The Humanities Value Chain:
A Framework for Knowledge Transfer
in the Modern University

Lisa Mooney Smith

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PART I

ABSTRACT

The research described in this thesis presents a body of material generated over four years of close observation of research and knowledge transfer practices in one Russell Group university institution. It attempts to contextualise knowledge transfer (hereafter KT) within the arts and humanities environment, as well as situate learning about the reception and adoption of KT with reference to the individual scholar and the organisation in which they operate. Within this context, little has been written explicitly about the character of the arts and humanities, and particularly the historical antecedence of the disciplines and their close relationship to current KT challenges.

In the early chapters of the thesis we address the growing interest in KT specific language, the key words that have become landmarks in the extension of the '*Two Cultures'* debate. In defining some of the parameters by which KT has come to be recognised, we also begin to signal changes in both the lexicon and landscape in which KT has evolved. We suggest that both the institution and their academic inhabitants play an intrinsic part in this evolution, framed by both the political and scholarly tensions of the time.

In the latter part of the thesis there is a distinct shift in emphasis from the foundations of the KT debate, to its current inflections at a more grass roots level within the academic institution. We frame this shift in the context of the key investor in research within these disciplines and suggest that the Arts and Humanities Research Council is equally challenged to articulate and underpin the adoption of KT and its impacts at the heart of academic practice. In order that we might better animate how these practices are emerging, we observe one particular case study that lays down a possible framework for closer observation of KT in what we term the 'Humanities Value Chain'. In focusing on a collection of players connected in the successful pursuit of collaborative research, we attempt to uncover a the perspective of individuals within the institution and the way in which organisations might support or hinder their pursuit of KT based research.

In concluding the thesis we suggest that the culmination of this knowledge might offer a useful framework for considering how KT occurs in arts and humanities led teams, and at the same time how

it might act as a possible tool from which KT players and practices might be better observed. In presenting a possible framework for consideration, we suggest that the current preoccupation with impacts might at the same time be better understood by observing more closely the roles researchers play during the collaborative research process.

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ORGANISATION OF THE THESIS

The thesis is essentially divided into three sections: the historical setting, a close-up study of individual academics in their institutional setting and the appendices and bibliography.

Part I is shaped by the need to set the scene for the context in which knowledge transfer has emerged. It reviews the contextual literature, and begins to pose initial questions around how to explore current inflections of debates rooted within that historical narrative.

Chapters 1 and 2 highlight the principal concerns of this investigation: language and concepts, intellectual debate and the climate in which knowledge transfer has emerged.

Chapter 3 utilises the principal concerns uncovered in chapter 2 and 3 to reflect upon one particular case study and examines how knowledge transfer is being carried out at a grass roots level within our university institutions. It attempts to lay down some key components for knowledge transfer practices for a more in-depth study throughout the later chapters of the thesis.

Chapter 4 is concerned with the methodological challenges presented in combining discursive narrative with more in-depth study and sociological frameworks. It outlines the sites and situations in which knowledge transfer is being shaped, and attempts to clarify how new practices might be adopted, and limitations overcome.

In chapters 5 and 6 the study shifts in emphasis towards a more in-depth observation of the individual scholar and the institutional environment in which they operate. It aims to present some of the complexity in academic and administrative practices, often overlooked in studies of knowledge transfer in the modern university.

Chapter 7 aims to bring a number of key threads together that have developed through the previous chapters to suggest that there may be roles, tools and frameworks that might, if combined, support the adoption of knowledge transfer practices more effectively.

Part II includes the appendices, bibliography and a CD containing a variety of reference material cited within the thesis, namely questionnaires, interviews and a chronology of key events and policies relating to Higher Education, research development and politics throughout the period of the study.

CHAPTER 1
THE HUMANITIES VALUE CHAIN: A HISTORICAL SURVEY

1.1 INTRODUCTION

This thesis seeks to explore the place of humanities research in a modern university in the context of changes in the landscape for research and research funding, which demand of all sectors of a university that research be seen to be more outward-looking and be of greater benefit to the wider economy of the nation (Currie & Newson 1998; Buchbinder 1993). In order to undertake this exploration, the early chapters examine these changes against an historical background of social and cultural change, with particular reference to the last forty years, which have also seen new directions in the formation of government policy, an overall expansion of funding for arts and humanities research and the development of a whole new vocabulary to articulate relationships between research and the wider world (Shrivastra & Mitroff 1984). Such changes have of course not gone unchallenged, nor without debate of some fundamental issues. Changes of this order also bring inevitable changes in the lexicon used to describe and debate them (Holden & Kortzfleisch 2004) and the capability of the arts and humanities to adopt what many consider to be new academic practices.

The first part of this chapter undertakes therefore a brief cultural history with particular reference to education and higher education, with discussion of key words and debates interwoven with an account of the main changes to the higher education system and the place of humanities within that system. Subsequent sections of the chapter explore more fully the key notion of 'Knowledge Transfer' (hereafter KT) and it developing centrality to the research and funding agenda in modern universities (Rynes, Bartunek & Daft 2001). The terms themselves used to describe this agenda raise questions about the nature of knowledge, its cultural production, how it is valued differently within different academic and administrative cultures and sub-cultures (Davenport & Prusak 1998). In setting the scene on the cultural perspectives we will go on to explore how knowledge can be effectively transferred (Cummings & Teng 2003) and uncover case studies, examples and recommendations as to how this transfer, or exchange may be better understood and adopted by the arts and humanities community.

As the thesis focuses particularly on knowledge transfer it also brings to the fore a number of insights underlying how and why different kinds of knowledge are adopted, valued and attached to different modes of research. We will address how these values are inflected in the behaviour, language and understanding of different communities (Wenger 1998; 2000), and suggest how, in taking a closer view of communities and their environment, might we uncover patterns and activities to enhance KT practices. In particular, the notion of the 'Humanities Value Chain' is described and developed as an important defining concept in helping to elucidate the nature of humanities research, from both an historical and contemporary perspective.

1.2 KEY WORDS IN THE DEBATE

"There is in fact a general pattern of change in these words, and this can be used as a special kind of map by which it is possible to look again at those wider changes in life and thought to which the changes in language evidently refer."
(Williams 1960)

Debates about the contribution made by arts and humanities research to society and to both the knowledge and wealth of the nation have become especially extended in the early part of this century. Throughout these continuing debates there are several words that cause us to pause, take stock of their meaning and explore what they reveal of the contours of that debate.

We begin with discussion of the work of Raymond Williams (1921-1988). Williams was one of Britain's most distinguished post-war cultural historians, theorists and polemicists. He was a distinguished literary and social thinker who was above all concerned with understanding literature and related cultural forms, not as the outcome of an isolated aesthetic adventure, but as the manifestation of a deeply social process that involved a series of complex relationships between ideology, institutional process, and generic/aesthetic form. Pioneering in the context of the British literary academy, these concerns are heralded in the short-lived post-war journal *Politics and Letters*, which he co-founded. They are perhaps best summarised in *Culture and Society 1780-1950*, his critical panorama of literary

tradition from the Romantics to Orwell, predicated on the key terms "industry", "democracy", "class", "art" and "culture". This ideological sense of cultural etymology became the basis of his influential study *Keywords: A Vocabulary of Culture and Society*, first published in 1976, with a second and enlarged edition issued in 1983.

'Key words' rarely stand alone, as each intersects and often shares common patterns of usage "to converge their way of seeing things and create a greater mutuality between them" (Carter 2004). When we talk about culture, the notion of value is made more visible by perceptions of rank, affiliation and social order for example. In the same way, to talk about the word 'common' in reference to common man or noble man, it tells us as much about the influence of language upon social order as it does about 'high culture' and the widening divides amongst lay and intellect (DiMaggio 1987; 1988).

Williams work covers key decades in the earliest phases of the debates about the place of humanities and the study of humanities in society. For Williams, words such as culture, value, purpose, community, industry and language mark out a trajectory, where an understanding of their semantic roots not only enables understanding of how they may be used and perceived today but also provides an index to shifts in the relationship between language, society and culture.

The following section of this chapter presents a brief analogue of the historical context of these particular terms, in order to see if 'living history' has diversified and adapted its points of reference from which different chains of value in the study of the humanities are understood today (Kaplinsky & Morris 2000).

1.2.1 Culture

The term 'culture' originated from within practices or acts of worship and cultivation. It was closely associated with the early church or cultivation and tending of crops, through to the metaphorical notion of the cultivation or tending of the human mind. The extremities of these practices were refined throughout the eighteenth century, moving away from the view that defined them as independent of each other, to one where coexistence was both possible and necessary. This pluralist definition was to be the basis on which later study of anthropology would be founded as the merging of political,

economic and social perspectives: idealism and materialism finding intersections between cultural activities and their relation to particular social orders (Castells 1996; Williams 2004).

The basis for understanding the term culture from a 'whole way of life' perspective takes one from the 'cultured person' to the 'cultural process'; a 'developed state of mind', the process of how this is achieved and the means by which the process produces outcomes or a specific 'cultural product'. In this way culture moves away from telling us something about the whole, to something about what makes up distinct parts of the whole, the social order and constitution of cultural identity.

A more current view of culture concentrates on the convergence of cultural practice and production, where a broader idealist vision is extended to form an overarching system from which social order is "communicated, reproduced, experienced and explored" (Williams 1981). In the twenty first century practice and production is being tested by the technological advancement of the media industry and its place in maintaining and influencing social make up and order. Although mass society and increases in production generally are not new to us, the inclusion of technical innovations (Daniel 1998) and advancements in mass communication, post Industrial Revolution, has meant the notion of culture has also grown and taken on new meaning.

Crucially, however, Williams' concept of cultural materialism went further. The key question was how the relationship between society and culture was understood. In his 1958 essay *Culture is Ordinary*, Williams cited the Marxist tenet that "a culture must finally be interpreted in relation to its underlying system of production as a culture is a whole way of life, and the arts are part of a social organisation which economic change clearly radically affects." The latter indicates Williams' resistance to the classical Marxist idea of culture as a 'superstructure', and the former his concern to ensure links between culture and economy are reinforced to secure 'a whole way of life' ethos to each. Williams counter posed this to 'high culture' where we "call certain things culture and then separate them, as with a park wall, from ordinary people and ordinary work" (Williams 1958).

Williams was thus a cultural historian who forced us to think about what we mean by culture, about the ownership of culture, its relevance to people's lives and what a modern university should be doing to

enhance understanding of it. He did not write explicitly about the relationship between funding and value to society in relation to humanities research, but his writings suggest that he would have been sympathetic to any approach which attempted to make links between scholarship and the economy, particularly where benefits were to be wider than to the academy alone.

1.2.2 Value

For Williams, a definition of value could not be easily divorced from what is of common value, that is, what is valued by or perceived to be of value to a community. It is not wholly a matter of what is perceived to be valued by or for an individual. Value cannot be looked at in isolation as it both reflects and reacts to combined elements such as environment, experience and behaviour. It often allows behavioural freedom, for example, to go beyond how we are conditioned to respond and sits at the heart of our moral, political and economic judgement. When we talk about value in this way we often adopt a sense of 'worth' or 'rewards' that equate to personal, monetary or market terms, particularly in an academic setting (Siegel & Waldman 2003).

Value also works on an individual as well as collective level, relying upon a common acknowledgement of social presuppositions, how they communicate, how they counter balance or expose conflict. Value theory tells us something about these personal and collective values and how they are shared within a particular community (Iverson & Mcphee 2002). Methodologies for exploring how values may have changed under specific conditions will be central to understanding how value may be perceived throughout the evolution of a community, or in this case, an institution or a value chain made up of the players within it (Kaplinsky & Morris 2002). This concept is furthered in Chapters 5 and 6 where we explore perceptions of the value of KT between scholars and their institutional environment.

Value has long been central to critical study, literary and cultural criticism, often acting as the mediator between the university and public, science and the humanities. It uncovers the objective and subjective elements that singles out the academy as the main exponent of both its use and analysis. Roger Fowler, in his *Dictionary of Modern Critical Terms (1991)* makes close association between academia and value saying that "every fine criticism is itself an assertion and a revelation of value" but that there is

an underlying problem that criticism also has a growing responsibility in the "intellectual and cultural safety of the university" (Fowler 1991), particularly as they are seen to becoming increasingly disenfranchised from contemporary society, publicly, politically and economically. In Chapter 6 we explore tensions between intellect and institution, to suggest there may be ways to overcome the difficulties associated with the exchange of scholarly knowledge.

1.2.3 Community and common

It is unsurprising therefore that the word 'common' was an early tool in defining the nature of the 'common man', as distinguishable from nobility, and that this word and words such as 'community' are interrogated by cultural historians such as Williams. Despite its roots in bringing people together under one banner or 'common way', the term itself differs from its roots in 'community' and often has stronger derogations, serving to denote negative associations of a lower order, rank or social position. In its collective nature it singles out a group who wish to make issues or interests common to many and share a common goal or aspiration in doing so, often to either feed into a dominant social system or to represent the common view against it (Briggs 2007).

In the fourteenth century 'community' was being defined by social groupings and the particular relationships formed amongst its members. It was soon to become a term distinguishable from an overarching establishment, such as regional or national state or government. Where 'common' was often seen to be negative in this context, 'community' was generally seen as a positive part of maintaining a rounded social order in which the common good could prevail. In a similar way the term community of scholars was coined to strengthen particular social orders within distinct disciplinary contexts. Alongside the larger science communities, the arts and humanities continued to maintain a strong role for the lone scholar that would be challenged as expectations for scholarship to enter the marketplace grew.

It may be that the use of terms such as 'common language' or 'community of scholars' also suffers from similar forms of derogation within the institutional setting. Currently there is a common perception across the arts and humanities that developing 'communities of scholars' drives new agendas such as KT, whilst the individual scholar suffers from poor access to research funds now

redirected into more diverse activities. A major challenge for institutions attempting to attract more diverse funding streams has meant that tensions have arisen which may disrupt the traditional communities of knowledge, where they may be required to diversify their scholarly practices as a result. At a time when knowledge transfer is the buzzword, attaining academic compliance in adopting unfamiliar practices is more a common challenge rather than common achievement.

In future chapters we explore one particular case study to suggest that new communities are mobilising within the modern university that are acting as a 'value chain' of players working collectively to ensure knowledge begins to extend beyond the institution in a meaningful and highly beneficial way. A closer inspection of a range of new academic practices may indeed offer the individual and the collective some common tools and points of reference in support of new practices such as KT in the modern university.

