveyors make use of a relevant degree. Links with university for Accountants are perhaps more uneasy than the Building surveyors although this claim may be restricted to the particular university studied. Nevertheless the indeterminacy of accounting knowledge and the strength of the professional training programme explains why chartered accountancy has not stipulated a relevant degree (Richardson 1997). Despite employer claims that field of study does not matter, and may indeed be detrimental to the profession, in practice it appears that relevant knowledge is preferred. The shift in initial education from the workplace to higher education explains why these two occupations are

categorized in the SOC(HE) as New but are elsewhere described as established professions (MacDonald 1995). Both professions have not used graduatisation in earlier stages of professionalization and subsequently adopted the strategy to consolidate, rather than establish, professional status. Despite different reasons for graduatisation, a common theme emerges across all occupations so that there is a tendency towards closer links between the degree subject and occupational title. Consequently the job requirements may be narrowing in the labour market for graduates. As a result of the plentiful numbers of graduates, employers can restrict entry to those they expect to be more work-ready, discussed more fully below.

Whilst the professional project was a useful explanatory theory for potential expansion in the range of graduate occupations, it is descriptive rather than analytical. The evidence supports the potential for higher education to feature in professional projects of associate professional and managerial occupations that may partially explain a wider distribution of graduates across the occupational hierarchy. Nevertheless it is largely silent on how and why aspiring and emergent professions might become established, except for adopting a “wait and see” attitude. MacDonald (1995) claims that unsuccessful projects do not negate the concept itself. However if professionalization is an emergent outcome from increasing numbers of graduates, then it requires further evidence. The professional project is nevertheless useful because it introduces agency into debate on graduate employment. Indeed, Larson (1977) portrays professions as self-interested groups pursuing a project to enhance their relative status and the evidence supports this claim, certainly with regard to educational strategies in these occupations.

Although professionalization is not inevitable, it may be that the expansion of higher education has facilitated the process. Professionalising occupations adapt the traditional model, largely by the use of an all-graduate entry. The advantages of this strategy are clear. Firstly, training costs may be reduced and secondly, the risks associated with pursuing an occupationally-targeted degree are borne by graduates. Thirdly the opportunity for professional bodies and employers to influence what graduates need to know presents itself, albeit that this claim is qualified by the willingness of departments and universities to participate. Finally, the availability

of connected degrees offers an opportunity for employers to reduce applicants in circumstances where there may be a “graduate glut” (Brown and Hesketh 2004). This evidence suggests that closure strategies dominate in the graduate labour market and provide an explanation for competing aspects within the mismatch problematic. Whilst closure may be increasingly based on relevant knowledge, the opportunity for other forms of closure to operate within groups of relevantly qualified graduates also emerges. It appears that exclusionary rather than usurpationary closure (Murphy 1988) is dominant in graduatisation which is perhaps unsurprising given the plentiful supply of graduates. In turn, graduatisation of new, and perhaps subordinate, areas of employment does not necessarily pose a threat to the status of existing professions. Consequently although degree requirements alter, the occupational hierarchy, in relative terms, remains stable.

Differences in the process of graduatisation suggest that qualification inflation is an over-simplified explanation of the (changing) relationship between education and work. When the scope of analysis includes all the actors in the relationship, a complex picture emerges. The state introduces educational policy that increases graduate numbers, underlined by an emphasis on employability. Policy is translated by occupations and employers engaged in pursuing their own interests that, in turn, reinforces the process of qualifications as a matching device. The labour market functions as a sorting mechanism and the status of graduate jobs more generally is diluted. Higher education, concerned with internal and state-enforced measurement criteria, facilitates and accommodates the changing relationship by creating new degrees, targeted towards specific occupations. Consequently boundaries between education and training may become blurred, raising questions on the fundamental purpose of higher education. This is not, of course, an inevitable or indeed universal scenario. Nevertheless, it provides a possible explanation for the observed differences in graduatisation amongst the case study occupations. However this scenario suggests increasing the supply of graduates perhaps has unintended outcomes, disconnected from the intent to establish a knowledge economy. Strategic use of the increased supply of graduates appears to have more explanatory power in the labour market than explanations based on claims of increased complexity in the nature of work.

The data from this study appear to reinforce the notion that professionalism is “a shifting rather than a concrete phenomenon” (Hanlon 1998). Despite analytical weaknesses in the professional project, the findings in this study may have broader implications for the sociology of professions. It has been noted above that increasing the supply of graduates offers the potential to facilitate professionalisation. As more occupations seek professional status and form professional associations with influence over educational requirements, the concept of profession may in turn be diluted. Indeed this supports Evetts (2003) contention that professionalism is an ideology, used as a form of control over workers. In relation to the wider division of labour, the evidence in this study appears to follow Abbott’s systems thesis where control over a jurisdiction is achieved by graduatisation of a body of knowledge. Yet this does not seem to involve conflict as suggested by Abbott, perhaps indicating that specialization at lower levels does not pose a threat to existing professions. It is particularly interesting to note that Risk management has formed a jurisdiction previously incorporated in the work of traditional and powerful professions such as law, accountancy and engineering. It may be the formation of a distinct occupation has been accommodated because the regulation of risk is increasingly associated with legislative compliance which makes it an administrative function and less amenable to professional judgement.

Higher education is, admittedly, only one factor in the sociology of professional groups and all-graduate entry does not necessarily confer professional status. Despite this narrowed focus, it is notable that that all occupations in the present study excepting Active-schools co-ordinators have connected professional bodies. However the influence that these bodies exert varies: it is strongest in Chartered accountancy and Environmental health, where professional membership involves a license to practice. A weaker influence is apparent with Building surveyors so that for some, professional membership is a condition of employment. For others, particularly in the construction industry, joining the RICS is a matter of choice and the CIOB may be preferred because entry criteria are less stringent. Similarly Risk managers have several possible professional memberships available, related to the industry sector in which they are employed. All professional bodies have some influence over education, either by accrediting degrees which offer exemptions from

examinations or by allowing graduate membership. It appears that this evidence may support a form of credentialism proposed by Collins (1979) in the respect that the use of qualifications becomes a strategy that legitimates employer decisions. Yet control over entry to the profession remains with the professional association and accredited degrees require to be supplemented with evidence of relevant work experience.

9.4 The salience of knowledge and skills: requirements and utilization

The foregoing has begun to explore utilisation of graduates by considering the labour market, exposing some gaps in analysis. In particular, it remains unclear whether the use of relevant degrees in the labour market is translated to work. This section begins by examining the recruitment and selection process and goes on to discuss the salience of knowledge and skills in graduate employment.

Although professional bodies exert an influence on entry to the profession, employers make decisions on which graduates to select, suggesting that this is a crucial stage in the transition from education to work. Institutional differences are a differentiating factor in such decisions, so that knowledge and skills are less important than the institution in which they were acquired (Brown and Hesketh 2004). However, graduates interviewed for this study did not generally feel that university attended had influenced employers. This claim is, of course, limited by the absence of comparator evidence from a Russell-group university where reputational capital may assume heightened importance. The absolute and relative dimensions of employability become salient to interpretation of the evidence (Brown and Hesketh 2004). Whilst the reputation of Russell-group universities may provide a comparative labour market advantage for their graduates, in certain sectors of the labour market, the absolute dimension remains important.

Although differences emerged in graduates' experience of the recruitment process, in general terms, there was also evidence that labour market conditions affect recruitment. Graduates in Active-schools, accountancy and Environmental health recognized that there were many more applicants than jobs in their area of

employment. Chartered accountants however undergo the most stringent recruitment process. Active-schools co-ordinators are also recruited by way of an assessment centre, although less rigorous than Accountants. Of all the occupations studied, Active-schools is the only one that explicitly requires post-graduate work experience with children or in a sports-related occupation. It could be argued, therefore, that making the occupation all-graduate is based on excluding non-graduates. Risk managers, Building surveyors and Environmental health officers were recruited via interviews. Notably, graduates across all occupations reported that organisational fit was the major criterion for employment although previous work experience through “job-hopping” is also salient. Risk managers, more than any other group, reported that employers were interested in the content of their degree, perhaps because it has a “novelty” value. Interestingly, except for Accountants, there is evidence that graduates had moved jobs at least once since graduating. Work experience quickly over-rides degree skills and knowledge in early career recruitment and the findings in these case studies provide some support for Elias and Purcell’s (2004) assertion of a transition effect in the GLM. Yet it appears that it is work experience rather than the degree that is more important. Even where there are close links between degree and occupational knowledge, graduates and employers recognize that work experience is necessary to learn how to apply and contextualize knowledge, indicating that degrees may be a “ticket to entry” irrespective of their occupational relevance.