1.2.4 Industry

Moving away from personal skills and human capacity, the key word 'industry' gives credence to the power of the industrial revolution as a symbol for the development of an entire institution of advancement. Williams identifies the nineteenth century as a key time when manufacturing and its methods of production had a huge transformative effect on society, and industrialism began to shape the future for advancement that "produced by a pattern of change, a new society" (Williams 1960). The concept of industry, industrial, industrialisation has gone through many stages of specification and generalisation, from organised production and invention through to a generalised twentieth century term specifically to produce and trade goods.

This general spread across original boundaries has also had implications for both politics and economics, such as that denoted by industrial and trade action. 'Value' also comes into play here, working jointly in adversity to political action and serving to steer away from dominant thinking through a collective purpose for change. Industry is thus often conceived of as representing an impersonal force in which the diminution of the value and place of the individual is often lost, robbing the individual of his function (Adorno 2001). For society as a whole, however, the wealth of the nation and its competitive position internationally, depended on the success of industry and business, and

paradoxically individual entrepreneurs were often at the centre as a driving force of such success (Siegel and Waldman 2003).

We are aware that across the arts and humanities, the term 'industry' suffers from close alliance with economics and business function, and that these have often been seen as polemic distractions which the arts and humanities have avoided. In this sense these academics are also moving away from dominant thinking. There may be a need to redefine the term in such a way that it can work alongside the notion of academic value, to present a stronger and unified understanding of its use, and therefore its adoption by individual players (Tasker & Packham 1993). In Chapter 2 we will explore how perceptions rooted in language associated with industry and commercialisation have perhaps influenced the slower uptake of new KT practices in the arts and humanities, and how these may be overcome by understanding better the value and contribution made by these disciplines.

1.2.5 Language

The word derives from the Latin 'lingua', or tongue, and pertains to human communication through spoken or written medium, and usually refers to a common or agreed pattern of interaction through each. Language of course is not limited to such a pragmatic approach and the nature of something like non-verbal communication is at continuously play throughout scholarly interactions.

> "No history can give us an idea so exact of the vicissitudes of a people, of their social organisation and their beliefs and feelings, as an analysis of their language."
>
> (Alonso 2003)

There is evidence in the critical study of historical and social factors influencing language, which suggest that when contact between different cultures occurs they each retain evidence of contact for some time (Snow 1965). At a micro level of study, particular professions, trades or socially defined groups can also be identified to do the same, and where the same genus for antagonisms surfaces, language often ceases to act as a bridge, but as a barrier to communication or common understanding.

It is perhaps onward from the *Two Cultures* debate where we might uncover how academics and their research groupings may in fact have retained intrinsic elements of the interaction experience. Whether language or methodology, could it be that we may have overlooked subtle changes in language adoption and behaviour, whilst embroiled in historical tensions between the arts and the impact they have increasingly being challenged to evidence? A closer inspection of individuals and groups engaged in knowledge transfer may, over time, uncover indicators for both the adoption of KT and the recognition of how to evidence resultant impact.

1.2.6. Conclusion

We have underlined the importance of the meanings of particular key words in discussions and debates about the relationships between language, culture and society, and in doing so have begun to see how debates about the value of different kinds of educational process might be positioned in such debates. At several points in this thesis Williams' position is rearticulated and further keywords are not left unexamined. These and others are interspersed within further chapters and begin to act as indices of underlying thinking around KT in the modern university. They serve to animate the historical and current perspectives on KT and begin to uncover the fabric of KT practices for the individual academic, their institutional environment and the social landscape in which they are increasingly required to reside.

The next section moves the debate into an historical context where the political changes in the post-second World War period had profound effect upon education and the research community. It was a time when some of our key words emerged and took on new meanings, but also when the public and political perceptions of scholarship presented new outward facing demands. In an era when politicians intervened ever more directly in higher education, they also began to change the shape of the student and academic experience. The next section explores the increasing intervention of politicians in higher education, revealing in the process how in the past fifty years different value chains have been established in relation to research in the humanities as well as other subject areas, and increasingly in relation to the needs of society. In focusing in on the period 1980 to 2000 we aim to clarify the evolution of the academy in light of this political governance, and describe the mechanisms by which the arts and humanities were being supported at the time.

1.3 THE CHANGING LANDSCAPE: A SURVEY OF KEY   DOCUMENTS 1980-2000

The background to changes in the research and KT environment is best articulated by means of an historical survey. Once again a degree of selectivity is necessary, but in what follows key documents in recent history are highlighted which illustrate the changes in the landscape with particular reference to government policy and funding, the role of the Research Councils and the onset of interest in Knowledge Transfer. Although discussion pertains to the post-second world war period, the main period selected for focus is 1980-2000. It was a time when higher education continued to expand, when increases in funding support were in evidence and when the impact of investment in research and KT was emerging as a key concern to the university sector. This chronological view sets the scene for the following section in chapter 2 where the context for knowledge transfer is further elaborated.

1.3.1 Evolution of an academy

> "We have entered an age of knowledge in which educated people and their ideas have become
>
> strategic commodities essential to our security, prosperity, and social well-being."
>
> (Duderstadt 1997)

As academia had become the bastion of institutional enquiry and debate during the seventeenth century, those on the outside of the institutions started to ask questions of the value and impact that warranted such large public investment. After the onset of the Industrial Revolution, English universities had been reticent to open their doors to external scrutiny, seeing a shift in university / industrial relationships which raised fears of increased competition for funds, as well as a suspicion of change in how universities were being perceived as "fit for public and industry purpose" (Slaughter & Leslie 1997). Other countries were quickly realising that their university institutions needed to address industry problems in both an intellectual, yet practical way in order to impact on and drive innovation and change. Through this direct approach European industry grew from strength to strength, as did

their universities and the academics they attracted, whilst English institutions were still trying to protect their autonomy from the perceived demands of the economy.

> "Almost none of the talent, almost none of the imaginative energy, went back into the revolution which was producing the wealth."
>
> (Snow 1965)

At this time the humanities were very much aware of the burgeoning demands being placed upon them. Although English educational institutions at this time were starting to see huge benefits from the wealth generated through the revolution, the academy was beginning to get uneasy about rising attitudes to the impending role intellectuals were being steered to play. Not all of academia shared the same perspective driven by engineering and science, and the humanities fought for the right not to have to divide their research into curiosity and outcome driven, particularly for the sake of new wealth generation and political steer.

The notion of the rising demands upon academia was not an issue for the arts and humanities alone, as the majority of the scientific community shared an equal distrust in change and ownership of intellectual freedoms.

The Victorian period revealed a number of common denominators that repeat themselves to different degrees throughout history and put pressure on a university education to contribute to progress, invention and material prosperity, starving some areas of research to feed the dominant and tactical subjects. In the modern university these denominators are still at play for the arts and humanities.

> "…these tendencies were only in their infancy; much more was to come… the liberal, classical humanism of the older universities was threatened by the desire for vocational and professional instruction."
>
> (Curtis & Boultwood 1953)

Snow (1965) intimates that at the time intellectuals were not recognising that industrial advancement was highly reliant upon fresh minds in order to continue its progress. He believed that intellectual enquiry and debate could fuel advancement, raise and innovate growth and bring about a highly developed economy, but British academics still seemed reticent to move outside familiar territory, believing a liberal education should be protected. Newman (1852) and Chanan (1997) demonstrated that the debate around protection of intellectual freedoms spans one hundred and fifty years, and remains a current and passionate debate.

If we look at a value base analogy of the purpose of intellectual advancement, the industrial revolution was entirely purposeful, coming at a time when the government wished the academy to fuel the country's competitive edge. It was to be the Germans who would see the role of the intellectual in underpinning and supporting continued progress and innovation, and indeed flooded England during the 1830s and 1840s, meeting "no competition at all, and made fortunes exactly as though they were dealing with a rich, illiterate colonial territory" (Snow 1965). By 1832, and exposure to the Great Reform Act (see Appendix 4), change was an inevitability and the intellectual contribution would become central to advancing the economy.

Whether it was Plato sharing his knowledge to win the minds of Socrates and Thrasymachus, or Professor R.K. Jones, "the boffin who managed to bend the beam" (The Times 1978) that won the war for Churchill, knowledge has historically carried a price tag within the humanist tradition as well academia, but it was valued ever more highly after the industrial revolution, when government developed a taste for progress and continual economic growth.

While continental universities were seeing the "restoration of the humanities" (Times 1946) as vital to the restoration of their countries, post war Britain was preparing government to take a more proactive role in the economy at large, bringing with it the universities on which they were placing new demands.

By the time Britain had seen the passing of two world wars academia was very much at the mercy of politicians and government in order for Labour to maintain political headway through providing

increased access to, and use of, high level, rigorous intelligence. The biggest problem for politicians was that the majority of subjects being taught and studied in our universities at the time were those from the liberal arts rather than the sciences. Even by 1954 Oxford and Cambridge disciplinary ratio was still weighted to the arts and humanities, and Labour Party Member, Horace King, warned that if universities were to maintain such an imbalance it would "lead Britain into a perilous state" (The Times 1955). This was a general feeling post WWII throughout both Labour and Tory Governments and resulted in much of the educational policies to expand the role of the sciences in both teaching and research. The arts and humanities were to find themselves heading into a new phase, out of favour with those that were bolstering science as the saviour to get the country back on its feet.

> "The Nation's immediate need was a supply of skilled workmen and individuals with inventive genius and also employers who would be eager to accept and use new ideas."
> (Curtis & Boultwood 1953)

As Curtis and Boultwood elaborate, the two institutions of intellect and skill must find a way to come together. Here early reference is made for the inclusion of business as a means to transfer or translate intellectual ideas into tangible assets that lays the foundations for chapter 2 on the research economy and KT.

1.3.2 Political governance of research funds

Moving through the radical educational reform of post war Britain, the Tertiary sector was still a direct route into the Civil Service, whilst cutting edge research was pursued in only a few select institutions. Up until the early 1960s the University Grants Committee (UGC) was maintaining academic research funds, supported by the Treasury, as it had done for over forty years, whilst technical colleges were heavily reliant upon Local Education Authority subsidy. This division of research and vocational training funds fuelled key issues of public concern around increased elitism and the need for recognised impacts of social value. These issues were made explicit in reports setting the stage for further funding reforms (Anderson Report 1958; Robbins Report 1963) until the UGC was subsumed into a new Ministry for Higher Education in 1962.

At this time the science based research expenditure had increased to at least ten times that in 1945 (Kavanagh and Seldon 1989) with the arts and humanities following a lower but similar trajectory, but with significantly less investment. Britain was expecting to join the European Market and face the significant changes that were to come through moving borders and cross fertilisation with other countries. A broadening of subject specialism was occurring and the merger between traditional and new subjects was beginning to expand. The Robbins Report (1963) presented a radical review of university education, particularly around the perception of a rising elitism and the onset of the widening participation agendas. The report recommended expensive reforms that the MacMillan Government responded to swiftly by backing the findings and recommendations within 24 hours, implementing new demands for what was considered a fairer and far reaching university sector.

The Victorian redbrick universities and the rise in the Oxbridge grouping increased the pressures of funding to rise to the demand for increased student and academic numbers. By the mid 1960s a counter move was being planned by the Robbins Committee and the Wilson Government, promoting expansion via polytechnics in order to both dilute public opinion around university elitism, as well as provide a broader system of higher education representative of the breadth of society.

As the system grew, the practice by which universities managed their income had to be more firmly addressed and the formal instatement of the Dual Support System came about, placing tighter controls on income and expenditure. As the public were also making stronger demands upon the universities to actively demonstrate an egalitarian approach to admissions, government were controlling the university income routes as they dictated where investment would go. A greater demand for increased science students meant a direct decrease in those subjects deemed to be 'less useful' to the economy. Use or value as terms became embroiled in a political argument similar to the post war demand for skilled labour.

As investment was increasing so was mass expansion of the Higher Education sector. As public awareness of their contribution to the new growth agenda became more apparent, opposition was also gathering against what universities were coming to represent. Kingsley Amis was amongst many popular writers at the time who felt that this enforced growth would "wreck academic standards

beyond repair" (Slowman 1963) fearing expansion would lead to less quality research and teaching (Elton 1986).

In the lead up to the 1980s the UGC were becoming central to a wider debate focused on rising student numbers and the support for research focused income streams. They asked universities to consider their future growth in light of the surge in expansion, as it was clear that the HEIs were beginning to show signs of the strain between research and teaching income, a divide which would prove to be widened by further government demands. As fiscal constraints were increased, UGC was being put under pressure to start quantifying research productivity and "was increasingly required to be the Government's agent" (Stevens 2004) in the process. This fuelled university concerns about losing what had been a valuable alliance with UGC, which was further substantiated in the Croham Review in 1985 which saw UGC influence in decision-making greatly reduced. The onset of a new system for university income, sought through the Higher Education Funding Council of England (HEFCE) and the Research Councils, was to emerge.

This new funding system focused on the provision for research through two particular streams commonly known as the Dual Support System, which is still the basis for allocation of research funds today. The duality of the fund is made up from a core grant from the Funding Councils, alongside project grants provided by the Research Councils. This enables both multiple sources of funds to be accessible for research, as well as a dedicated proportion allocated directly to universities for self-administering. When the system was originally put in place, it was anticipated that the Funding Council contribution would enable 'blue skies' research to grow, rather than support research infrastructure as we see at its core today.

The Research Councils were at this time still able to ensure money was continually available to support curiosity driven research, with as little control from government as possible in dictating thematics. The territory would soon change as evidence of return and the Research Assessment Exercise (RAE) was to be increasingly utilised to quantify and question the value of their investments.

In the twenty one years after the Robbins Report (1961) the rationale and purpose of the Dual Support System was still somewhat unclear and as UGC had already generated concern in both the academy and government by asking HEIs for returns that would in effect divide teaching and research, these and other suggested algorithms continued to fuel criticism and debate amongst scholars throughout much of the 1970s and 80s (Cook 1976, 1977; Dainton 1977; Merrison Report 1982; Hanham Report 1988). During this period the arts and humanities community were unified in supporting the system, and although they had no dedicated Research Council as yet, they saw it as the only fair way to equate an even balance between disciplines that were significantly different. The arts and humanities community were aware that any change in the system might also bring about change in the way they were to be supported.

Coinciding with mass cuts across public funding the report concluded that the Dual Support System was not working and that rationalisation and a "more systematic and selective approach to our allocation of funds for research" should be undertaken (Tapper & Salter 2002). They concluded that this would "not be effective unless the universities make a complimentary effort to develop explicit strategies" (UGC 1987), and set up committees to advise them and relay results back to the UGC. Circulars followed from the Committee and many thought "the principles of selection, discrimination and management were taking root on a broad front" (Tapper & Salter 2002). Everything the academy hoped to avoid was about to unfold in the demand for hard-nosed accountability and the increase in administration to manage and temper the changes. At this point management of any university as a business was to become a primary concern, making the institution an economy driven by both administrative management and academic services.

It was not until May 2003 that the next radical reform would emerge alongside the Roberts review of Research Assessment. It was hoped that the position of the arts and humanities would be underpinned by gaining Council status in the period leading up to this, something which the British Academy were instrumental in instigating and supporting as a way to secure their disciplines were well represented and able to contribute to change. Any dedicated Research Council for the arts and humanities would have far reaching implications in shaping their future and the role these disciplines play in the knowledge economy.

By the time the Conservatives were elected to Government in 1979, dramatic cuts in public expenditure had significantly reduced UGC's annual grant, and a time of uncertainty for higher education resulted in an inward facing period for academia. UK Higher Education had become one of the most reformed across Europe, heightened by the Conservatives in the 1980s and continued under 'New Labour' with successive reforms around research and teaching, business-university interaction and science and innovation agendas throughout the late 1990s and 2000.

The continued emphasis over ten years was on maintaining a government steer on institutional autonomy, auditing and evidencing performance and finding new ways to balance a mix of public and private funding initiatives. It was evident that institutions would have to use ingenuity to accommodate the discursive strategies of these initiatives if they were to work effectively under such reforms.

> "Growth was again seriously checked in the 1980s, but that was a consequence of government policy; the Cabinet had begun to feel ungenerous to all forms of higher education."
> (Brogan 1998)

If we observe the climate in which these reforms were being shaped we can see a number of interesting parallels with what universities were experiencing. Whilst not explicitly connected, these parallels began to define a more complex ecosystem in which research generally was struggling to assert itself amongst powerful economic and governmental drivers. The arts and humanities were also finding it difficult to be continually compared and benchmarked against disciplines thought to have a greater impact on these drivers. Firstly the dichotomy presented by the *Two Cultures* in the next section of the chapter, begins to surface between research as a tool for government policy and that of intellectual independence and enquiry. Secondly, the power struggles for intrinsic levels of control over either of these outcomes was acute across a number of fronts. In the next section on *key concepts* we explore how the much-debated paper entitled *Two Cultures* (Snow 1965) forms a critical element in describing the challenges the arts and humanities faced in articulating their role in both society and the scholarly environment.

At this time the Thatcher Government was preoccupied in changing the face of the British state. The Treasury had no control over marshalling change or manipulating research finance, since the Department of Education and Science assumed responsibility for UGC in 1964, and were essentially isolated from any influence from the university sector. There was notable contention around academic culture "militating against democratic inclinations" (Pearce 2005) which was never more evident than in UGC papers and media articles throughout the Thatcher years.

Amidst an era notable for government scepticism additional funds for research was not an option for the government in the current climate of mass cuts and unemployment, therefore their utilisation of the more controllable Dual Support System meant the treasury would be able to push research towards serving their policy ambitions, at the same time as delivering notable return for little investment. 'Low cost' had become a government mantra that would constrict investment in areas not deemed to be of value to them.

This Americanisation of education and funding was not popular, and as Oxford denied Thatcher an honorary degree in 1985, her business consultants began preparing university management for its most notable period of mass production. The academy had reason to be weary of political rhetoric, as they had experienced the demise of research value as prescribed at the turn of the century.

In Michael Chanan's paper (1997) around politics and aesthetics, his critique of Thatcherite antics uncovered their preoccupation with management control, linked to an overt hostility to left attitudes, and stressed that "we need, urgently, seriously to rethink our pedagogic discourse, if we wish to keep alive the humanist tradition of aesthetic education" (Chanan 1997). The arts and humanities were to realise that a change in government might also they lay the foundations to substantiate and locate their place in the political landscape.

As the funding system came under increased pressure, UGC and the Advisory Board for the Research Councils set out to systematically review the current provision, and in 1982 the Merrison Report was published. Although it posed a credible and comprehensive review of research at this time, it was criticised both for its bias towards research selectivity, as well as its keen focus upon the science base,

somewhat leaving the arts and humanities on the peripheries of both debates. Its focus upon selectivity was not a new issue, as both the Department of Scientific and Industrial Research report (1965) and the Council for Scientific Policy (1967) were very much in favour, but it was the Merrison Report (1982) which was to finally put the debate into action and draw attention to inclusion of the arts and humanities in systematic funding regimes.

A significant and symbolic moment occurred in 1989. In April that same year the then Education Secretary, Kenneth Clark, proposed that, for purposes of funding support, colleges of further education be taken out of local authority control and be absorbed, alongside higher education institutions such as polytechnics into a single source and management of funding. Thus, the former Polytechnics and Colleges Funding Council (PCFC) was re-formed into a single body to be known as the Higher Education Funding Council of England (HEFCE) set up to administer and manage key elements in the changing landscape. HEFCE was to establish greater direct control in the move from central state policy development to policy implementation. At the same time a range of polytechnics were accorded university status, allowing them greater autonomy in the mangement of their affairs but at the same time ensuring that they compete with more established, older universities for funding, including research funding. From the point of view of research funding, differences and distinctions in orientation and priority were to become even more apparent as the tradition of the polytechnics was to work much more closely with local companies. They developed business contacts with more vocationally oriented courses and contributed more palpably to the economic drivers of society. From the point of view of central government, research was crucial in this matrix as it provided the basis for applications that benefited society and economic development, thus needed to be more centrally controlled.

By 1992 further changes were occurring around how funds would be distributed and controlled, and as the balance of funding shifted towards the Research Councils, Clark agreed a transfer of funds in order to better support the true costs of academic based research, allowing a degree of separation in the allocation of funding which was previously combined and centralised. Per-capita grants were formatted for teaching and a merit based system formalised for research. The immediate threat in respect of competitive research funding was not yet at the fore, as polytechnics played to their strengths in

teaching whilst they got used to the newly acquired university title. However, the competition for funding on an equal basis with the 'old' universities was to become a major concern as the number of universities had doubled overnight and the spread and distribution of research funding could not be even or equitable. Government intervention and support meant therefore an inevitable increase in the mechanisms used to measure investment and the return on investment.

As the 'old' universities, and particularly the arts and humanities subjects in those universities, struggled to equate research outputs with a credible value system, polytechnic counterparts were quickly producing hard quantitative metrics in respect of employability and private investments. As the polytechnics would soon pose a financial threat, universities were under increased pressure to keep research income firmly in their territory, which resulted in the formation of the Russell Group in 1994 to continue to lobby to that effect, something they have remained successful at today. As Christopher Price predicted in the October 1995 Prospect Magazine, those maintaining a lead at the top of such university league tables in the twenty-first century should have become astute in working closely with government and non-academic agencies without 'sacrificing excellence'. As one of Britain's most powerful exports, excellence could prove harder to maintain for some in the face of a drive to a more diverse research landscape.

In the period immediately after 1992, 'new' universities were gaining ground on their older counterparts, attracting a wider diversity of students and taking a strong hold of research aligned and applied to business and government agendas. A review of research performance and outputs loomed in the form of the RAE (Research Assessment Exercise) and new tactics were required to keep and raise high-level research funding with as little distraction to the review as possible. RAE reviews were carried out systematically in 1989, 1992 and 1996, but from 1992 onwards the outcomes of this exercise was to become the major factor in determining the distribution of research funding amongst pre and post-1992 institutions.

1.3.3 Origins of the Arts & Humanities Research Council 1900-2000

Amidst the changes taking place in government it was the British Academy that had remained the main stem of arts and humanities support and the body to address the advancement, as well as protection of a

much valued research environment. They were established by Royal Charter in 1902 and given key responsibility to help underpin, as well as support financially, the role of humanities and social science research. In 1924 they were awarded their first Government support in the form of a grant from the Treasury and established themselves in their first central London base. What followed were twenty years amidst the Second World War that brought drastic cuts in Government provision for research and it was not until 'the Wheeler Years' (BA 2006) where they were able to begin putting in place a solid programme to increase both public and private funding sources to the disciplines. Throughout the next thirty years the Academy succeeded in gaining core funds from the University Grants Committee and expanded research schemes into an expanding international environment.

By the 1980s the Academy was considered as the de facto funding body for the humanities disciplines and diversification of schemes and research themes began to emerge. When the Academy finally took over Postgraduate Studentships from the DfES (Department of Education and Science) in 1984 they began preparing proposals to Government for support to set up a new Humanities Research Council. This never came to fruition and resulted in the Academy becoming somewhat disenfranchised from Government control, enabling them to further develop private investments and the building of their learned society mission. This afforded an extension of autonomy that would not last.

During the 1990s growing demands for an ever-diversifying research community began to increase the burden of responsibility upon the Academy to support more applied practices in the form of collaborative schemes reaching beyond academia. Increasingly investments were burdened by the need to provide evidence on the impact of such research persuasions and the Academy was under pressure to retain the support from learned societies to reject these demands. The outcome of debate and discussion offered a doorway for withdrawal from their expanding role, enabling them to be free to pursue the full breadth of research, unencumbered by the new wave of research known as Knowledge Transfer and applications to business and industry. The Humanities Research Board was now primed to take on these roles as part of its transition to AHRB in 1998.

New schemes began to emerge from the Humanities Research Board (HRB), who created their first Institutional Fellowships to pursue collaborative research. Funding was initially confined to those

institutions funded by the Higher Education Funding Council of England (HEFCE) but would be rolled out to the whole of the UK throughout 1996. A particular emphasis was beginning to emerge at the same time as KT focused upon Information Technology, mirroring Government interest in the role of research to boost industry through innovation, where technology was seen to be key. A heightened interest in the role the arts and humanities would play in this arena was to ensue, with a series of inquiries and green papers that would test public and government opinion.

On 10th May 1996 the Secretaries of State for Education and Employment appointed the Committee of Inquiry into Higher Education under the direction of Sir Ron Dearing. The aim was to review and make recommendations as to the purposes, shape, structure, size and funding" of higher education, and in July 1997 Higher Education in a Learning Society, swiftly coined the 'Dearing Report', was finally published. As the Labour Party had only recently taken centre stage in the National elections, the feeling for radical reform was at its greatest, but the pressing question at the time was whether the Party Manifesto for "the improvement and expansion of higher education" would remain a main stay to their success. With a new general secretary and much needed cash boosts, the forecast looked good for university investment.

> "After the internal exile of the 1980s, academic researchers are to be brought in from the cold."
> (Crewe 2001)

The Dearing Report (1997) was made up of a series of special reports and 93 recommendations, which in their entirety were expected to lay the foundations for higher education for the next twenty years. The British Academy had been particularly active in the months leading up to its publication, along with a recognised list of consultees making detailed submissions to the Committee. It is Appendix 3 in the report that draws the attention of the arts and humanities community most, with its creator, Professor John Laver, being commended as their biggest champion. At the time Laver was in the favourable position of being both Professor of Phonetics at the University of Edinburgh and Chairman of the Humanities Research Board. His paper entitled *The Need to Invest in Research in Humanities*

and Arts carefully constructed a valuable argument in which the 'intrinsic benefits' of the arts and humanities have been 'unduly neglected' and the anomaly in great need of rectifying.

The crux of the Laver Report was to present evidence of the contribution the arts and humanities research community offer to both the knowledge economy, as well as to the quality of life of the nation. He was direct in making comparisons in both funding and per capita costs that would favour the arts as highly 'good value'. It was closely observed during its creation by the Select Committee on Science and Technology, and indeed contributed in a large part to securing a voice for the arts and humanities in both the Dearing and Scottish Garrick Reports. Laver in many respects anticipated the Dearing Report, with much of his material compiled prior to the framework being in place. It is recommendation 29 of the Dearing report that appears most significant and which many of his findings ultimately lead to:

> "We recommend to the Government that a new Arts and Humanities Research Council
> (AHRC) should be established as soon as possible."
> (Dearing 1997)

Dearing realised that there would be difficulties in merely increasing the British Academy budgets to support the arts, as the autonomy they had secured allowed a level of freedom to steer away from the rising interests in research reaching beyond the academy. The challenge was how a new system might continue to support and preserve successful bids from lone scholars, at the same time responding to a landscape where research was increasingly diversifying.

> "He recognised that there was some inherent conflict of role in the institution being an
> independent commentator and adviser and at the same time a distributor of government funds.
> That led him to look for other solutions."
> (Dearing 1997)

During discussions with Lord Flowers in oral evidence at the Select Committee on Science & Technology, Dearing stressed that infrastructure for the arts and humanities was acute, particularly to

respond to the growing demand for greater communication between the disciplines and the introduction of new information technologies. This was an area the HRB and British Academy had tested two years previously in the introduction of their first collaborative Institutional Fellowships with HEFCE, which diversified the Academy's reach and may have been an early indication of the growing divide between the BA and HRB provision.

Dearing considered a number of options during the consultation period including mergers with other Research Councils and devolving responsibility for certain elements of new activity to bodies equipped to support new demands, for example the increase in commercialisation and the spinout of research as Intellectual Property. It was recognised that the BA would be ill equipped to take this role and smaller funding streams unable to develop new activity.

> "Freed from its quasi-research council functions, the Academy can devote its resources to identifying and supporting individual excellence, responding to the needs of active and especially younger scholars, and safeguarding the disciplines which it exists to promote." (British Academy)

Many responses were offered up to the report from interested parties such as the British Academy, UK and Scottish Higher Education Funding Councils, all of which commented on options for any new provision and also the imperative to maintain the nature of the arts and humanities disciplines as distinct from the sciences. Many were concerned about what a new Council would look like; who would administer and run it and how it would sit alongside the better established Councils. Questions regarding economic performance and the capacity to provide the Office of Science and technology (OST) and the Department of Trade and Industry (DTI) with indicators that would recognise their contribution, was to be repeatedly emphasised.