More generally, the recruitment process for graduates appears to be designed to assess suitability and test interpersonal skills. This finding supports Brown and Hesketh’s (2004) conclusions although without a control group of unsuccessful graduates, it is difficult to assess whether this is a weakness in recruitment or a result of oversupply. Given that employers have the upper hand in the GLM, it could be argued that recruitment is designed to “select out”. It could of course be that degree knowledge is taken for granted and that employers select on criteria that they are comfortable with, and competent to assess, that is to say, degree plus social skills with the latter used to discriminate amongst otherwise equally qualified graduates. In other words, the degree only puts the applicant in a position to access work. Furthermore, it is difficult to assess the extent to which selection on social skills is

actually a new phenomenon in the GLM and the findings may support the proposition that the requirements of work justify an emphasis on social skills at recruitment.

The following sections offer the greatest potential to unravel the utilization of graduates. They seek to explain rather than describe what is happening to graduate employment. A central theme is that transfer of knowledge and skills although important, neglects that qualifications themselves can function as a closure mechanism at port of entry (Collins 1979; Murphy 1988). Analysis of graduate work begins to uncover what is required to perform in the job and introduces analysis of the features of work which may enable or constrain utilisation of graduates' knowledge and skills. In order to clarify whether utilization of graduates is substantive, opportunistic or strategic, it is necessary to examine the extent to which transfer of knowledge and skills are apparent. Analysis also requires to make knowledge and skills separate as far as is possible (Warhurst and Thompson 1998). Claims of over-education tend to rest on the utilization of skills *and* knowledge. When a distinction is made between knowledge *or* skills, as in Teichler's (2007) comprehensive study of graduate employment, mismatch is found to be less pronounced, given that subject knowledge does not necessarily always relate to occupational knowledge. Evidence described in Chapter seven revealed that whilst knowledge transfer may be incomplete, communication, presentational and computer-literacy were used by graduates in all occupations. Relying on self-perception of skills and knowledge use, it was found, may be better assessed within an occupational context.

At this point it is worth briefly re-iterating some of the core debates within knowledge and skills, particularly related to "ideal-type" graduate jobs in the professions. In general terms, professional knowledge is underpinned by tensions in the type and nature of knowledge. There is an inherent tension between extreme abstraction and extreme concreteness in professional knowledge (Abbott 1988). The task for professions is to achieve equilibrium between these two extremes so that knowledge is sufficiently abstract to prevent its appropriation by the lay public whilst retaining an element of practical application. Abbott (1988:9) noted "what

matters is abstraction effective enough to compete in a particular historical and social context, not abstraction relative to some supposed absolute standard.”

The tension between abstract and practical knowledge is central to understanding the distinction between professional knowledge and ideal typical knowledge work which is embedded in organizational rather than occupational control (Frenkel et al 1999). Control over knowledge in professions is connected to the authority given to practitioners to provide a service to clients. Warhurst and Darr (2008), for example, note that the work of many legal professionals is routinized and limited to producing conveyancing contracts. Nevertheless, it is only solicitors who can provide the service. Such control over knowledge is a product of increasing rationalization in society and is central to the theory of social closure. According to Murphy (1988:246), knowledge cannot be reduced to science and technology and results from new means of control over other groups within society. By contrast, knowledge workers may also provide a service for clients but their knowledge is not typically a means of occupational control. This poses some interesting questions for the present study. Although professions and knowledge workers are often held to be sub-sets of the same group of workers in accounts of the knowledge economy (Bell 1999), academic attention tends to separate the two groups, perhaps because of disciplinary constraints and a reliance on “ideal types” in research. For example, research on knowledge workers tends to focus on occupations involved with new technology rather than in the traditional professions. Frenkel et al (1999), for example, suggest that the distinction between knowledge work and professional work is the profit motive and argue that “there is no necessary connection between knowledge work and membership in a profession” (ibid:67). Knowledge work is derived from power within an organization rather than control within the confines of a profession. The distinction between organizational and occupational control also enters the literature on professions (Brown 1995; Evetts 2003; Friedson 2001). The nature of knowledge produces tensions in the extent to which knowledge can be commodified, influenced by licensing powers of professional bodies. For example, the body of knowledge controlled by Environmental health officers is more practical than theoretical although the requirement for a license to practice reduces who may actually apply the knowledge.

The distinction between knowledge work and professional work is less than clear cut when applied to the present study. Excepting those that are employed in the public sector, Accountants and Building surveyors are actively engaged in contributing to the profit of their employing organization but are also subject to occupational controls over work. Risk managers provide an internal consultant role but have a professional body that controls standards and offers advice on “best practice”. Environmental health officers administer legislation and work is only loosely connected to science, yet a license to practice is required. Active-schools coordinators do not have a professional body and it is doubtful whether they fit into the knowledge worker or professional bracket because of their peripheral importance to the core business of teaching. The evidence appears to demonstrate that boundaries between occupational and organizational control are becoming blurred (Wilensky 1964). Utilization of relevant degrees appears to be more connected to status and authority than substantive knowledge but has implications for work-readiness, discussed below.

9.4.1 Work content: transfer of knowledge

The findings revealed some differences in transfer of knowledge. Inconsistencies emerged across and within occupations that make interpretation problematic. Nevertheless it is possible to make some general observations, related to an imbalance between theoretical and practitioner knowledge and context of employment. The interests of various actors in the relationship between education and work are also a useful lens through which to view transfer.

In general terms, the findings demonstrate that transfer of knowledge between education and work is not necessarily related to position in the occupational hierarchy. In the established professions, where it might be expected that graduates would use degree knowledge, inconsistencies emerged. Although Building surveyors reported that they could not do their job without their degree knowledge, the evidence showed that diversity in employment contexts means that only a proportion of degree knowledge is reported to be relevant and transferred. The

body of knowledge, however, is not based on high-level theory and is practically orientated. Despite having one supplying degree, standardization of knowledge attempts to create a “one-size fits all” programme, subsequently found lacking in some contexts. Yet it was the partially-relevant graduates who reported more knowledge transfer than the Accountancy graduates demonstrating that self-report evidence on knowledge transfer may be influenced by graduates’ expectations of their degree. Accountancy graduates mistakenly believed that degree knowledge would be entirely relevant in work and were clearly disappointed. It also reflects that the professional training programme for Accountants is designed to impart practitioner knowledge and once in work, degree knowledge is subordinate to practitioner training.

In Associate Professions, transfer of knowledge was also difficult to unravel. Findings from Active-schools and Environmental health suggest that degrees provided graduates with theoretical (scientific) knowledge which remained unused once in employment. Yet Co-ordinators with Sport in the community degrees present a close match and report significant transfer of degree knowledge. By contrast, it might be expected that the indeterminacy of management knowledge would suggest transfer in for Risk managers would be incomplete. However, these graduates reported that they use their degree knowledge and a close match was evident in different sectors of Risk management. There was, in addition, further evidence that individual perspectives influenced how graduates assess and report transfer. These findings emphasise the difficulty in defining graduate jobs, particularly by way of an exclusive focus on knowledge and skills transfer.

In aspiring and emergent professions, establishing a body of knowledge may be the source of professional projects. The kind of knowledge that a profession claims as its own is an important factor in defining the cognitive exclusiveness of the profession (Abbott 1988; Khurana 2007). Higher education plays a major part in standardizing and legitimating the knowledge base by producing future professionals (Larson 1977). The more abstract the knowledge base, the more likely that exclusiveness can be maintained. Universities also play a role in standardizing

knowledge of professionals. Yet it appears that for these graduates practical rather than abstract knowledge is useful.