In the British Academy's Annual Report for 1996-7 Sir Keith Thomas gave the presidential address and referred to their concerns stating that they would "prefer to do without a Humanities Research Council and continue with the Humanities Research Board." Thomas made a vain attempt to retain the steady role of the BA and HRB as a combined learned society, but the Academy was to be freed of its responsibility and better enabled to be "free from the political pressure which makes research councils

less than wholly independent institutions and the financial pressure which forces modern universities to be opportunistic and entrepreneurial" (Thomas 1997).

In July 1998 a formal press release was issued that recognised the establishment of the Arts and Humanities Research Board in response to Recommendation 29 of Dearing Report (1997). In October 1998 the HRB set up an interim board and began plans for the AHRB to be formally constituted. Although the Dearing Report offered a positive way forward for the HRB there were a number of key hurdles hinted upon within the report that were not yet fully realised. The implications of a number of recommendations would be evidenced over the next five years such as the "principle means to win additional funds [being] through research performance" (Recommendation 29: 11.63) with the offer for the less research intensive to consider opting out of the RAE and therefore research investment opportunities. Institutions were to be left to make such strategic decisions alongside the demand for greater research links with industry, applying that research to products, improving the entrepreneurial environment and building the information technology infrastructure for their disciplines to capitalise upon their reach beyond institutional walls.

1.3.4 Conclusion

The period from 1980 to 2000 was a time of considerable change in the perception of the arts and humanities and its research culture. As funding grew so did the notion of 'public value' and the arts and humanities, although poorly understood, were required even more so to demonstrate their role in benefiting the economy and the nation as a whole. The establishment of separate funding bodies and the eventual creation of an Arts and Humanities Research Board brought many benefits but would not ensure any degree of autonomy. Increasingly the AHRB were required to be more accountable to government, and in return subject to measures and metrics which Council status would not be able to avoid.

In an influential book *Crisis in the Humanities* (Plumb 1964) a virtual crossroad was described where the humanities must decide upon a change of course in how they are perceived by the wider society, adapting "themselves to the needs of a society dominated by science and technology, or retreat into social triviality" (Plumb 1964). The premise of his work is in enabling the humanities to adapt,

diversify and respond to the demands of public funds. The book also indicates the nature of discussion at that time, where scholarship wished to deflect the need for accountability for such funding and continue their autonomous enquiries. In the next section, and in an attempt to interweave survey and debate, we move from historical background and socio-cultural change, to questions of traditional tensions and their relationship with current inflections of the *Two Cultures* debate.

1.4 KEY CONCEPTS: THE TWO CULTURES DEBATE

The previous two sections have provided background in respect of key words and terms and an outline of key historical landmarks. It is now necessary to return to underlying philosophies, positions and discursive practices. In order to understand the role our actors play in the research environment, we need to know more about the influences and demands upon them, how historical and contemporary thinking has created value systems that shift and change over time. Some illumination may be provided by an examination of the 'two cultures' debate in order to look more closely at what influenced and shaped the debate as its continuing manifestations. It will be seen that the debate both shapes and shadows the issues discussed in the previous section, particularly about the place of arts and humanities research in contemporary society.

1.4.1 What are the Two Cultures?

> "All movements tend to extremes, which is approximately where we are today."
> (Wilson 1998)

The term 'two cultures' has come to represent a dichotomy between two opposing forces, a general expression that captures differences, distinctions and dichotomies born out of the inabilities of the sciences and humanities to find points of productive mutual interaction. In many ways, though a contemporary debate and one that reached a highpoint in the 1960s, this is the debate of the ancients and moderns, the dual between man and machine, matter and art, culture and the scientific (Snow 1965; Gross & Levitt 1998; Gibbons 1994).

The term 'two cultures' was originally coined through the title of a highly influential lecture in 1959 by Charles P. Snow and has occupied cultural and intellectual historians for some fifty years subsequently it has also, uniquely for academic debates, remained in the limelight of both academic and public interest. It posed questions about an intellectual's capacity to embrace the field of their opposites and signal a change in the way the humanities and sciences were perceived to interact.

The crux of the argument is in defining the differences that exist at the extremities of the humanities and sciences and how seemingly impossible it has been to find a common, shared language (Carter 2002) or space in which to come together. In the language of the debate there is "mutual incomprehension" (Snow 1965) exposing opposing values, beliefs and reward systems driven by different communities of thought and ambition. It is still the case in the present day that dividing lines remain in place.

1.4.2 Why two cultures?

The debate brings us back to a common tie with Greek philosophy where the nine Muses were perceived by two schools of thought to be both a unified representation of all learning, while at the same time representing one ideal of learning specifically "challenged to do battle with other ideals" (Bird 1976). There is an evident dichotomy here that at once tells us that we belong to a field of thought, in itself seemingly all encompassing, but in reality the thought must be tested and refined by continued challenge and conflict. We could end our debate here in many ways as we fully recognise the power of rigorous challenge as central to refining our argument, as well as helping define our position. These challenges are not as clear-cut as this may first seem. As a contemporary journalist at that time notes:

> "A race that knew nothing but science and its practical application would, if left to itself, become as soulless and mechanical as the formulas that it invented and the engines it created; just as a race that knew and cared for nothing but the humanities would end its life in dreams or some other cloister of the mind."
>
> (The Times 1955)

In this continued debate many thought the critique would enable both camps to conquer their differences rather than fuel their capacity to remain polarised. There has long been the opposing camps of intrinsic/instrumental, liberal arts/science, mechanist/humanist, enlightenment/postmodernism, all of which have held each other at arms length unable to agree on their place in intellectual enquiry. The heart of the debate remains one concerning the nature of knowledge as applied or as a disinterested character.

1.4.3 Snow v Leavis

Charles P. Snow (1905-1980) was a writer and scientist with a passion for literary pursuits, publishing well-known novels, extensive journalism and scientific work of considerable merit. Many thought his perspective on the two cultures debate to be as confused as his professional academic life, moving from scientist to novelist, then recruiter for Britain's scientific research to journalist. The Two Cultures was originally submitted as an article for the New Statesman about the growing divide between science and the humanities and the need for unity.

In Snow's Reid lecture, *Two Cultures and the Scientific Revolution* (Cambridge University 1959) public and intellectual interest in the debate was extensive, ensuring the paper was published in two instalments in the popular magazine Encounter and thereby extended a wider audience. As soon as it was published both Snow and the debate became so popular it went through to several reprints and continues today as a major text on the subject.

This was not a new debate for the academy however, as Matthew Arnold had given a very similar lecture entitled *Literature and Science* in 1882, which was in essence a direct response to T.H Huxley's *Science and Culture*, published just one year earlier. Although focused more upon the virtues of a classical education, Arnold was still unable to resolve the divide that C.P. Snow's Rede Lecture some 77 years later was to re-assemble and equally polarise.

Snow had in fact done what few attempted and traversed the gulf between scientists and writers. By moving backwards and forwards between landscapes of language, culture and epistemology, he had gleaned rare insights into their commonalities as well as their ferociously protected differences. Snow

noted that the actors and participants in the debate come from similar backgrounds and move in similar environments, yet "one might have crossed an ocean" (Snow 1965) instead of crossing between two cultures.

In both *The Two Cultures* and *The Two Cultures: and a Second Look*, Snow recounts meetings, conversations and predicaments where his daily life has intersected with the debate. He himself saw the ecosystem in which these cultures reside, both a traditional and transitional experience. He witnessed "common attitudes, common standards and patterns of behaviour, common approaches and assumptions" (Snow 1965), but did perhaps steer away from making any hard-fast attempts to resolve those differences. What if these struggles could find resolve in doing the very thing that Snow himself had begun to do in starting to make attempts to move between and within both cultures? In this way, Snow represents an example of 'interdisciplinarity in action', a topic to which we will return to in chapters 3, 5 and 6 where we explore how interdisciplinarity occurs between different individuals and cultures.

At the outset of the *Two Cultures* Snow talks as though his thoughts were no more than accidental, a mere voyeuristic account, yet what we see from our perspective is a dilution or narrowing of the actual divide in action. Although going somewhat unnoticed, Snow offers us a possible solution; cross the divide repeatedly, familiarise oneself with the trajectory and bring along what one has learnt from each. The thesis utilised this as a key methodology in uncovering the co-production of research and suggest that such 'acclimatisation' between disciplines and collaborators, influences academic perceptions of what constitutes normative research practices.

A year after Snow's papers were published, a counter attack was issued by the literary critic F. R. Leavis in The Spectator magazine which ignited a renewed interest in what was quickly becoming a battle between the two men in which the public were to take well-defined sides in the debate.

F.R. Leavis (1895-1978) was one of the most influential figures in twentieth-century English literary criticism. He introduced a 'seriousness' into English studies, and the modern university subject has been very much shaped by Leavis' example. Leavis possessed a very clear idea of literary criticism and

insisted that evaluation should be the cornerstone of criticism and therefore of a literary education and that criticism should involve the shaping of contemporary sensibility. These positions also informed his view of university education which he strongly believed should be based on the development of judgements which allowed students to discriminate between what represented the highest moral values of a civilisation and what is merely meretricious and ephemeral. For Leavis, Snow's position and that of science in general represented an opposition to these core, almost spiritual, values. He was contemptuous of an education that did not involve literary criticism and unsympathetic to anything that may suggest interdisciplinary interest as a necessary dilution of the purity of disciplinary focus, which he held to be essential in university teaching and research.

His attack on Snow is deeply felt and involves a personal attack on Snow as an individual without a proper moral sense.

> "It's not just that no two stones of Snow's argument are left standing: each and every pebble is pulverized; the fields are salted; and the entire population is sold into slavery."
> (Kimball 1994)

Leavis outraged the public with his damning response and public favour swung swiftly back to Snow, which was something that Leavis had not anticipated in his barrage of contempt for the man. The crux of his disdain for Snow and his 'undistinguished' persona came from a deep rooted distrust of intellectuals that trivialised culture and dragged the public in to support its demise.

Although Leavis' uncompromising attack on Snow's Two Cultures would leave him somewhat at the mercy of the huge pubic support Snow had gained, his attention to personal innuendo and character analysis was never the less unrelenting and distracted us from the essence of the argument. It was not until he concentrates on dialogue rooted in culture and literary history, that he indeed engages us in more than a character assassination that makes hard reading and in the "slapdash boorishness of his attack on Snow, Leavis spoiled an excellent case" (The Times 1980).

1.4.4 Historical Antecedents

The debate between the 'science sage' and the 'literary giant' was to mark the 1970s as the period in which public opinion had come to embrace the science and arts debate. The public now had access to a more palatable dialogue with intellectuals, and popular success meant that academics could win public support that raised the impact of their debate, whilst working to the 'common good'.

Whether it is Plato, Aristotle or Thomas Aquinas pitched against his Augustinian counterparts, Vico or Galileo, Huxley or Arnold, Snow or Leavis, the quarrel of the ancients and moderns has come dressed in many guises. All have made contributions to the overarching debate, some choosing to delve deeper than their predecessors into language (Levi 1970; Bird 1976), distinction and behaviour (Vico 1744; Dilthey 1883), others remaining firmly fixed on the future, progress and adaptation, cooperation and a 'diversify or die' perspective is ever present in the survival of research and teaching today.

There are many dichotomies here, faith and reason, philosophy and poetry, religion and science, primitive and modern, each attempting to analyse and justify where a divide or cultural split finds purpose to a debate some seven hundred years old. As an example of such divides it is important to recognise historical antecedents (otherwise, the Snow v. Leavis debate may appear unique) and then move immediately to the current condition of the debate that appear, repeat and reiterate many of the same questions and issues, with the exception of a few who may have begun to divert us into new territory.

Plato presented a new depth and breadth to the humanities at a time when the early philosophers were preoccupied with the natural world. His *Republic* set out to introduce the notion of value as central to the debate around humanities and the impact of their roots upon society. Although *Republic* presents us with exemplary paradigms of justice, health and architecture as societal assets, Plato wanted no association with Aristotle's more primitive perception of their value. He was far from concerned about the place of the common public in being able to use this knowledge to practical effect, for such things as informing social co-operation, ridding disease or the primordial need for shelter, and avidly defended that access to intellectual enquiry remain at their farthest reach.

A split in thinking begins to expose itself here and the humanist and the scientist begin to single out their respective positions. The crux of Plato's theories in the end proliferate the belief that "such inquiry is the province of a gifted elite who deserve to rule over the common horde" (Chapman 1997) and that intellect should remain the bastion of the educated. On the reverse sat his adversary Socrates who wanted all citizens to find both use and understanding from knowledge, and thereby show value beyond the elite academies. As Baker Brownell wrote "modern men have done more towards segregating these two aspects of value from each other than any other age of man on earth" (Brownell 1945). An early reiteration of this division could also be seen within the humanities and the sciences, brought about by the language that seemingly defined them and the values that more often divided them.

From Kant through to the later work of Otto A. Bird, writers explored the conflict of what was termed the 'cultural ideals' pursued amongst the liberal arts throughout both the medieval and renaissance periods. Whilst Kant and Miles resolved to keep conflict apart, Plato and Aquinas were defining such literary pursuits as poetry, as at the bottom of a cultural ideal of teaching and learning. To the 'common horde' this was projecting a blatant and deep-rooted mistrust of the humanities, but Bird thought otherwise. He looked at this from another perspective, one that changed the co-ordinates of value, to give us a plausible approach to the claim that it indeed placed poetry at a distinct advantage to science.

Whilst a scientific subject such as mathematics would have a specific commitment to state its complete and exhaustive meaning, "a poem, on the other hand, approaches the other extreme of meaning more than can be ever said" (Bird 1976) suggesting that this approach offers us a kind of value indicator where fields of research that are considered to have particular qualities that are somewhat organic, evolving and changing, also have the capacity to parallel life and the ever moving and changing nature of society. In Bird's thinking it was the act of reinvigorating and reshaping intellectual thinking that gave poetry a certain strength unavailable to a subject like mathematics. Here literature and science stand at either end of a debate rooted in purpose, value and language, one that would inform the makings of the first strands of literary and scientific linguistics.