Interpretation of the data on knowledge transfer suggests a complex relationship between academic and practitioner knowledge. There is support for Collins' (1979) view that educational and occupational knowledge can never completely correspond. Yet this claim does not hold for all occupations and is dependent on how willing educators are to accept the influence of employers and professional bodies. On the one hand, Abbott (1988) optimistically suggests that the separation of academic and practitioner knowledge is necessary, so that the research function of universities allows the body of knowledge to expand, whilst also informing practice. Unless this view is understood and accepted by employers who, it has been suggested, seek work-ready graduates, then there may be a gap between what graduates know and what employers expect them to know. Moreover, it is perhaps no co-incidence that the recently formed degrees (Sport in the community and Risk management) are those where graduates report the most transfer of knowledge, and where employers have had most influence. The employability agenda, set by government, may therefore be at the expense of academic autonomy and standards.

Despite closer links between degree and occupational knowledge in the labour market for graduates, when transfer is examined more closely, the idea that occupational knowledge can be "read off" a connected degree is shown to be less than straightforward. In general terms, the meaning of "vocational" education in relation to the occupations in this study is elastic. Whilst a related degree might, in theory, signal occupational knowledge, it has been shown that this is not necessarily the case. The findings, however, should be treated with a degree of caution. Although knowledge transfer is found to be incomplete, this does not suggest that theoretical knowledge imparted in degree subjects is useless. It is more likely that the findings demonstrate an instrumental attitude on the part of graduates towards their degrees and different perspectives on what university education actually means. Knowledge about social accounting may, for example, be dismissed as irrelevant by trainee accountants and perceived as crucial by educators to produce more rounded Accountants.

This observation has arisen from the specific occupations selected for this study and may not be further generalisable. Mixed results on knowledge transfer, even within the same occupation, suggest that context of employment has a significant effect on relationships between education and work. Although it was noted above that the labour market for graduates is becoming segmented according to field of study, higher education cannot always produce what employers want and this goal may indeed be resisted by the Academy. The evidence indicates that, irrespective of where occupations are placed in the hierarchy, it is professional expertise rather than theoretical knowledge that transfers. Whilst theoretical knowledge may have been gained in higher education, expertise is acquired by different methods. For those who have the protection of a training programme, occupational know-how is gained there. With Building surveyors, the shift from a traditional apprenticeship model of training conducted within a firm has been replaced by a more general education that largely conforms to academic standards. Inevitably this means that education becomes standardized and consequently not necessarily applicable to all occupational contexts. Such evidence may also explain why professional membership is assessed by means of demonstrable work experience, rather than the possession of a related degree. For other graduates, it appears that expertise has to be assimilated via work experience in early careers and possibly by changing jobs. Overall, some graduates may be more disposed to attributing success to their degree and reason that without the degree, they would not have achieved employment, irrespective of the need to acquire work experience. Others, by contrast, make more specific links and conclude that what they need to know to do their jobs has been acquired via work experience.

9.4.2 Work content: transfer of skills

Despite reservations associated with transfer of knowledge, it would seem that there is something advantageous for employers in recruiting relevantly qualified graduates. This section examines the findings according to skills transfer. Comparison across occupations produced remarkable similarities in skills transferred and used. Nevertheless, whilst it was deemed necessary in analysis to separate knowledge and

skills, interviewees had not necessarily grasped this distinction. It appears that graduates tend to confuse the technical skills required to do their job and occupational knowledge. In general terms, graduates across all occupations identify communication skills as the most important in their jobs. There are, however, different forms of communication. Written communication was common across all occupations and identified as transferred from university. Spoken communication, too, is a skill that all graduates reported as necessary and transferred. Accountants, for example, directly engage with clients in the organizations where they conduct audits and Building surveyors communicate with sub-contractors and other professional groups. Transference of communication skills demonstrates an underlying advantage of connected degree education: graduates with such degrees are able to communicate in a common occupational language. Whilst the client group in each of the occupations varies, the ability to communicate is grounded in “knowing the jargon”. To an extent, degree education is incorporated in the socialization process, aiding formation of an occupational identity which may be particularly relevant for emergent and aspiring professions. The benefit of communication skills derived from university and related to work is particularly evident in the Active-schools and Risk manager occupations where graduates noted that they were often engaged in persuading colleagues of the importance of the Active-schools initiative and of Risk management.

Skills use in the occupations is very much connected to the work that graduates do. Nevertheless, there are differences in the balance between soft and technical skills that graduates use. Although it has been suggested that accountants’ work is routinized at an early career stage, a high degree of analysis is required within the audit process. This involves interpretation of the business environment in which the audit is conducted. Management skills are also acquired over the course of the training contract. Similarly the Risk managers have to apply risk management techniques to business functions and processes. Surveyors also have a high level of technical skills, in valuing and managing building projects and in assessing the work of sub-contractors. Technical skills for the other occupations appear to be less analytical and more exclusively communication based. Co-ordinators note that they are substantially employed for their people skills although there is some

evidence of project management in devising and running sports festivals. Environmental health officers also have communication and technical skills, in order to assess and enforce legislation. It could be argued that the balance between soft and technical skills is much more closely allied to where the occupation is placed in the hierarchy than was found in transfer of knowledge. The rate at which graduates are required to become proficient in the skills needed to perform varies across occupations and is, to an extent, connected to employer perceptions of the skills expected from graduate recruits in their early careers.

Although there is some debate over whether teamworking is an aspect of work organization or a skill (Alvesson and Thompson 1998), when presented as a skill, it was also reported to be important to graduates in all the occupations. Graduates use team-working as a catch-all term that is often more appropriately defined as working within a department. It also appears that graduates recognize teamworking as important and therefore mention it as a particular skill. For some, the team was defined by the project in which they were engaged, for example, accountancy teams were structured round specific audits and Surveyors saw themselves as part of the team related to specific building projects. The team structure defines tasks and allocation of work on a project to project basis. However differences emerge so that Accountants are teams of experts and Surveyors are experts within a multi-disciplinary team. Team membership for Environmental health officers is structured round one of the areas of Environmental Health which in turn allocates work. Active-schools co-ordinators reported that they were members of a regional Active-schools team rather than any team within the schools where they work and for them, the team is a network where members can share experiences. Risk managers showed most diversity in team configuration, aligned with the departmental structure of the employing organization. For some, this meant that team membership is according to the risk management function whereas others felt themselves to be specialist risk managers within a business function. It is perhaps surprising that graduates reported teamworking as transferred from university, given that degree education is ultimately measured individually. This may be an outcome of the employability agenda where groupwork is incorporated in degree programmes to satisfy employer demand for the skill. It also reflects a type of skill formation for

graduates who report that they gain occupational knowledge and support from other members of their respective teams. De Weert (2007:236) reporting on the CHEERs cross-national survey of graduates and employers, notes that the strongest discrepancies between required and acquired skills from an employer perspective are non-cognitive in nature and not related to subject knowledge. In order of importance, ability to work in a team, problem-solving, planning and communication skills are noted as lacking in graduate employees. This list of required skills may represent unrealistic expectations from employers, given that not all are explicitly derived from degree education but notably these skills are largely the similar to those that graduates in the present study report that they possess and use.

In general terms the findings can be interpreted according to the schema suggested by Grugulis et al (2003) where skills are separated as components of work and in the worker. Technical skills that reside in the job more frequently correspond to skill levels in the SOC descriptors. Skills that reside in people incorporate soft skills such as communication and ability to work in a team. These are desirable in professions but do not over-ride technical ability. Indeed literatures on the professions tend to emphasise a process of socialization rather than the use of soft skills (Eraut 1994; Freidson 2001), demonstrated by evidence from Accountants who are nurtured, trained and supported in acquisition and application of soft skills during their training contract. In the Associate professional occupations, technical skills are less important and soft skills perhaps have a greater significance. Nevertheless, the Risk managers seem to sit outside this broad claim or more particularly demonstrate a balanced mix of technical and soft skills. The social construction of skills is also evident in the findings: it was noted that the confidence boosting effects of undertaking higher education were reported by the majority of graduates, irrespective of occupation. This evidence may correspond to Bourdieu and Passeron's (1977) notion of "cultural capital". Instead of a list of specific skills, a product of higher education is the ability to exhibit confidence in whatever job role that they undertake.

In summary, although transfer of knowledge may be incomplete, employers clearly identify relevantly qualified graduates as having at least some useful qualities. The

common denominator appears to be that a connected degree gives graduates an understanding of why they are doing what they do. Relevant degrees give graduates at least some of the occupation-specific skills they require. The level of knowledge contained in the degree may be “way beyond” what graduates require to do the job, particularly in Environmental health and Active-schools but this is not because graduates have the wrong type of knowledge, rather they are constrained from using knowledge by the type of work that they do. The evidence for this claim is abstracted from differences within the occupations studied. Instead of a distinction between academic and vocational degrees, the possibility that skills embedded in occupational knowledge are an explanation for graduation, and for employing graduates, is abstracted from the data. Nevertheless, it may serve to advance current knowledge of graduate work.

9.5 Utilisation of graduates: complexity, autonomy and discretion

This section of the chapter explores utilization of graduates, particularly in relation to disparity within occupational classifications and the “ideal type” professional model. It begins by considering complexity of work and task discretion, moving on to discuss training provision and career progression. However, in order to understand utilization of graduates, the first section makes some observations on the work content of graduate jobs.

The evidence revealed considerable variation in the task range within graduate occupations. Knowledge used by graduates is related to context of employment creating differences amongst and within occupations. Yet in order to compare the work content of occupations, an analytical perspective is required which transcends the “job family” parameters set by the SOC descriptors. In other words, if the SOC descriptors are followed, then interpretation of the findings is limited to proposing that degrees are now required in Associate professional and technical occupations, that in certain circumstances it is used, or indeed that vocational education targeted to such occupations is now conducted within some sectors of higher education. Whilst these claims may be true, they do not entirely explain the findings and the

contribution that graduates may make in the work that they do. For example, graduates in Associate professional occupations report that their degree education enables them to do their jobs better. Interpretation of how graduates are utilized once in work therefore requires an alternative framework of analysis, suited to cross-case analysis. Discussion of transfer of knowledge and of skills whilst relevant, remains wedded to the tension between acquired and required knowledge and skills. Although the professional literatures go some way to explaining the separation of practitioner and academic knowledge, and provide an “ideal type” to compare occupations, they are less successful in providing a framework for comparison, unless semi-professions or associate professions are to be discounted in analysis.

For these reasons, it is proposed that the findings on utilization should be analysed according to the framework proposed by Frenkel et al (1999) which has the advantage of being developed to compare service occupations across a wide spectrum of employment. The framework proposes a method to analyse the occupations, albeit one that considers features of work abstracted from the findings. According to Frenkel et al (1999:63) there are three separate components of an “act-of-work”, comprising knowledge, creativity and skills. Knowledge is sub-divided into theoretical knowledge, corresponding to specific professional knowledge or contextual knowledge, related to firm-specific procedures. Creativity, measured on a continuum from high to low, is defined as the process of problem-solving conducted within work and perhaps encapsulates one of the major transferable components of absolute employability. Skills use is restricted to analytical skills, defined as reasoning based on abstract cues and explicit inferences made within the work context, and social skills which are “purposesful actions initiated towards eliciting particular responses from others on a continuing basis” (Frenkel et al 1999:64). A further analytical component has been added so that the client group can be compared which, as noted, varies in the occupations studied. In general terms, the findings, analysed according to the act of work framework produce a comparison across occupations, demonstrated in Table 9:2

Table 9:2 Graduate occupations according to the Act of Work framework

	Accountants	Building Surveyors	Active-schools co-ordinators	Risk Managers	Environmental health officers
Theoretical Knowledge	Accounting theory and application. Audit regulations	Principles of building. Planning regulations,	Sports related theories of activity and health	Risk theory and application/ Health and safety legislation	Knowledge of legislation and principles of environmental health
Contextual knowledge	Firm specific accounting standards. Reporting methods	Applied to sector of work (i.e construction, Public sector	Methods of making children more active	Firm specific policies and procedures related to sector of employment	Methods of enforcing legislation, applied to area of Environmental health
Creativity	Medium	High	Medium	High	Medium
Client group	External clients	Internal in public sector, construction. External in private sector	Head teachers, school children	Internal as management function. Advisors	External inspections, general public as advisors.
Analytical skills	Application of audit to specific client contexts	Judgement of refurbishment and new build projects	Analysis of activity levels and participation levels	Application of risk techniques to new situations, scenarios	Analysis according to compliance with legal framework
Social skills	Advising and liaising with clients and colleagues on audits	Advising on area of expertise, negotiating with building trades, liaising with clients and other professionals	Persuading teachers of value of Active-schools initiative, motivating children and coaches	Advising internal clients, persuading and mentoring clients of value of risk management	Advising clients, liaising with law enforcement.

Table 9:2 reveals that cross-occupational analysis produces some interesting comparisons that are again independent of the SOC descriptors. Each “act of work” involves a combination of the three components indicating that irrespective of work content, graduates may possess qualities that enable them to perform in their jobs,

particularly with regard to interacting with clients. Whilst these qualities are labeled creativity in Frenkel et al's framework, they seem to resemble what Bourdieu and Passeron (1977) regard as cultural capital. It is graduates' capacity to assimilate contextual knowledge and use their interpersonal skills with clients that enables them to be "work ready". The act of work framework proposes that there may be a material reason for employers to take advantage of increasing numbers of graduates, yet it does not necessarily support increasing complexity in work and it is to this tension that discussion now turns.

Whilst work in general is said to be increasingly more complex, paradoxically there is also evidence of a reduction in autonomy and discretion within work (Felstead et al 2007; Green 2006). One of the major factors in reconciling patterns of change in graduate work is the extent to which job-holders have control over work content and the way in which tasks are carried out. If work in the new economy is becoming more complex, this would be a possible reason for graduatisation. However, as Green (2006:32) notes, "[r]equired qualifications are only one indicator of the ability needed to do complex jobs". He goes on to suggest that the time spent training to become proficient is also a crucial factor in assessing complexity. Felstead et al (2007) note that workers are expected to become competent in a shorter period of time. The act of work framework suggests that using graduate entry may reduce the need for training without work necessarily becoming more complex.

Conceptually, autonomy and discretion are closely connected to the level of occupational skills and knowledge. Levels of autonomy and skill tend to correlate with position in the occupational hierarchy where higher skill levels reflect greater autonomy over work. However specialization in tasks complicates a linear correspondence between autonomy and skill. In professional work, specialization is a force for greater autonomy and authority over work (Friedson 2001). By contrast, specialization can also be conceptualized as a force for de-skilling, usually discussed in relation to employer/worker relationships (Braverman 1974; Littler 1982). In other words, there is a disconnection within autonomy, related to position in the occupational hierarchy.

As noted there is an emergent tendency towards specialist knowledge at port of entry within graduate employment, raising questions on whether changes in the GLM reflect employer demand for “work-ready” graduates. Explanation of the findings is therefore concerned with how far graduates in the occupations have discretion over work: “within work” discretion. However, it also requires to examine differences between graduate occupations: the relative dimension of discretion. The relative dimension of discretion implies that “work-readiness” may reflect reduced complexity in the overall nature of graduate employment, demonstrated in Table 9:2. The key question is not what discretion graduates have, rather what do they have discretion over?

The findings demonstrate that within work discretion is highest for Active-schools co-ordinators who largely control what they do on a day to day basis, albeit that there is extensive monitoring of work output, fed back to Sportscotland. Training is minimal although work experience is needed to access the job in the first place. Building surveyors, who have little formal occupational training, also have a fairly high level of autonomy over what they do on a daily basis. Tasks are driven by the nature of the building project and support is available from managers. Surveyors also have authority to call on expertise from other related professions which implies that judgement and discretion are integral to work. Risk managers also report a high level of “within work” discretion and limited training. The majority of Risk managers had moved jobs since graduating and this could be seen as a form of training. Support is available from line managers but generally accessed only when there is a specific problem. Unsurprisingly for Accountants and Environmental health officers, during the training contract work is extensively monitored. Environmental health officers “shadow” a qualified officer during training and immediately after begin to carry out inspections on their own although after qualifying, reports are checked by managers. Accountants experience the highest level of monitoring throughout the training contract although there is a gradual increase in responsibility throughout. In effect, trainee accountants are given more complex areas of the audit to prepare as they progress. Extensive feedback is also given to trainees after each audit is complete.