Whilst Bird wished us to see the value of poetry from another perspective it had been Friedrich Nietzsche who had wanted to get the scientist to cross the threshold of Bird's thinking into the unknown and experience the roots of philosophy that ultimately influenced the goals and methods they pursued, without which they would have had little basis to ground their research in the real world. This 'humanist footprint' shapes much of interdisciplinarity today where the two cultures are being bridged by a revived necessity to seek intersection through joint schemes of work.

Most historical derivatives of the two cultures debate present us with a common divide, both inseparable and more often in conflict. The wider the differences, the harder it becomes to find mutuality and maintaining a divide "so clear of each other that we were to forget their common origin and clash" (Jennings 1985). Plato, Haley, Jeffries, Hopkins, Leavis all exposed variations on such dichotomies, and by exposing mutual opposition asked us to make a choice, by defining and defending our distinctiveness. The wider society has been asking us to clarify and fight over this ever since. The difference today is that maintaining these barriers is coming at a higher cost to university research than ever before.

1.4.5 Current inflections of the debate

In 2006 the two cultures debate is finding that it has points at which the line that divides them is becoming far less distinct, a modern take on an old debate is emerging through demands of both technology and government. Lord Sainsbury of Turville in his speech to the Royal Society (2002) emphasised why there was a greater need now for both cultures to find intersection, particularly as the ethical, legal and social implications are becoming of 'comparable importance to scientific achievements'. The reverse is also true in increased interdisciplinary funding schemes, where the arts and humanities are being encouraged to seek to bring science to a balanced enquiry.

Understanding both cultures has been a major preoccupation for the last forty years in particular, no more evident as in Snow's Rede Lecture (1959), as it yet again surfaces in the Council of Science and Technology report *Imagination and Understanding* (2001). Although created to lead and deliver policy, the report makes hard recommendations to break down the barriers between science and the arts, particularly around perception of value and prestige. It had long been thought that the AHRB

should be considered for Council status and a recognised connection to government agendas, would bring notable rewards to its constituency. As long as the AHRC remained a limited rather than a public body it would "perpetrate archaic distinctions between different forms of knowledge" (CST 2001) and keep the two cultures very much alive and apart.

The Research Councils UK (RCUK) was established in 2002 to ensure world-class interdisciplinary research would not be hampered by a two cultures mentality, both within disciplines, as well as inside institutional walls. Within three years the AHRC gained the status it was long promised and better enabled to contribute to maintaining such a balance between the disciplinary perspectives.

Although there are many ways to view the impact of these histories, we concentrate on three key terms in contemporary history which may be helpful in understanding how value became such a preoccupation of the two cultures; value perceived through purpose and prestige, and through language and the make-up of a constituency or culture.

In transcending the epistemological barriers the development of common space, rather than common language alone, could perhaps be instrumental in moving the two cultures forward (Giddens 1990).

> "Many quarrels, great and little, have their origin in differences of interpretation, in the failure to define accurately. That is not always easy to do, for some words are vague and general in their application, and the bigger and broader, the finer and nobler the word, the more it gets kicked around. So it is with the choice word humanities."
>
> (Ullman 1946)

It would be some ten years after *The Two Cultures* that Snow himself would agree that closer attention should be paid to language, something which Albert William Levi used as a bridge between the 'wars' exposing communication as a key source of antagonisms. Levi believed that language and values were so different as to force apart and widen the gap further between objectivity and subjectivity, science and poetry. As Leavis also became an avid exponent of language and communication, he moved the

issues more towards the close association with how it defined a constituency's ability to reference their position amidst their adversaries, citing that often "language is their only index" (Bell 1988).

Separated by some thirty years a Scottish colloquium on the *The Value of the Humanities in Modern Society* resonates with similar issues. It laid out the contradictions and antagonism, but has moved on little as a contemporary take on an old debate.

> "Everyone knows how many different kinds of value there are – personal, spiritual, social and moral value – and again, that links back into the idea of language and the need to find a language with which to convey those ideas of value."
> (Henderson 2006)

Language can indeed convey value in many ways, and although powerful, it rarely works alone. An entire history of intellectual development brings with it some unerring baggage; good value, common values, value added, value for money.

In John Margolis' joint review of *The Humanities Today* by Albert William Levi (1971), the role of language and value in a modern world serves to tell us something about the plight of the humanist tradition, but not everything. Even though Levi was preoccupied with the humanities 'identity crisis' Margolis suggests that he was one of those rarer academics that sat well between the natural and social sciences and the liberal arts, due to the belief that language is "the indispensable medium within which we all move and breath" (Levi 1970).

Although extolling the virtues of science generally, Bird offers us an exploration of the nature of humanities from its Ciceronian roots and linguistic arts. Coining the phrase 'the sciences as humanities' he attempted to find a description of the humanities that would act as 'scientific does for the sciences', an adjective that would encompass its breadth and credibility. Today we have coined similar phrases in the struggle to add value to the humanities through close association with a more 'credible' partner, whilst possibly maintaining a less visible status; medical humanities and human

sciences in particular find themselves in an interdisciplinary race for recognition with their science counterparts.

Snow had often confused issues that were later thought to be critical (Bird 1976), particularly that of naming the Platonian divide between the social and political through greater reference to the divide amongst the rich and poor. Snow somewhat mirrored certain aspects of Plato's distain for the common man, and wished for science to remain the superior reflection of society. His confusion was also evident in his continued inability to define what the antithesis of his science culture may be in reality, only really able to affirm the ineptitude of the humanities language, rather than its culture, in asserting a rightful place alongside science.

The sciences more often than not accused the humanities of not understanding their perspective due to lack of rigorous knowledge, training and inclinations towards subjective rather than objective analysis. As Sir Edward Salisbury's presidential address reveals at the annual meeting of the Science Masters' Association in 1955, science at the time had little idea of solutions beyond British etiquette and precise dialogue.

> "Scientists should be able to write good English and that the humanist should be prepared to take the trouble to understand him. The art of good expression was of equal importance to those who dedicated themselves to science and to those who studied the arts. Accuracy and aptness in the spoken and written word were essential to both."
>
> (The Times 1955)

Finding common reference points through language is a continual plight across academia. Governor General of Canada, Mr Vincent Massey, gave a plea in 1955 to find commonality in a materialistic and technical age, saying "the world needed philosophic scientists and scientific philosophers" to recognise the power that language plays in this debate. Today we understand that this merely coats the surface of something far more complex, something that causes intrinsic problems deep within the culture of the academy and one that worries the purveyors of academic value to such an extent they are not sure where to go next.

B.L. Ullman (1946) thought the root of the problems could be more easily resolved by defining one's understanding of the word humanities at the outset of debate and discourse, as it has a "vast range of connotations that everyone who writes on this theme should give his own definition before proceeding into the main roads and bypaths" (Ullman 1946). This thesis does not follow that tradition at the outset, but along with Wilson (1998), follows the notion that common or shared language may in fact precipitate the building of barriers, rather than presenting an opportunity for commonality to emerge. In chapters 5 and 6 we explore some of the complexities of the behaviour of the individual and the culture of the institution in which they reside. We suggest that a study of commonality and co-production can help to uncover new practices that in turn may help academics to overcome the barriers precipitated by tradition.

Perhaps the etymological collectives of the humanities or human sciences can tell us something about how language contributes to the way the subject may intersect or even merge with areas like neuroscience or the study of genetics. The following chapters concentrate on relationships and the building of common space where collaboration can be tested and refined in order to make that journey more feasible, as well as coherent. In many ways Snow, although often fuzzy in his interpretations, inadvertently showed us how this duality may begin to overcome barriers, and ensure scholarship remains a place in which one has freedoms to challenge and explore.

Language in this sense is not just about definition, but about the constructs we put in place to communicate within a defined group. There are constructs of administration and management, learning and teaching, as well as subjects and specialisms, all of which are learnt and developed mostly within our particular constituencies or communities. Much of the science and humanities debate comes from within those constructs, as does those similar antagonisms between administration and academics, curiosity and outcome driven principles.

> "We hear phrases like flexibility and competitiveness in academia as well, in part because
> they represent the only knowledge base corporate executives serving on boards of trustees are
> interested in bringing to bear on higher education."

(Nelson & Watt 1999)

A deeper understanding of language is important where we are hampered by a balance in power (Fairclough 2001). In the arts and humanities, and indeed most research domains, the balance of power lies more often than not with the dominant genus, high profile subjects, investors, movers and shakers at the helm of government agendas. The university has become an astute business machine, both responsive and reactive to income and prestige, and this is particularly evident in the languages we develop to pursue these ambitions, and the distinct communities of practice we are seemingly bound by. Even within the publishing hierarchy, one is subject to the demands of the dominant five star publication, where one can develop one's credibility and recognition. To date KT practices have not always worked to support that tradition. Like many discipline defined scholars one will often stay where one is accepted and valued within a constituency and identified as sharing the same make-up, language and territory. Stepping outside those boundaries has often made academics feel vulnerable to value systems that might affect this.

1.5 CONCLUSION

> "The UK's 1997 Dearing Report on higher education suggested that the role of universities is to enable society to maintain an independent understanding of itself and its world. Their function is not only to develop the individual skills and knowledge that we all call human capital, but also the networks, norms and trust known as social capital that enable people to act together effectively to pursued shared objectives."
> (Daniel 1998)

Outlining the ways in which the research landscape has shifted and changed over the last fifty or so years, enables us to place the arts and humanities within a context where a new currency is shifting normative behaviour and developing a research environment where knowledge transfer in the twenty-first century is becoming a pressing concern. The following Chapter engages us in the mechanisms by which these shifts may be better characterised and adopted, and attempts to set the scene on new research practices which the arts and humanities are perceived to resist and deflect.

CHAPTER 2

CURRENT REFLECTIONS: THE RESEARCH ECONOMY 2000-2005

2.1 INTRODUCTION

"Public funding for university research in the UK has become dependent on the perception of whether it will make a direct contribution to the economy. The reduction of research funding has forced public sector institutions, especially universities, to undertake activities that either attract industrial funding or generate income."

(Etzkowitz et al 2000)

In the years between 1997 and 1999 the Government was increasingly preoccupied with its role in shaping the research environment, and to this end the Dearing Report (1997) and the *Modernising Government* White Paper (1999) were published in fairly swift succession. The key outcome from these papers was the request for a joint study to be undertaken to examine the implications of devolution on the arts, humanities and social sciences, if Council status was to be achieved by the AHRB. The next six years signalled the start of a rise in Government expenditure for research generally, and a point at which the arts and humanities in particular were looking to become recognised alongside other discipline specific Research Councils.

These reports coincided with new statistics regarding income from external research grants up to 1999, as distinct from those administered by the AHRB and BA, which showed a steady increase for the arts, humanities and social sciences. At a higher than average 41% the rise, was significantly higher for the arts and humanities subjects than the 23% experienced by the science and technology base at the time (British Academy Report March 2004). This was a significant point for the arts and humanities community, as investment heightened renewed government interest in research partnership for these disciplines. It was evident that with significant increase in arts and humanities investments, attention would be paid to how those investments were also impacting beyond the institutions and what proportion could be attributed to government efforts.

"Failure to fully appreciate these contributions can result in misunderstandings. Subjects that are taught, studied and researched by many individuals attracted by their inherent interest sometimes suffer from a prejudice that what is often evidently enjoyable is unlikely to be useful… like more 'scientific' disciplines, their contributions cannot be easily measured as public service targets, but this does not make them less important to the economy and society."

(British Academy Report 2004)

The period between 2000 and 2005 was one where the Government Knowledge Transfer agenda and Council status for the arts collided, each providing a platform from which new initiatives and demands would emerge.

2.2 A CLIMATE FOR CHANGE: COUNCIL STATUS FOR THE ARTS 2000-2003

There are six awarding bodies in the UK acting centrally as the Research Councils, all established by Royal Charter in 1993 (to be jointly launched as Research Councils UK (RCUK) later in 2002). These Councils distribute awards across the science, social sciences and engineering, with the exception of the arts and humanities, and had developed ties with Government ministries and departments to drive major themes of research.

In 2003 Government and the Devolved Administrations evidenced the recommendation of the Government review and formally offered the AHRB full membership to become a Research Council, to be formally constituted before 2005.

"The decision to establish an AHRC illustrates the increased awareness of the important contribution that high-quality research in the arts and humanities plays in maintaining the UK's reputation in the world, and its contribution to the cultural, creative and economic life of the country."

(AHRC 2003)

Prior to this recognition much work had been undertaken to gain the final decree. In 1998 a memorandum had been drawn up between the Higher Education Funding Council for England (HEFCE), the Department for Education in Northern Ireland (DENI), and the British Academy, to move HRB to a combined and enlarged AHRB. The British academy was to continue support for the individual scholar whilst the AHRB focused on the larger institutional awards. This had placed the AHRB alongside the Economic and Social Research Council in terms of support capability, but not yet in status.

The Government was at a point where they had the Dearing evidence and had issued their White Paper *Modernising Government* (1999); the challenge now was to seek ways to improve their use of evidence in order to understand better the problems they were trying to address. If the Research Councils improved their evidence base they knew government investment would also follow. Targets for student numbers were at their highest in forty years, the Party Manifesto was shaping up to expand HE further and the agendas for Government and research were being designed to work jointly toward strengthening the UK knowledge base for 'excellence'. It was not by chance that the AHRB Director, Geoffrey Crossick, was preparing the ground to formalise the Board and take it toward Council, the timing was instrumental, as Government was primed to take the universities with them to help "tackle the twenty-first century" (Blunkett 2000).

> "The powerhouses of the new global economy are innovation and ideas, skills and knowledge. These are now the tools for success and prosperity as much as natural resources and physical labour power were in the past century. Higher education is at the centre of these developments." (Blunkett 2000)

After formal establishment of the AHRB a joint study to examine the implications of devolution on arts, humanities and social sciences was undertaken by the British Academy and the Royal Society of Scotland, reviewing the structure and operation of funding for research and the impact of outcomes, justifying any change in current funding regimes (British Academy and RSE 1999). Although still inadequate, the result was the doubling of income for the BA unified grants scheme, which the AHRB community would now be able to fully draw upon.

Primed with greater funds and a more egalitarian dialogue with other Councils, the AHRB was also now subject to closer scrutiny as part of the HEFCE Review of Research, particularly as it was agreed that the four Councils should undertake their own wider reviews of research policy and funding, something the AHRB had not been required to undertake in their former incarnation as HRB. This was to sit alongside the review of 2001 RAE, and for the first time the AHRB would have to explore more publicly their approach to such things as international competitiveness, the regional economy and their ability to engage with business and the community, and how that may be framed within their RAE remits. The evaluation of research policy and practices had also begun to surface in HEFCE reports, and recommendations would see increased attention over the next several years on notions of impacts and evaluation of research more broadly.

The 2001 Research Assessment Exercise was approaching and improvements to subject budgets was of primary concern for HEFCE, who proposed that "the Council should take account of the relatively lower level of project funds provided to the arts and humanities compared with other subjects" (HEFCE 2000). Alongside the issue of offering Council status the arts and humanities were also being closely associated with research being taken up by industry and the wider community. This was new territory. Although funds through HEFCE's generic research streams had not previously included the arts, there was now a window of opportunity to be included in new funds under the Higher Education Reach-out to Business and the Community fund (HEROBC).

Up until this Review HEROBC had been administered through a £20 million award to support a range of outward facing interactions that were notably growing in the sector. An additional £80 million was announced as part of the next Spending Review, with a proviso that due consideration be given as to how investment would become a "sustained and credible alternative source of funds to support and embed this third mission as a core activity within HEIs." (HEFCE Review of Research 2000)

What we could see emerging was a fast moving territory of renewed Government interest in research, diversification of funds promising take up by business and the community and a Research Board looking at 'new frontiers'. The Council for Science and Technology (CST) had published *Imagination*

and Understanding and the British Academy had already announced the publication of *Creativity and the economy: The contributions of the arts and social sciences* (2002). Both appeared within a month of each other seeking to bridge the arts science divide, as well as quantify their contribution in an environment where the disciplines were 'undervalued and neglected'.

The challenge for a new incoming Chief Executive for the AHRB would be to make sense of the plethora of reviews and consultations in order to secure their position and gain the funds to sit alongside the Office of Science and Technology (OST) with the other Research Councils. As professor David Eastwood steps down as AHRB Chief Executive, he had prepared the ground for this shift.

> "The Central reason for the AHRB's existence is to provide a range of new opportunities for researchers, enabling them to extend the boundaries of arts and humanities research."
> (AHRB Annual Report 2001-2002)

In Europe arts and humanities disciplines were perceived to be much further ahead than their UK counterparts, particularly with respect to interdisciplinarity and to a certain degree KT, and support was reflected in a range of formal reports. The French Risset Report (1998) sought cooperation between the creative arts and scientific communities, and the Danish Government was already establishing the Information Technology University (1997) to encourage greater linkages between the arts and science disciplines. Ministers in the UK had been aware of these developments and were keen to move the UK research base onto a similar trajectory. Margaret Hodge's review of the AHRB in September 2001 explored such a plan for implementation saying:

> "We need to recognise the importance of research in arts and humanities and acknowledge the contribution such research can make to the economic growth of the nation. Arts and humanities research helps underpin 'creative industries', is central to improving our quality of life and to the creative output of the country – and there is a great deal of scope for innovation across disciplines – between arts and sciences."
> (Hodge 2001)

There was a notable difference in tone and emphasis in the AHRB's Annual Report for 2001-2002 than those previously, as the introduction of new terminology and references saw words such as impact, breaking convention, stakeholder, communication technology, application through innovation, efficiencies and a notion of 'preparing for the future' all appear throughout the text. These terms are closely aligned to a perception that they may help the arts and humanities to embrace a new mission to take a "role in the new knowledge economy" (AHRC 2002), a hint at changes the academy might expect. In the 2002 AHRB report, an 1845 map depicting a Chartist experiment in community living appears on the end sheet. The significance may be incidental but served to draw the reader back to historical reference where the 'ordinary man' would rise up to take his rightful place with his counterparts. Whilst hinting perhaps that this shift in emphasis may not be that new, the AHRB were highly aware that any forthcoming reforms may also provide them with a 'rightful place' to have an equal say in the way the disciplines might develop in a highly competitive future and an equal say in the way UK research would be informed and shaped.

Once the outcomes of the 2001 RAE was published the success gained by the arts and humanities was to lay the foundations for a more ambitious bid under the Comprehensive Spending Review for 2002. Having gained recognition for the highest grade improvement of any other subject discipline the AHRC looked to underpin their programmes, as well as introduce new forward thinking schemes, many of which were to cut across other Research Councils and lay the way to develop Knowledge Transfer as a key ambition for the future.

Lord Sainsbury of Turville was well noted for his support for the UK research base and wrote prolifically on these changes and developments. In his address to the Royal Society in 2002 he drew on the plethora of reports and speeches of the last two years making the direct link back to the *Two Cultures* debate as central to any shift in government thinking on the arts and humanities. He stated that "the relationship between the two cultures is not an arcane academic one, but one that has major policy implications for key areas of our national life." Although he realised the move to integrate the arts and humanities into national research funding formulas was somewhat slower than hoped, it was evident that the pressures on government to move the AHRB to a Council was imminent. If this were to be

secured, current efforts and increased visibility in government circles would serve to raise their capacity as well as the profile of their disciplinary communities.

The following two years saw a continual review and consultation culture build up around the arts and humanities, much of which focused upon either their Council status or the need to qualify their role in the Knowledge Transfer arena. In the *Tabular Chronology 1990-2007* (See Appendix 4a) we offer up the sequence of unfolding events and outcomes during that time, which enables one to see how developments in the AHRB were being played out alongside shifts and changes in government. In brief, 2003 marked three significant shifts for research which sparked new reforms and significant plans for investment; the *Roberts Review* set out benchmarks for research quality and evaluation; and the *Lambert Review* clarified university-business collaboration; and the AHRC had finally gained agreement on becoming a Research Council.

In the next section of this chapter we address the outcome of these three shifts and place the 2003 White Paper and the Roberts and Lambert Review in the context of an emergent rise in KT practices in the modern university. We uncover some of the background on how the KT agenda was arrived at and how some have struggled to define and adopt it as a normative practice in scholarly life. In setting the context in which KT emerged, we suggest that the modern university has perhaps not fully embraced the place of the arts and humanities in that context. In an attempt to better equip both academics and their institution for new KT practices, chapters 3 to 6 go on to present a range of possible methodologies and recommendations that may add weight to the argument.

2.3 RESEARCHING KNOWLEDGE TRANSFER: SOME FIRST STEPS

2.3.1 Background and current inflections

> "Research orientated universities are to the information economy what coal mines were to the industrial economy."
>
> (Castells & Hall 1994)

It will be clear from the previous chapter that there is a need to re-examine the term and impact of Knowledge Transfer (KT) in an academic environment, particularly as the political, social and

educational policies were continuing to drive the process further into the research landscape. In this context Gibbons et al (1994) begin to describe 'knowledge economy' as the economy of the intellectual, and in doing so begin to raise the KT agenda to acknowledge knowledge as a valuable asset in the wider economy. As we move from a predominantly industrialised economy to one which is preoccupied by information as a source of wealth creation, the emphasis on knowledge has meant that the arts and humanities were also undergoing renewed social and political interest in relation to their place within and outside academic contexts. As information relies on a transfer of knowledge, both the use of that knowledge and the impact it may have upon society has become heightened. The role of arts, humanities and social sciences in 'making sense' of this transition has in itself shifted some of the attention away from the old economies, and allowed social and historical antecedence to come to the fore (Bell 1973). To some degree this also acted to substantiate the value of the arts and humanities in that transitional period, although it had not yet been fully recognised.

Whilst universities in the past have essentially enjoyed a level of self-governance and remained at what could be considered at a suitable distance from the dictates of government, the last ten years has seen significant changes. As the knowledge economy has grown, so has the demand on universities to feed and nurture that economy. The rise in enterprise and entrepreneurship has brought with it a blurring of the edges between universities, industry and government. It is well documented that universities are critical to the economy (Currie & Newson 1998), but little is known about how such a *transaction* takes place. Even with the increased awareness of KT and its inclusion in major policy directives, government is still struggling to articulate how KT occurs and what its potential may be (Etzkowitz 2000).

A number of key reviews have been commissioned precisely to explore the 'how' in university industry relationships. Examples include: the Dearing Report (1997), the Lambert Review (2003), and the House of Commons Science & Technology Committee review of Research Council Support for Knowledge Transfer (2006). More recently, the White Paper *Enterprise: Unlocking the UK Talent (2008)* and NESTA's *Arts and Humanities Research and Innovation (2008)* have also sought to extend the knowledge and debate about the challenges faced by academics to engage with new business facing activities. Most of these documents propose variations on the expectations for the arts and humanities

to engage with the KT agenda in particular, but few offer any mechanisms by which they may ignite that process. In an environment where other tensions are continually at play between research and teaching, resource allocation models and the divide between applied and basic research and so on, KT is often perceived to be of peripheral concern, and therefore in direct conflict to government drives to increase these types of interactions. The AHRC recognise the challenge in turning these perceptions around, but as yet have had few mechanisms to penetrate the university environment, and equally government departments, to solicit advocacy and support. Later in the thesis we explore these two features to suggest that there may be ways to work closer with academics in order that we might aid their relationship with government interests.

The term Knowledge Transfer (KT) has derived partly from within the study into organisational behaviour (Davenport & Prusak 1998) and knowledge management (Zander & Kogut 1995), and partly as a broader derivative of the Technology Transfer agenda in the early 1990s (Siegal, Waldman & Link 2003). The former explores the ways in which people in organisations interact and exchange information or knowledge and the latter extends that to a particular domain adopted by university-industry interactions aided by technological advancement. Within this environment, Drucker's work on knowledge management was influential in the 1960s and beyond, insofar as it attempted to show how organisations could capture knowledge as a resource to enhance competitiveness and increase income potential. During the next thirty years research and business began to join forces to refine the knowledge management concepts through an exchange of knowledge across the two contexts (Davenport 1998; Starkey & Maden 2001).

During the 1980s and 1990s there was a marked growth in the transfer of knowledge between universities and industry at large, embedded in both government drives for innovation and increased funding made available for Higher Education to bolster this agenda. As the increased focus upon the movement of knowledge and expertise has become a key factor for university investment, there has also been a need to focus on the systems and processes that may aid those types of interactions or transactions. Although the arts and humanities are not alone in navigating this terrain within the institutional context, they are at a much earlier stage in aligning their research culture, belief systems

and practices. Adoption of KT within both the institutional and external context has met fierce resistance from the arts and humanities community.

This chapter aims to uncover the key factors affecting the adoption of KT by the arts and humanities in the current climate, its historical foundations and current inflections. It begins with a brief overview of knowledge transfer and the landscape for adoption in UK HEIs, focusing in on one case study in Chapter 3 that lays down the foundations for a closer inspection of engagement between individuals and their environment. This study introduces the term 'value chain' which is an analogy in which knowledge can be seen to develop in a co-constructed environment (Kaplinsky & Morris 2001).

2.3.2 What is Knowledge Transfer?

The terms and references associated with Knowledge Transfer are broadly confusing and more often inconsistent, particularly during its emergence throughout the 1980s and 1990s. It was a phrase coined to respond to the increased focus upon the core manufacturing technologies and high-tech firms whose outputs were a direct and overt asset to the economy at large. We have therefore chosen to focus mostly upon a review of literature post 2000, where the term starts to appear more frequently within both governmental and academic contexts, and is seen to be more readily adopted and recognised in reference to the 'knowledge economy' rather than the economy per se.

Here we present a range of representative definitions from recent publications that outline three particular perceptions of KT being a linear transition, a one-way interaction or a two-way exchange.

> "[KT is a] …process of systematically organised exchange of information and skills between entities."
>
> (Wang, Tong & Pen Koh 2004)

This definition is broad and relies upon the assumption that knowledge is both an organised and ordered process. It does not suggest that actions may divert or diverge, but that it essentially runs along a linear trajectory between two points.

"Knowledge Transfer encompasses the systems and processes by which knowledge, expertise and skilled people transfer between the research environment (universities, centres and institutes) and its user communities in industry, commerce, public and service sectors."

(Select Committee on Science & Technology Third Report 2006)

The term 'knowledge transfer' here still encompasses the notion of academics *giving* knowledge to the partner in a systematic and process driven way, rather than inferring a two way exchange of knowledge or less formal mechanisms where the intricacies of individual or organisational actions may affect the transaction or preferably the exchange.

"Knowledge transfer, in its simplest sense, is the feedback mechanism in an economy of knowledge powered by engagement and collaboration."

(NSW Public Health Bill 2005)

This description begins to make closer association between entities, inferring the act of engagement is in fact at the root of KT activity rather than in the end product or outcome. This is still somewhat limited, although it does move away from the economy as a driver of knowledge, to one in which knowledge may be of intrinsic value in itself, and orchestrated between those engaged in its development and use.

It may be instructive to see that KT is currently more widely utilised and adopted in the Health Sector. The growing interface between research and clinical practice has ensured that the health sector views KT as a natural process in the exchange of knowledge which is highly applicable in real settings. The sector has begun to refine and redefine both its definitions and usage of KT, creating a tailored environment for more effective adoption. Much of the literature available is proving to be much further ahead in identifying how KT is enabled, pursued and embedded in organisations. Fink, Thomson and Bonnes (2005) write extensively on the use of research in nursing practice and provide some of the most recent work on how organisational cultures enable or inhibit the effective exchange of knowledge. We will return to their work and the research of others that is rooted in health research

when exploring the nature by which individuals group together in distinct 'value chains' where they are challenged to find applicable means of cooperation and exchange.