The evidence shows differences amongst the occupations in terms of within work and relative autonomy adding depth to the concept of work-readiness. If within work autonomy is considered in isolation, then a different picture emerges than if the relative dimension is incorporated. For example, Active-schools co-ordinators may have discretion over what they do but the scope of their remit is restricted. Building surveyors and Risk managers, by contrast, have a fairly high level of autonomy and discretion over complex areas of work. The specialist knowledge that these graduates possess reinforces autonomy. Extensive training experienced by accountants is also seen as preparation for a high level of responsibility and discretion over work.

The findings here are consistent with occupational categorization according to the SOC. Accountants are involved in a long period of training for a complex area of work. Their work is also integral to the core business of their employing organization and it is in employers' interest to ensure that they are competent at each stage of their training. Similarly Surveyors and Risk managers also have a relatively high degree of autonomy, yet this is assumed at an earlier career stage. They are experts in their particular fields and this confers authority within work, albeit that Risk managers' authority varies according to the importance placed on the function. Associate professional occupations in Environmental health and Active-schools report different levels of autonomy. However the tasks within work are relatively limited. More generally this evidence suggests that the professions and Risk managers conform to a professional model of specialization. Active-schools are typical of fragmentation: in essence they carry out work that connected professions (schoolteachers and health professionals) either cannot or will not do. Environmental health which is an aspiring profession appears not to have accumulated sufficient status to alter work to any great extent, nor the relative status of the occupation.

This final section of the analysis examines opportunities for career progression. Admittedly this evidence is speculative, given that interviewees do not know how their career will develop. Nevertheless it is instructive to look at graduates'

perceptions of career opportunities. It has been noted that a specialist field of study may limit career opportunities at port of entry. Notwithstanding that interviewees are largely at an early career stage, it is at least clear that opportunities for progression are limited by context of employment as well as the occupation that they enter. Graduates employed in the public sector report that career progression is limited by the hierarchical structure within the sector, irrespective of occupation. The evidence also suggests that Associate professional occupations are, to an extent, classified according to opportunities for progression. Once Environmental health officers, for example, have become managers, they might possibly be reallocated to the management category. It appears that achieving professional membership is an important factor and graduates are well aware of their career and labour market opportunities.

There is, however, little persuasive evidence within the case study occupations to support claims of the demise of bureaucracies (Burton-Jones 1999). All graduates report hierarchical structures within their specific occupation which limit or advance progression. Risk managers and Accountants have the most opportunity to move out of their original field of expertise. There is limited evidence of self-managed careers, given that a proportion of graduates have undertaken, or are considering, further qualifications or used “job-hopping” as a form of career advancement. Arguably graduates who undertake further qualifications on their own account are perpetuating and reinforcing a qualifications-based approach to selection and advancement. For Active-schools co-ordinators, acquiring further qualifications is possibly a result of the poor labour market opportunities for Sports graduates and the insecure nature of their jobs. Intention to exit the occupation is most clear in this group, where most graduates are actively seeking alternative work or preparing to undertake further qualifications.

In summary, career advancement is a useful element in analysis of graduate employment. Although some confusion emerges between context of employment and occupational career ladders, differences emerge according to SOC categories and professional status. The specialist knowledge of established professions and Risk managers is a platform for a structured career. By contrast, Associate

professions have limited career opportunities. This distinction is however qualified: it appears that initial career experiences of graduates influence perceptions of progression. Graduates recognise the difficulties associated with crossing the divide between public and private sectors which adds weight to the notion of positional competition in the GLM (Brown and Hesketh 2004). Not only is there fierce competition to secure a first graduate job, as time passes, it may become increasingly difficult to move out and up. The evidence suggests that an outcome of specialist knowledge at point of entry may restrict career ladders.

9.6 Discussion: (Re)-conceptualising graduate work

Interpretation of the findings has theoretical and methodological implications for researching graduate work and employment. Comparison across occupations allows some qualified contributions to theories of the relationship between education and work. Firstly the literatures on the GLM have proved useful in identifying the sources of labour market inequalities. Yet the evidence in this study reveals that the extent of mismatch is perhaps over-estimated according to which feature of graduate employment is under scrutiny. Examining mismatch may only provide a partial explanation of the outcomes of increasing numbers of graduates. Although general claims of oversupply appear to be supported by the findings, they do not explain how graduate work and employment may be changing. A key contribution of this study is that social closure theory explains patterns of change in the graduate labour market. Although closure via qualifications is not a new phenomenon, as numbers of graduates increase, employers and occupations respond by using altered forms of closure. Exclusion of the non-qualified is superseded by exclusion of the inappropriately qualified.

There is, however, considerable variation related to the “ideal type” graduate job. Although a traditional pathway between education and work, comprising degree plus occupational training remains, the findings reveal that work-readiness is an emergent feature in demand for graduates. Work-readiness is conceived differently in each occupation and has an impact on work and on graduates. Accountants measure

work-readiness as potential to succeed in professional examinations and in the social skills required in the profession. Graduates may or may not have acquired social skills in higher education but they quickly understand how important they are in work. To a lesser extent the same applies to Environmental health officers. Building surveyors and Risk managers by contrast are work-ready solely by way of degree knowledge and expected to apply knowledge early in careers. Active-schools co-ordinators are also required to be work-ready, both by having a degree and by demonstrable work experience, although it is debatable whether their level of education is needed for work. The absolute dimension of employability which includes fixed graduate attributes such as institution attended and degree subject and level is replaced by the relative dimension which offers the opportunity for graduates to demonstrate work-readiness, the crucial factor in demand.

The findings indicate that outwith specific occupational knowledge, graduates are employed for their ability to communicate, to make judgements and to interact with clients, other organisational members and associated professions. Much of the work content in the Associate professional jobs involves administration, information-handling, negotiation and persuasion rather than application of high-level theoretical knowledge. Whilst many graduates report that they have a considerable level of autonomy, job-roles in Associate professions are often limited in scope. Utilisation of graduates' abilities in these occupations is constrained by the job content: it is not that they do not use their skills and knowledge, rather that work content means that they cannot. Nevertheless the utilisation of graduates with relevant occupational knowledge also means that once in work, they can become proficient more quickly. Graduates may be equipped to understand why they are doing things.

Career opportunities may also be limited by a narrowed field of knowledge. Differences in transfer of knowledge and skills within the same occupation mean that this is perhaps an inadequate measure of mismatch in the GLM. Future research on graduate employment might usefully gather data in other graduate occupations. For example, traditional professions escape claims of mismatch, yet there is little

empirical evidence on the extent to which educational and occupational knowledge coincide in this area of work. The evidence that graduates have changed jobs since graduation in order to gain relevant work experience also indicates that work-readiness is decisive in success. Job-hopping is despite specialist degree knowledge at port of entry and could indicate employer abrogation of training. Despite constraints placed on utilisation of degree knowledge, it is also apparent that graduates may possess qualities that are a hidden component of degree education which in turn allows them to be work ready. An over-supply of graduates may cause mismatch but it also means that those who are in jobs consider themselves fortunate and do not question the demands placed on them.

When the scope of analysis is expanded to include actors in the relationship between education and work, the evidence suggests that increasing numbers of graduates has been countered by strategies to establish occupational boundaries and thereby reduce applicants. The professional pathway between education and work provides a model that professionalizing occupations adapt. Despite this, whilst some evidence of professionalization is apparent at entry level, its influence fades once graduates have established themselves in a particular occupation. The full effects of expansion of higher education remain to be seen but it appears that credentialism has been altered towards useful knowledge and skills, certainly within the occupations in this study. Professionalization via higher education may advantage relevant graduates but the advantage may diminish as the career progresses. The findings reveal that graduation is not necessarily accompanied by significant change in work content. Although the range of graduate jobs may have expanded, their relative standing in the occupational hierarchy

CHAPTER TEN: CONCLUSIONS AND REFLECTIONS

10.1 Revisiting objectives

This concluding chapter reflects on the research process and logic of discovery. It returns to the core research objectives and evaluates the extent to which these have been achieved, detailing core contributions of the thesis and emergent opportunities for further research. The aim of the research was to investigate the scope and character of graduate work and employment in light of an increasing supply of graduates. The research objectives, as proposed, are as follows:-

- Explore and evaluate existing models of the graduate labour market (GLM)
- To incorporate work content in analysis of graduate employment
- To contribute to academic and policymaker knowledge of graduate employment

This chapter begins by re-visiting the research objectives relating these to the key empirical and conceptual contributions of the thesis, followed by a section on limitations and areas for further research.