Undertaking a review of KT literature in 2001 at the British Library produced only thirteen publications and very few citations. In the proceeding six years that has tripled but there is still very little material that uncovers and challenges the role of KT pursued in an academic environment, and even less that tells us something about it from the arts and humanities perspective. In order that the disciplines had a recognisable point of reference for KT interaction the AHRC decided upon the use of a much broader definition. There were few that were reflective of their community, and fewer that used recognised terms or language. In introducing KT formally from 2005 the Council began to define knowledge transfer as follows:

> "To exploit fully the new knowledge and learning that is generated in higher education, it has to be applied to areas of life where it can make a difference."
>
> (AHRC website 2006)

Whilst the definition is retained as a 'catch all' mission statement, particular references have had to be introduced into common usage in the academy, or are at least adapted to fit, in order to make common links between policy, research and application. Knowledge Transfer as a term has also begun to diversify and derivatives like knowledge exchange or knowledge interaction have crept into texts and discourse. The long standing term 'tech transfer' has returned to its research roots and knowledge itself is slowly becoming a recognised outcome, increasingly viable as an innovative widget or product, but not yet quite as articulate in describing itself or its impacts. Geoffrey Crossick was succinct and direct in his address to the Royal Society of Arts lecture in 2006 when he said that "it is often important to pick up and use the current discourse if one wishes what one says to resonate with government" and to that ends the AHRC managed to avoid the inclination to rename it, enabling government to make sense of our outputs according to such recognised points of reference. Unfortunately the AHRC did not describe this language adoption effectively to the community of scholars they were set up to support, and this may have led to some feeling alienated by the unfamiliar lexicon suddenly being introduced. It may have helped the process of earlier adoption if the dialogue around KT had been more inclusive to

the community who were expected to deliver upon its ambitions. In chapter 5 we briefly explore the relationship between individual academics and their adoption of new terms of reference and understanding.

The AHRC KT definition has remained in place over the last few years but has now become more embedded in a framework that underpins a broader spectrum of KT schemes and activities. In completing the new AHRC Vision and Strategy document (2007-2012) we see that not only has KT remained in their strategy, but it has also been closely aligned to the notion of impacts.

> "To strengthen the impact of arts and humanities research by encouraging researchers to disseminate and transfer their knowledge to other areas where it can make a difference."
>
> (AHRC, Vision and Strategy 2007-2012)

This alliance anticipates a recognisable relationship between research and external collaborators in order that something may be counted and evidenced as a result. Here we see KT may also be beginning to change shape again and the demands upon the academic possibly more complex. In chapter 7 we explore how KT and impacts may be entwined and how we may be able to devise mechanisms to both raise adoption of KT practices whilst at the same time consider the gathering of evidence in support of their impact.

2.3.3 The University, KT and arts and humanities research

University institutions have long been associated with generating knowledge as a key component to enterprise and innovation. They have made great strides into technological advancements, patents and the pursuit of Intellectual Property Rights (IPR), and are noted for bringing the 'knowledge economy' in line with the economy at large.

> "For universities, this has meant that we are beginning to see a shift from a grant to an exchange economy in Higher Education. This has required new institutional orderings and modified academic regimes that govern and reward entrepreneurialism."
>
> (Etzkowitz, Webster, Gebhardt & Cantisano Terra 2000)

At this point in the recent history of the entrepreneurial university, the role of the arts and humanities in the wider economy is often overlooked, particularly where a discipline has seemingly little resonance in an applied setting, and demonstrates little or no influence upon industry investment or government policy. What has fast become a traditional application of knowledge is actually turning out to be one of the major hurdles in securing buy-in from the arts and humanities disciplines. The 2006 House of Commons Select Committee on Research Council Support for Knowledge Transfer highlighted the fact that little attention has been paid in the past to the role of KT in uncovering economic and social impact through research, and that efforts must be made to bring the arts and humanities in line with other disciplines. The status of the newly formed Arts and Humanities Research Council in 2005 enabled the first steps to be taken to include this voice in government debate and review.

Government had increased the presence of KT in its research and policy strategies, which is reflected in the allocation of funds to roll out activity via its Research and Development offices and agents: Higher Education Funding Council for England (HEFCE), Office of the Deputy Prime Minister, Research Councils and Department of Trade and Industry. Previously the AHRB remained on the peripheries of these agents, on one side distant from their demands and the other, needing to secure a voice in decision-making in order to secure income streams. Today the AHRC are undergoing a marked and overt transition in the way they operate, and are now trying to remain alongside their counterparts in providing evidence of value and impact. Along with all Research Councils the AHRC have been required to gather evidence in line with the request from the House of Commons 2006 report which denoted a "pressing need to develop metrics to provide a baseline against which Research Councils can measure future increases in impact and indicated that the Councils should develop research programmes closely aligned to the needs of the economy."

The broader creation of talent and knowledge that the arts and humanities harness has long been unrecognised in an environment preoccupied by the interests of a government led research base, and what may be emerging is a backlash deeply rooted, as we have seen in the previous chapter in *the* definitive debate of the *Two Cultures*. For example the perception of and degrees of resistance to KT in arts and humanities disciplines is markedly constrained by historical antecedents and once again recalls

the importance of the science-arts debate, elaborated upon in Chapter one, in recognising the need to turn those perceptions around. It is clear that arts & humanities disciplines must seek to find new ways to cross that divide if they are to adapt to a new and changing KT environment, particularly where evidence forms the basis on which they will be judged for future investment.

As monies begin to be targeted towards a change in research culture in our institutions, it is becoming harder for the arts and humanities to avoid the influence of KT. The availability of any form of core income for universities, such as those denoted by HEFCE and the Higher Education Innovation Fund (hereafter HEIF) can be seen to have had a marked effect upon research culture, particularly where it may come with expectations of outputs and impacts. The increase in KT funds has meant that both the term and associated activity has increasingly appeared in institutional strategies, has penetrated the school planning cycle and can even have been seen to become a promotions indicator or a bench mark for success in some universities. However, there is still a problematic relationship between KT and the Research Assessment Exercise, which is often seen to be a disabling factor for KT rather than enabling, as publication in peer review journals dominates over practice or applied outputs. The ex polytechnics and the 'red bricks' provide us with an interesting cultural divide where research and practice is concerned and where KT is often seen to vie with RAE persuasions. There is a distinct pattern emerging in those universities that have a long-standing history of applied practice and one where the RAE demands are less influential in a less research dominated culture.

Current variations in how KT is measured as an indicator of esteem increases the pressure on academics to reconsider their relationship with KT in light of the 2008 RAE process. Where alternative indices are being sought there may be little room to ignore the research and application debate. Government is becoming increasingly accountable to public expenditure review, which brings with it a demand for impacts beyond the norm, creating a research culture perceived to be dictated by the investor. Academics are uneasy with this relationship for fear of losing the autonomy to pursue research unencumbered by such demands.

However, the perception that the arts and humanities offer a lack of benefits beyond the institution is beginning to change as we see more interaction between researchers and external organisations. The

University of Cambridge is now recognised for its interactions between philosophers and corporate industry, where their knowledge is being utilised to enhance a corporate understanding of both their employees and their growing customer base. The work has had profound effects on the companies involved, encouraging a breakdown of the perceptions that philosophy is purely an intellectual pursuit. The AHRC Research Exchange Network, described in more detail in chapter 7, has utilised the work at Cambridge to stimulate the debate about those subjects that may sit on the peripheries of the KT agenda. If we begin to develop strong models of practice from the less obvious disciplines we may be able to encourage and intellectualise KT as an asset to the research environment more broadly.

Theology	Modern Languages	Classics	Philosophy	Law	Threshold of KT transition	History	Archaeology	Architecture	English	Art & Design
Less movement outside traditional disciplinary practices ←———→								Higher level of adoption of KT Practices ←————————→		
1990s ←————————————→										2008
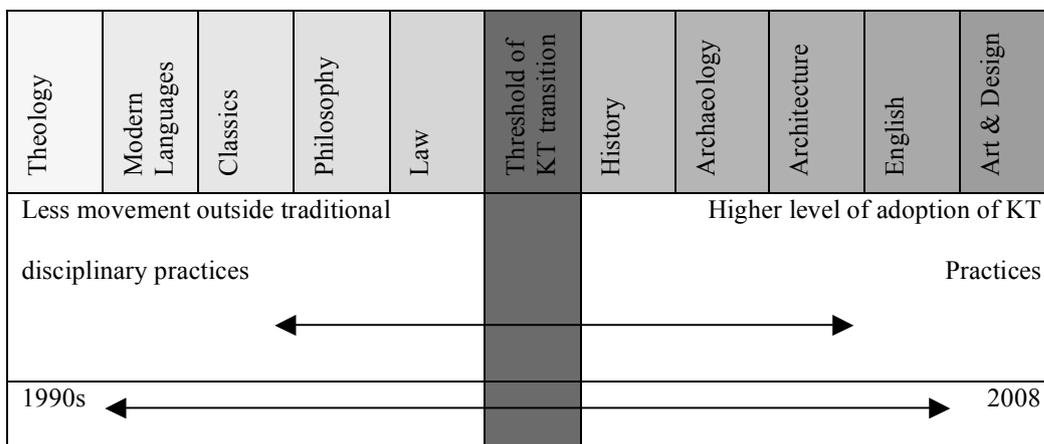
Figure 2.3 The KT Spectrum

Figure 2.3 offers up a spectrum of key disciplines and the current perception of their 'adoption distance' from current KT practices. This spectrum does not act as a definitive pole positioning of the disciplines, but reflects upon the findings within this thesis and the evidence gathered in the KT questionnaires in Chapter 5. As the KT landscape changes over time the spectrum should, by nature of 'acclimatisation' to KT, become more detailed, with disciplinary fields splitting to recognise sub-disciplinary and interdisciplinary activity. Many disciplines will shift position, meaning the threshold of adoption will move and fluctuate to reflect a broader level of uptake, and more importantly a rise in general KT activity outside the domain of KT schemes. Overt adoption however is not the only indicator of changes in KT practices, as this is also highly dependent upon where investment is evident to support thematic fields of research and the generation of better evidence on how it comes about and why it is of value to scholarship.

The diagram represents those at the peripheries of the KT agenda and particularly those both unrepresented and not yet applying for KT related funding. A major challenge for the AHRC and other investors is to find ways in which they might encourage the development of a richer and more complex KT spectrum and landscape.

There is little research into the relationship between KT in the arts and humanities, and the retention and exchange of knowledge in research environments as a key feature to its adoption. Could research around the building and embedding of tacit knowledge within our institutions tell us more about how we create a recognised environment for KT to be retained and nurtured as a practice? Chapters 5 and 6 address this in more detail by exploring how knowledge, and more broadly organisational knowledge and behaviour, may be key factors in the KT process, looking closer at how we harness this to best effect within an institutional setting, learning about what patterns of interplay and characteristics lend themselves best to humanities disciplines. Do the arts and humanities have an innate fear of codified knowledge, preferring a paradigm of knowledge as disinterested, and, if so, is this against a cultural instinct for the pursuit of applicable knowledge? Cummings and Teng (2004) suggest codification of knowledge is a factor in the *lack* of success in the transfer of knowledge, as it does not become, on the part of both individuals and organisations, an element in the ownership of, commitment to, and satisfaction with the knowledge shared. Dunn and Holzer's (1998) 'complexity thesis' and the work by Stover (2004) regarding loss of tacit knowledge as loss of 'knowledge capital' are key reviews in the development of arguments and debates in this area.

Malhota (2002) suggests that knowledge transfer cannot be expected to follow a similar pattern from other fields of practice and that therefore the exchange and reception of knowledge will not be identical. It may not be the science model per se that holds the arts and humanities back, but perhaps a resistance to the demand that they should have to be applicable beyond the academy at all. This takes us back to the science arts debate explored in chapter one, but in order to move beyond it may be necessary to could look more closely at individuals rather than the collective, to find the nuances and qualities more common to our KT practices. We cannot deny that there is a *great divide* but we could push it aside for a moment to observe things at a more grass roots level. The observation of our

disciplines and the codes they share in their communities of practice may give us the empirical basis for new knowledge generation in itself; a snapshot of what previously may have been no more than an emergent body of tacit assumptions.

In chapters 3 to 6 we explore the styles and behaviour of a range of academic researchers and attempt to situate them and their KT interests in an institutional setting. This setting is seen at times to support and hinder the adoption of KT practices, and it is with this premise that we will aim to define more clearly the interplay between individual and institution at a more micro level.

The continual interplay and exchange required to work collaboratively is something that has to be nurtured, and roles such as those denoted as brokers (or commonly Research or Business Development roles) are often seen as key to ensuring communication and continual dialogue is sustained. This is explored in detail in chapters 3 and 5, the former devoted to a particular case study called Creativity East Midlands (hereafter CreEM). Through this study we look more closely at the interplay between individuals in one given 'value chain', or collaborative partnership, in which academics from history and business history come together with the music industry, local and regional government and public bodies. Working collaboratively in similar large-scale teams is not a research practice with which many arts and humanities researchers are familiar. The dominant paradigm of the lone scholar working with material on his or her own and developing interpretations of that material which are likely to lead to a gradual refinement of understanding is by far more familiar. These practices sits uncomfortably with a more transmissive or instrumental view of research, where reflection or evaluation is not always given enough weight in research, where there is a culture in which the norm is to work in teams, often collaboratively, and to move from one project to the next in quick funded succession. In many non-humanities disciplines building collaborative teams, preparation and organisation as a group seem to play an intrinsic part in bringing quality projects to fruition; in the arts and humanities the preference is for the development of a more individualist and interpretive approach to research in which outcomes are seen as less easily measurable by criteria external to the discipline. What is valued is a sense that the research is likely to contribute to an iterative deepening of understanding, rather than to an immediate or direct application of findings. There is also a perception that working with outside agencies often results in short term, narrowly defined, methodologically poor outcomes which are

dictated by commercial viability or co-opted by the demand for new research income from diverse sources (Press & Washburn 2000). Timeframes for delivery of research outputs are often in opposition to the expectations of the external collaborator e.g. particularly in the civil service where results may be required swifter than researchers are able to deliver, in order to affect or stimulate policy interests for example.

Do arts and humanities researchers have a perception that research that comes about through practice-based collaborations weakens and hinders academic credibility? Science has a well recognised relationship with practice and perhaps this may tell us something about how this came about and what impact it has upon the scientific community. Applied research has obviously the closest associations with knowledge transfer and the notion that research is only of value when used or useable is central to that picture (Sveiby 1997). If we look at the social sciences in particular we can see evidence of a rise in research collaborations focused upon public policy. This is increasingly demonstrating demand for government and industry approaches to undertaking more intensive R&D, for example through co-supporting commissioned research with recognised agencies and the business sectors. University researchers have become increasingly aware of a similar shift to a climate in which there is a greater reliance upon public funding, and where universities are increasingly being incentivised by monies tied closely to business and knowledge transfer interactions.

2.4 A MOVE TOWARD A KNOWLEDGE DRIVEN SOCIETY 2003-2005

The past forty years have brought with them a marked shift to mass higher educational expansion across the globe. It has seen both research and teaching expand exponentially alongside political demands, new funding regimes and the pull toward commercial and private interests.