10.2 Key contributions

The first research objective was designed to explore contrasting models of the GLM. The dominant policy model, supported by the SOC(HE) typology provides an optimistic picture of the GLM, suggesting that the range of graduate jobs is expanding in line with increasing numbers of graduates. Utilization of knowledge and skills is the key descriptor of graduate level employment. The SOC(HE) is arranged in a hierarchy with traditional graduate jobs at the top and a niche category at the interface between graduate and non-graduate categories. By contrast, successive empirical studies suggest that increasing the supply of graduates produces different forms of mismatch. The occupational mismatch derives from a contested definition of graduate level employment and the educational and skills and

knowledge mismatches propose tensions between required and acquired qualifications and/or knowledge and skills.

Interpretation of the findings in this study reveals that neither conceptualization presents an entirely adequate model of the GLM. It is accepted that the range of jobs that graduates do is expanding and that degrees requirements extend into Associate professional and technical professions. However it is not, as the SOC(HE) proposes, that the presence of graduates necessarily means that work is upskilled. It is more likely that the wider distribution of graduates reflects diversity in the skills and knowledge that graduates possess. Although identifying mismatch is useful to uncover possible sources of inequality in the GLM and consequently to challenge a meritocratic view of the GLM, it appears from the evidence in this study that mismatch may be exaggerated. Versions of mismatch make assumptions about graduate-level employment and connections between education and work that work itself.

This thesis does not reject claims that there may be an over-supply of graduates and that positional competition characterizes the graduate labour market. It does, however, argue that research designed to explore and quantify mismatch has perhaps produced an impasse in evaluation of graduate employment which will persist unless diversity in higher education systems and demand strategies are incorporated in analysis. It is possible that ever more sophisticated analyses of the GLM may produce nuanced versions of mismatch based on one or more features within the broad concept of personal capital defined by Brown and Hesketh (2004). Indeed the comprehensive CHEERS study, which surveyed graduates in 14 countries and incorporated social class, field of study and transfer of knowledge and skills questioned mismatch (Teichler 2007). It also suggested that in comparison with other European countries such as France and Germany, the UK higher education system is less vocationally-oriented. Whilst this may be true, it does not indicate if a process of change may be underway as a result of increasing the supply of graduates and the way in which actors may shape the GLM via graduatisation. Positional competition is an outcome of increased supply and also the driver for diversification and differentiation amongst the graduate population.

This thesis proposes that increasing numbers of graduates has produced “multiple matching” in the GLM. These may be based on the requirement for certain qualifications, constituent knowledge and skills or indeed on the currencies within personal capital that are not necessarily a product of university education. Increasing the supply of graduates has produced a “buyers market” in the GLM so that employers can pick and choose graduates that suit the contextual conditions relevant to their particular circumstances. Increased supply has certainly facilitated and accelerated graduatisation in occupations. Consequently, the SOC(HE) may be an accurate reflection of the range of jobs that graduates do. To an extent, and given certain circumstances, supply does create demand and yet the result is not more of the same type of (professional) jobs. Occupations graduate “because they can”, and relative position in the occupational hierarchy remains stable. The findings are not, however, entirely consistent with an overall trend towards qualification inflation: it is not that employers seek graduates, rather they seek particular types of graduates related to occupational requirements. University rankings rely on the SOC(HE) to define graduate jobs, yet they do not separate categories of the model. The findings in this study indicate that employment outcomes, according to the SOC(HE) may correspond with university rankings. Yet a blanket use of the SOC(HE) as a definition of graduate employment obscures differences in the type and level of employment that graduates achieve.

Despite the claim of “multiple matching”, a gap in knowledge obtains without attention to graduate work. By focusing on the labour market, on graduate destinations, and to an extent on skills and knowledge transfer across the graduate population, the nature and quality of work in the jobs that graduates do is neglected. This introduces the second research objective which sought to explore the work content of graduate jobs. Given that there is no apparent template in existing research from which to fulfil this objective, a major part of this stage of the process involved selecting appropriate and relevant literatures to advance knowledge of graduate employment. Admittedly, some pointers were evident, both in terms of possible connections between education and work and in the features of work that might aid analysis. In particular, the focus shifted from graduate attributes onto tensions between qualification requirements and work content.

A strict labour process analysis was replaced by research questions which sought to explore utilization of graduates. Intuitively we know that all graduates are not qualified for all jobs and there is often little connection between degree and occupational knowledge, suggesting that the function of qualifications should be investigated further. Broadly speaking, the review proposed that analysis should separate qualifications from their constituent knowledge and skills. The key question is the extent to which new areas of employment for graduates are driven by work content or opportunism on the part of employers.

Secondly, economic and education policy seeks to create a knowledge economy by increasing the supply of graduates and this suggested scrutiny on the knowledge economy thesis. Consequently, the Marxist approach and social closure theory were considered as alternative perspectives on relationships between education and work. Review of these literatures suggested that structural and uniform explanations such as Marxist and knowledge economy produce, are inadequate to explain the workings of the GLM. Social closure theory appeared to have more explanatory power, given that it allows for variation in demand strategies. Thirdly, the literatures proposed that professions are ideal-typical graduate jobs with distinctive features, in turn prompting review of professional work as a approach. Professionalisation strategies, apparent in the utilization of graduates, mean that relevant degree education can be used as a method of establishing and consolidating jurisdictional boundaries. Finally, selecting a number of occupations for the qualitative element of the study provided a useful comparison between and across occupations. Reconciling the labour market for graduates with work content in graduate jobs indicates variation in the labour market and in work content. For example, utilization of knowledge and skills is related to work content and context in each particular occupation.

When the nature of work is examined, the findings suggested continuity and change in graduate work. The “ideal type” graduate job in the form of degree education followed by a period of supported occupational training, is still evident. However the overall reduction in training found in the survey evidence was also evident within some graduate occupations. Yet this does not mean that education is a substitute for

training, despite what employers may think. Instead it suggests that responsibility to become proficient and “work-ready” is devolved to graduates. Transfer of knowledge cannot simply be read off by close connections between degree subject and occupation. The findings revealed that it is not that graduates do not have the correct knowledge, rather that constraints within work prevent use of knowledge. Despite this, it appears that graduates may have qualities that enable them to perform in the occupations that they enter. Moreover, attention to autonomy and discretion over work revealed that the absolute and relative dimensions of autonomy are key to understanding graduate work. Task discretion is not necessarily connected to position in the occupational hierarchy and may be related to how important the occupation is to the core business of the employing organization. To an extent, the more complex work is, the less autonomy graduates are afforded in early careers but subsequent career ladders are foreshortened in Associate professional and technical occupations. The SOC descriptors may be outdated in evaluation of requirements for occupations yet accurate in sustaining the occupational hierarchy.

The key contribution from examining the work content of graduate jobs is that work-readiness shapes demand for graduates. Although work-readiness is conceived differently, it has implications for analysis of graduate work. Utilization of graduates does not solely depend on the skills and knowledge that employers want related to those that graduates possess. Re-casting employability as work-readiness incorporates the underlying drivers of demand for graduates. It recognizes that many of the graduate attributes within personal capital are fixed and although they allow comparison amongst graduates, it is the ability to demonstrate work-readiness that appeals to employers. More particularly, the evidence reveals that graduatisation may feature in professional projects but the resulting bargain between employers and graduates does not follow a traditional professional model. Although Accountants are provided with post-graduate training, work-readiness means that uncertainties involved in employing school-leavers as apprentices is reduced. In effect work-readiness implies that employers select the graduates most likely to succeed in professional examinations and those with the qualities required for the profession. Similarly Surveyors have shifted initial professional training to higher education and graduates are expected to be work-ready on graduation without

any further training. The Associate professions, Environmental health officers and Active-schools co-ordinators, use degree education as an indicator of work-readiness with the result that training time is reduced for the former and the latter are also required to have work experience to be considered for the occupation. Risk managers used a relevant degree in the formation of the occupation but are also expected to be work-ready on graduation and often have to gain practical work experience in the labour market. Niche degrees may provide an initial advantage for graduates but this is dependent upon the labour market. Whilst the transition effect is noted by Elias and Purcell (2004), the evidence in this study demonstrates that it is not necessarily related to initial degree education, rather to labour market opportunities and demonstrable work-readiness.

The final objective is a cross-cutting theme running throughout this thesis and deserves some close attention in this concluding chapter. As suggested in Chapter five, this is where the emancipatory intent of critical realist research becomes apparent. On the one hand, this research has revealed that graduate employment is expanding and suggests that occupations in the Associate professional category of the SOC are not beneficiaries of a “cascade effect” in the GLM (Brynin 2001). It appears that supplying these occupations has become a regular function of some sectors of higher education, perhaps as a strategy to combat the reputation of Russell-group universities. Yet the news is not all good. Explanation of the effects of increasing numbers of graduates and expansion in higher education involves a complex interaction amongst actors and factors, articulated at different levels of analysis.

At the macro level, this research has suggested that, for a number of reasons, policymakers’ desire to create a knowledge economy in Scotland has not materialized as intended. Instead new degree subjects are being created and used according to occupational self-interest. Admittedly, this may reflect the nature of the occupations and universities selected for this study. Yet occupations were chosen to cover a broad spectrum of graduate employment and specifically because they are more recently graduatised. At the meso-level the reasons for graduatisation, it emerged, were not connected to utilization of high-level theoretical

knowledge, typical of knowledge work. It seems far more likely that closure is the dominant mechanism in the GLM. Aspiring and emergent professions adapt and dilute the traditional professional model and traditional professions have shifted from firm based apprenticeships to all-graduate entry. Professionalisation or consolidation of professional status is aided by a competitive higher education sector, willing to comply with employer influence and to create new degrees, targeted towards specific occupations. This thesis cannot comment on whether this is an effect of the employability agenda but it is certainly a possibility. It appears that newer universities may be willing to cede academic autonomy in the pursuit of producing work-ready graduates, in turn making degree programme rather than university important to prospective undergraduates. Overall the trend towards relevant knowledge and skills, irrespective of occupational entry requirements, suggests that labour market segmentation may be an unintended outcome of the expansion of higher education. As qualifications become devalued in general terms, employers and occupations respond by limiting access to those more likely to be work-ready. Yet this does not present the full picture: at the micro level, social skills are used to discriminate amongst equally-qualified applicants replacing an education-based meritocracy with a form of nepotism and reinforcing positional competition. Instead of graduates being the unwitting victims of positional competition, it may be that they recognize the potential effects of increasing supply and adjust accordingly.

Attempting to reconcile expansion in the range of jobs that graduates do with exclusionary strategies in the labour market is not a simple task. What is desirable and feasible is by no means straightforward. In addition, it is inadvisable to use evidence gathered in one doctoral thesis to make sweeping generalizations and predictions. Nevertheless the implications for policymakers from this study are that increasing the supply of graduates may be met with demand driven by occupational self-interest which may in turn be to the detriment of graduates, particularly those “purists” with non-vocational degrees (Brown and Hesketh 2004). If the trend towards labour market segmentation is confirmed with further evidence, it might reasonably be assumed that positional competition will continue to feature in the GLM. By reducing the possible occupations graduates can apply for, initial

labour market options become substantially restricted. This may be increasingly evident, given the current economic crisis, the effects of which have been felt across the occupational hierarchy. Moreover graduates with more general, or non-vocational, degrees may be entirely overlooked by prospective employers in favour of relevantly qualified peers, despite the best efforts of educators to embed the employability agenda.

To an extent policymakers pay lip service to the value of education as a collective social good in favour of an emphasis on personal returns. One of the emergent issues from this study was that graduates appeared to adopt an instrumental attitude to their degree education, apparent in all but the Sports science graduates. Whilst Warhurst (2008) notes that it is well-nigh impossible to interfere in the demand side of the labour market, it may be time for policymakers to engage with the purpose of higher education and measurement of its value to Scotland as a society, rather than an economy. This may only mean that the social value of education is promoted with at least the same vigour as the economic value. Despite this, employment outcomes remain an important indicator in evaluation of education policy more generally and given the substantial investment in higher education, it is also possible that funding in the form of grants might be a useful corrective to instrumentality. If the Scottish government truly believe that education is a social good, then means-tested funding, irrespective of possible employment outcomes is certainly desirable. Moreover the attitude of educators deserves further scrutiny, particularly in relation to the extent to which work-readiness is perceived as a valued objective of higher education and the corresponding effects on degree education in general. Whether or not universities and educators see higher education as a form of training, it is being used by employers as such.

10.3 Limitations and future research

The research in this study begins to advance the debate on graduate work and employment and has made some useful contributions to knowledge, as follows:

- The concept of “multiple matching” accounts for variation in the function of qualifications. Expansion in the range of graduate jobs is a reflection of diversity within higher education systems.
- Graduation is governed by closure and credentialism. New areas of employment for graduates do not necessarily reflect new areas of expertise and may indicate increasing rationalization in the division of labour. Occupations graduate “because they can”, yet the occupational hierarchy remains stable.
- Work-readiness is a key feature in demand for graduates. Employers perceive higher education as a substitute for training. Responsibility for acquiring work-readiness is devolved to graduates. If work-readiness rather than employability is emphasized, then graduates may become more aware of what they require to demonstrate to be successful in the labour market.

Conceptually, the thesis has argued that new, and perhaps challenging, questions should be applied to researching the effects of increasing the supply of graduates. More specifically, whilst there is a wealth of information on the supply-side characteristics of graduates, the nature of work and job quality in graduate employment are relatively under-developed. This study has begun to address this weakness. Consequently, the case study approach has proved instructive in analysis of graduate work and employment and provides a platform from which to conduct further research, using a similar approach. Indeed this will be a necessary undertaking to confirm the findings in this study. It may, however, be more productive to study a particular occupation in order to analyse the labour process in more depth. Work organization, for example, although given passing attention here, would be a useful addition to the conclusions derived from this study.

There are, in addition, at least three other areas worthy of further research. The first is social class and higher education which was identified from the literature and subsequently discarded for pragmatic reasons. To an extent, social class was covered by using institution as a proxy but this is, admittedly, rather a blunt instrument. It may be that research in a Russell-group university would produce

different results. Work-readiness may be conceptualized differently in such universities. Secondly, the instrumental attitude towards higher education displayed by graduates deserves further research. Graduates who are more aware of their “work-readiness” may be more successful. In addition, research on graduates who have been unsuccessful in their chosen career path would also be illuminating.

It was suggested in analysis in this study that relevant education may offer the opportunity to create or consolidate occupational identity, more usually referred to as socialization in the professional literatures (Eraut 1994; Freidson 2001). However the effects of specialisation in degree subjects in relation to the creation and management of occupational identities are relatively under-researched. Finally, the transition effect noted in this study might benefit from longitudinal research, perhaps following a group of graduates throughout their careers. In conclusion, although some limitations have been identified in the study, overall it has made a useful contribution to advancing knowledge on graduate work and employment and has therefore achieved its objectives, although the impact remains to be seen.

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Appendix 1: GLASGOW CALEDONIAN UNIVERSITY CAREERS SURVEY

Section 1: What were you doing on 15 April 2007?

- 1.1 Which **ONE** of the following best describes your employment situation on 15 April 2007?
- | | |
|--|--------------------------|
| I was employed full-time in paid work | <input type="checkbox"/> |
| I was employed part-time in paid work | <input type="checkbox"/> |
| I was self employed/freelance | <input type="checkbox"/> |
| I was doing voluntary/other unpaid work | <input type="checkbox"/> |
| I was permanently unable to work/retired | <input type="checkbox"/> |
| I was temporarily sick or unable to work/looking after the home or family | <input type="checkbox"/> |
| I was taking time out to travel | <input type="checkbox"/> |
| I was due to start a job within the next month | <input type="checkbox"/> |
| I was unemployed and looking for employment, further study or training | <input type="checkbox"/> |
| I was not employed but NOT looking for employment, further study or training | <input type="checkbox"/> |
| I was in full-time education | <input type="checkbox"/> |
- 1.2 On 15 April 2007 were you involved in either full-time or part-time study?
- | | |
|-----------------------|--------------------------|
| YES – full-time study | <input type="checkbox"/> |
| YES – part time study | <input type="checkbox"/> |
| NO | <input type="checkbox"/> |

Section 2: Your employment on 15 April 2007

If you were not working on 15 April 2007 please tick and go to Section 3

If you have more than one job please answer the questions in this section in terms of your main job.

2.1 What does your employer mainly make or do?

2.2. What is the name of the organisation you were working for?

2.3 Where was your place of work, and, if in the UK, what is the postcode?

2.4 What was your job title?
2.5 And please briefly describe your duties?

2.6. Approx how many people does this organisation employ in the UK? Under 250 Over 250

2.7 Which of the following best describes the basis on which you were employed on 15 April 2007?

On a permanent open-ended contract	<input type="checkbox"/>
On a fixed-term contract lasting 12 months or more	<input type="checkbox"/>
On a fixed-term contract lasting under 12 months	<input type="checkbox"/>
Self-employed/freelance	<input type="checkbox"/>
Temporarily, through an agency	<input type="checkbox"/>
Temporarily, other than through an agency	<input type="checkbox"/>

		Other	<input type="checkbox"/>
2.8	How long have you been with this employer?	Years <input type="text"/> Months <input type="text"/>	
2.9	What was your annual salary before tax?	<input type="text"/>	
2.10	Is this your first job since graduating from Glasgow Caledonian University in 2004?	Yes <input type="text"/> No <input type="text"/>	
2.11	If no, what was your first job?	<input type="text"/>	
2.12	Would you have been able to get the job you were doing on 15 April 2007 without the qualification you obtained?	No: the qualification was a formal requirement	<input type="checkbox"/>
		No: successful applicants were expected to have the qualification	<input type="checkbox"/>
		Possibly, but the qualification gave me an advantage	<input type="checkbox"/>
		Yes	<input type="checkbox"/>
		Don't know	<input type="checkbox"/>
2.13	Did your employer provide a formal training programme for you when you started employment?	Yes: a formal graduate training programme lasting a year or more	<input type="checkbox"/>
		Yes: a short induction course to the company	<input type="checkbox"/>
		Yes: formal on the job training	<input type="checkbox"/>
		No	<input type="checkbox"/>

- 2.14 As far as you are aware, what was more important to your employer about your qualification, the subject(s) studied, or the level of study?
- The subject(s) studied
 - The level of study
 - Both were equally important
 - Don't know

- 2.15 Why did you decide to take the job you were doing on 15 April 2007?
(Please tick most appropriate)
- It fitted into my career plan/it was exactly the type of work I wanted
 - It was the best job offer I received/Only job offer I received
 - It was an opportunity to progress in the organisation
 - To gain experience in order to get the type of job I really want
 - To see if I would like the type of work involved
 - To broaden my experience/To develop general skills
 - In order to pay off debts
 - Because it is better than being unemployed

What were the other reasons for taking this job?

- 2.16 How did you find out about this job? (Please indicate all the methods you used)
- The University's careers service (including Careers Fairs)
 - Employer's website
 - Newspaper/magazine advert
 - Recruitment agency/website
 - Personal contacts, family, friends, networking

- Speculative application
- Other

- 2.17 In terms of your employment on 15 April 2007: did you work for this employer before or during the programme of study at Glasgow Caledonian Uni?
- Yes – before my programme of study
 - Yes – during my programme of study
 - Yes – both before and during my programme of study
 - No (Please go to Section 3)**

- If your answer to the last question was Yes In ways did you work for this employer?
- On a sandwich placement
 - On another kind of placement or project work
 - As a holiday job
 - Full-time or part time work all year round
 - Full-time or part-time during term time
 - In other ways

2.18 Please give details of any other employment you undertook whilst at university.

Section 3: Further study, training or research

If you were not undertaking study, training or research on 15 April 2007 please go to Section 4

- 3.1 Which of the following best Registered as a research student

describes the study or training you were undertaking on 15 April 2007?	Registered on a course	<input type="checkbox"/>
	Preparing a professional portfolio of my work	<input type="checkbox"/>
	Engaged in private, unsupervised study	<input type="checkbox"/>

3.2. What is the name of the course you were registered for	
--	--

3.4 What is the name and location of the Institution at which you were registered?	
--	--

3.5 Which of the following best describes the type of qualification you were aiming for?	Higher degree, mainly by research (PhD, DPhil, etc)	<input type="checkbox"/>
	Higher degree, mainly by taught course (MA, MSc etc)	<input type="checkbox"/>
	Postgraduate diploma or certificate	<input type="checkbox"/>
	First degree (BA BSc etc)	<input type="checkbox"/>
	Other diploma or certificate	<input type="checkbox"/>
	Professional qualification e.g. accountancy	<input type="checkbox"/>
	Not aiming for a qualification	<input type="checkbox"/>

3.6 Why did you decide to undertake further study, training or research? (Please tick most appropriate)	To develop a broader or more specialist range of skills or knowledge	<input type="checkbox"/>
	To change or improve my career options	<input type="checkbox"/>
	Because I was interested in the content of the course	<input type="checkbox"/>
	Because I had enjoyed my first course and wanted to continue studying	<input type="checkbox"/>

I wanted to go on being a student/postpone job hunting

I had been unable to find a suitable job

Other reasons for further study

Section 4: Personal details

4.1 What was the title of the course you completed in 2004 and the qualification? qualification (e.g. BA, BSc, MSc, Diploma, Phd)?

Qualification

Degree

Subject

4.2 What other qualifications do you possess? (Please give qualification, awarding institution and year)

4.2 What was your age at 15 April 2007?

Years

Months

4.3 Sex?

Male

Female

4.4 Home address

Postcode

4.5 Would you be prepared to provide additional information about your career development for this research? Yes No

If Yes could you provide your email address/ telephone number?

E mail address:

Telephone number:

Name (optional):

4.6 Looking to the future, do you anticipate changing your job or employer during 2007? Change job Change employer

Yes Yes

No No

THANK YOU FOR YOUR TIME. PLEASE RETURN THE SURVEY IN THE ENCLOSED REPLY PAID ENVELOPE BY 2 July 2007

Appendix 2: INTERVIEW QUESTIONS

This research is conducted in line with the University of Strathclyde's Ethics Policy. I am going to tape the interview if that is OK with you? Everything you say is confidential, it is anonymised so no-one can attribute anything you have said to you personally, it's entirely voluntary and you can stop the interview at any time. If you want I will send you a copy of the interview transcription so that you can make changes to any answers that you have given. This research follows on from the survey you completed last year and is designed to find out a bit more about what you do in your job.

Job content: output and process issues

So first of all could you tell me a bit about your job, perhaps thinking about a typical day or week? What kinds of things do you do at work?

What kind of knowledge and skills do you think are important in your job?

Do you work as part of a team? How do you find that?

How much feedback and support do you get on what you do at work? From colleagues and supervisors?

Do you have direct contact with clients? In what ways?

Is there a formal training programme in place for your traineeship?

What kind of hours do you work?

Work/life balance in your chosen profession – while training / in the future

Do you find your work challenging? I suppose what I am saying is has your job so far turned out to be what you expected?

Input issues: what needs to be known prior to, or as a condition of entry?

So going back to thinking about your university education, what are your qualifications?

How did you find the recruitment process?

How important do you think your degree(s) was/were in getting your job? Was it just the degree or subject that was more important?

What do you think were the important parts of your degree, now that you are in work?

Context/career progression

Thinking about the future, how would you see your career progressing?

What kind of opportunities do you think will be available to you?