In the timeline in which these events were evolving and shaping the academic landscape, we can begin to understand more about the influences of not only the political and social climate of the times, but the cultural plates that were continually shifting, splitting and regrouping amongst academia. Amidst these shifts, research was to find itself not only challenged by advancements in technology and industry, but also continually embroiled in a deep routed debate around value and purpose.

Although the origins of the humanities are as relevant today, markers have occurred at particular points in history where the value of intellectual freedom shifts to that of the ownership, definition and influence of intellect as property or a valued commodity. The classicist retreated as the academy's knowledge filtered out more into wider society, as the more it became visible beyond the institution, the more the academic was required to step outside and demonstrate the outcome of investments in research. Sir Ivor Crewe's Burrows Lecture (2006) touched upon this as a great failing of government to protect the intellectual freedoms of university research and allow "the independent creation and dissemination of knowledge and ideas, unfettered and unmediated by the interests of state, industry, community or ideology." (Crewe 2006)

In order that universities can respond to the demands of government interests white papers are formally constituted to tell us how and why they chose to deliver or reform policy. Their agencies take those policies and look for ways to shape and reflect them in industry and society. Funders and investors are then required to harness and capture those reflections, to steer money into academic and private research where expectation that solutions to major problems will be resolved. The universities are then drawn into the circle often to validate, innovate, invent and nurture solutions in return for continued investment. This cycle of investment and expectation, whilst simply described here, has often portrayed the university as the business machine beholden to deliver upon the demands of who pays them.

Academia finds itself embroiled in a micro version of this cycle, another value system that equates the prominence of themes reflective in society or politics as of greater value than curiosity. Within our research institutions the policy becomes research strategy, ideally a back reflection or response to current government interest, therefore where investment is most likely to be found.

The reflections of industry and society heighten the traditional civic responsibility of the institution, and the development of solutions to governmental and societal issues acts as a ransom to those who are deemed to be best suited to answer them. If the cycle is continuous, where does curiosity driven research find time and funds to pursue avenues outside of the circle? Such orchestration requires

academics to perform astutely in a climate where investment falls well short of demand, and curiosity holds less value than that which is outcome driven.

> "I share Gordon's concerns, perhaps, about the way in which universities are becoming more commercial, not necessarily the fact of them becoming commercial, but in particular what seems like an attempt to make them behave in a much more market-focused and short-term manner, which I think ultimately would corrode to some degree the opportunities which are presented by curiosity-driven research."
>
> (Ecclestone 1998)

The perception of commercial interests acting as a direct threat to curiosity is long standing, and reinforced by common systems of language and values, as outlined in chapter 1. Government values have also greatly reinforced the development of new systems and processes in universities, enabling them to adapt to new circumstances and demands. Many of these business and policy driven interest have often set the arts and humanities in a bereft landscape where they were perceived to have little direct or tangible value on the political or economic wealth of the nation. The arts and humanities to date have no history of gathering the hard evidence required to demonstrate this, or found effective ways to communicate their place in the value systems created and implemented by others. The plethora of reviews, consultations and reports during 2000-2005 aimed to uncover such evidence, which as yet still remains somewhat 'myth and magic'. Recent moves by the AHRC to shift impact evaluation away from the broad perspective of research outputs, to the complexity of interactions at grass roots level within our institutions, suggests a return to exploring early stage interactions and this may in fact be the catalyst for new insights. In chapters 3 to 7 we begin to uncover a number of methodologies that might support arts and humanities scholars to better understand how they undertake KT, and in the process gather evidence of the impact KT has upon the multiple players involved. In understanding the need for KT to gather evidence we suggest that a closer, in-depth study of academic behaviours, institutional support structures and collaborative practices may shed light on the complexity of co-production, and area greatly overlooked with respect to the arts and humanities disciplines.

In the intervening years between 2002 and 2005 the AHRC underwent significant challenges and changes in advancing the Knowledge Transfer agenda as referred to earlier. Many thought them ill equipped to rise to external demands and some were dismissive of them even trying in a climate few in the community really understood. In fact the antithesis is almost the case. Those working in the AHRC during this time were in fact experiencing less tension with government agendas than those outside it expected. The DTI was mostly unaware and somewhat unaffected by the newly appointed Council. This was due, in part, to the perception that the arts and humanities research community offered little they recognised as of value to their policy and economically driven interests outside the creative industry arena. This enabled the AHRC to undertake a dialogue unencumbered by existing preconceptions, thereby enabling them to ease the DTI into a newly forming culture through continual exchange and acclimatisation to arts and humanities qualities.

During this period the AHRC was able to develop and share emerging references that have become increasingly embedded in their collaborative work today. The Council too learnt about the inner workings of the policy environment and the benefits that can come from making ideas targeted, measurable and achievable. In describing these qualities it is almost in direct contrast to what has commonly driven the arts and humanities community, as we have seen in the previous chapter. After we have explored the *Two Cultures* debate, the dilemma around impacts and a poor evidence base, one can see how the AHRC would be required to further navigate this territory to secure government funding. In talking with senior staff at the Council in late 2007, it was evident that they had gained a confidence in supplanting the arts and humanities community into the policy environment. They had both nurtured the government to accept there were intrinsic qualities of value to them, whilst also trying to prepare the ground for the research community to embrace a policy environment. As Weick (1995) infers, the AHRC's actions will always be either 'a little behind or a bit ahead' of both government and academic thinking on KT, as this is part of how the 'sense-making' process finds common points of reference and consensus in a shifting landscape. In a similar way, although at a grass roots level in academia, the CreEM case study in the next chapter explores how 'sense-making', in relation to KT, also finds common points of reference amongst academic, policy and business collaborators. The study suggests that success of KT outcomes is very much dependent upon a change in current ways of working, influenced by organisational and individual behaviour and highly

dependent upon scale and adaptation and shifts in perceptions and values. One particular sector has been recognised as a great influence on KT for the arts and humanities and that is the Creative Industry sector (hereafter CIs). Although we deliberately choose not to focus on the CIs throughout this thesis, the case study is utilised to demonstrate how history scholars were able to adapt their disciplinary practices to move beyond the boundary of those traditions. This enabled them to test and refine their disciplinary perspectives and assumptions in new settings, but also to explore their applicability in policy settings in particular.

The research community has adapted to this shifting landscape by forming a strong alliance to what is thought to be their closest industry partner, and although they have the capacity to work in a much broader context, the two have become synonymous as a success story for innovation and enterprise. The CIs are one of the fastest growing industries in the UK and abroad and have become one recognisable route in which the AHRC and DTI could expect to show hard impacts, similar to those experienced by science and medicine. The academic community has been reticent about being defined by their CI alliances alone, but in many ways this has acted as a catalyst from which other alliances may be forged. As a 'test bed' for KT the CIs have ensured the arts and humanities have become more visible and in turn recognised as a contributing factor of their success. The challenge for the arts and humanities will be to make an intrinsic shift from the CIs as a test bed and explore how other disciplines, often considered to be on the peripheries of the KT agenda, might approach similar challenges to engage.

2.5 CONCLUSION

Advancement in the way research is perceived and undertaken has brought with it a need for reflection, and is given context by historical as well as current antecedents through the last chapter. As the title of this thesis may suggest, this reflection may be somewhat determined by the chain of players, the stage on which they perform and the common system of values they adopt to communicate their purpose and message to others.

> "It is a dynamic conception of the Humanities in which people not merely belong but in which they act."

(Brownell 1945)

Scharpf (1988), Marks (1997) and Mayntz (2002) all developed and utilised variations on the notion of 'actor centred' institutionalism or governance, as a way to view the complexity of both political interaction and negotiation amongst diverse groups. Although this predominantly focuses upon a range of theoretical contributions of a political and economic nature, many of the principles have strong parallels to academia as a stage in which many scenes are enacted and characteristics and behaviours uncovered. Introducing a microcosm of larger value systems, this perspective offers us a chance to see the impact those actors may have upon particular audiences, in this case including public, political and peer.

The next chapter moves away from the macro view of the research environment to the micro level interactions between individuals. It attempts to present one such framework or 'value chain' in which a series of key 'actors' became central to the design and success of a large research collaboration, focused on the interactions between history scholars and the Creative Industry sector.

CHAPTER 3

CREATIVITY RESEARCH IN THE EAST MIDLANDS (CreEM): A CASE STUDY

3.1 INTRODUCTION

> "The Government White paper on Enterprise, Skills and Innovation has reinforced the policy already adopted by Emda that the economy should be built through focussing attention on successful clusters. There is currently very little knowledge or understanding of creative industry clusters within the East Midlands…"
>
> (Emda Comedia Report 2003)

Creativity Research in the East Midlands (CreEM) was a collaborative research team brought together at the University of Nottingham in 2002. It was tasked to find out more about the lifecycle of the music and digital industries in the East Midlands by working collaboratively with the sector and those in governmental and public bodies, set up to support growth in the sector.

The CreEM research project was set up for an initial twelve-month period to develop a body of evidence to further research in support of the long term-sustainability of the music sector in particular in Nottingham. The aim was to bring the key people and agencies together to design and deliver a collaborative approach to academic research in support of sector development. The outcome of this process described in this chapter offers unique insights into the dynamic effects of the methods and tactics the group pursued to co-produce research, and as such has been chosen as an historical account of a large scale research consortium in which particular roles were adopted, models of research practice uncovered and lessons learnt.

Current value structures developed collaboratively between researchers, universities and the wider society tend to be historically observed and evaluated on completion of the agreed outcomes. There has traditionally been less interest in the details of close interactions between individuals, and more on the overarching impacts of projects to deliver tangible assets to the partner. This global view often misses

the role of individual actors in developing unique and intimate value structures (Liesyte 2007), in turn often missing key factors that can affect the success or failure of collaborative research projects during their development. The following attempts to present the first foundations of a study of one particular value structure using a 'value chain' analogy (Kaplinsky & Morris 2000) to expose the actors and the tools and methods they pursued to bring about a research project from inception to final fruition. In chapter 5 the findings of the CreEM case study forms the basis on which we extend the observation to look more closely at the academic actor.

The following case-study will present the background to the project, the key players involved and a reflective account of the processes of adopting particular methods and approaches to aid the exchange of knowledge, a process that, as we have seen in previous chapters, is commonly termed 'Knowledge Transfer' (KT). The study will combine a number of methods in order to bring an organisational culture perspective to KT (Davenport & Prusak 1998), where there is currently little research specifically relating to such cultures embedded in arts and humanities disciplines (see chapter 4 on methodology).

The following sections will include regular insertion of selected reports and minutes, as well as ongoing recorded notes from CreEM participants as a way of linking the overall description with the daily ongoing life of the project. These documents can be located in Appendix 1a, and serve to provide a more animated narrative in support of the key findings. The case study will propose what elements may be significant to explore in future studies of this kind, in order to generate a clear hypothesis around arts and humanities interactions outside the most common parameters of institutional research. It will lead to the formulations of specific research questions to be explored in chapters 5 and 6 of this thesis, where we uncover the role of individual academics and their institutional environments as key elements in the adoption of KT practices.

3.2 BACKGROUND

CreEM began in early 2002 amidst a plethora of existing academic and public sector research on both business clustering and creative industry development. The research arena in both fields had begun to explore wider perspectives to business sustainability more generally, in light of the increased pressure

for UK based industries to compete in an expanding global economy. Although extensive research in support of the larger scale industries was being undertaken, such as biotechnology and manufacturing, little attention had been given to how the UK may sustain a thriving CI sector.

In order to explore the sector more fully, and ensure involvement between sector representatives and academics, early stage funding was sought to enable these groups to convene, get to know each other, and devise a joint approach to tackle questions of interest and importance for both academia and the sector. A fund, newly established at the University of Nottingham, provided a possible route for such early stage investment, although not yet fully accessed by the arts and humanities community. In order to gather evidence for future large-scale monies to be sought it was vital that developmental discussions were enabled to take place to co-construct the partnership and the appropriateness of the research focus to the sector needs.

The Higher Education Innovation and Regional Fellowships programme (HIRF) was a collaborative programme operating across eight East Midlands Higher Education Institutions (HEIs). The programme funded Fellowships to support two key features of commercialisation and engagement with regional organisations in support of economic growth. These funds often posed significant problems for the arts and humanities, as they were often difficult for them to negotiate, particularly where the terminology was unfamiliar, criteria prescriptive and outcomes often requiring 'hard impacts' on economic drivers. The arts and humanities were often at a disadvantage and struggled to compete for these funds and demonstrate their value in similar ways to disciplines more conversant with such business characteristics.

A number of key roles are outlined further into the chapter, but in the early stages of the CreEM project it was the university Research and Business Development Officer who was highlighted as acting as the broker and facilitator throughout the development of the partnership. The broker helped the team to translate their proposal into one that was able to demonstrate the impacts on more recognisable targets that the HIRF review panel would be both familiar and conversant with. Hence the terminology in the following objectives utilised 'policy speak' (Holland 1998) to enhance the offer, which in turn helped the CreEM team embrace potential connections that may have not been of primary concern at the

outset of the projects formation. In many ways this process introduced the academics to the notion of applicability beyond their usual academic frameworks. Reference to policy conversant language (Gasper & Apthorpe 1996) through clusters, sub-sectoral, enterprise, SMEs, Intellectual Property all played a part in bringing the early ideas into an early stage funding stream, previously unexplored by arts and humanities academics.

As these funds continued, so the applications increased in numbers and competition became fiercer. The success of the CreEM project was to help bring other academics to the HIRF fund and in turn helped to familiarise them with pots of money of a similar nature well before the Arts and Humanities Research Council had even begun to develop their first Knowledge Transfer schemes. The project itself acted as a model of practice enhanced by a recognised peer, and provided the University with a recent case study accessible by others interested in exploring similar routes to funding.

At Nottingham we struggled to maintain access to these funds for the arts and humanities amidst heightened competition in the region for hard economic benefits and policy interests shifting to sectoral clusters such as the biosciences, and later health and construction. In the next three years many academics were beginning to revert to new forms of Research Council funding, as their KT schemes were beginning to offer funds unencumbered by the demands to mirror impacts delivered by the sciences in a business context. In the interim between AHRB and AHRC, new KT orientated schemes enjoyed a sense of relative autonomy, much diluted by the demands that followed Council Status.

In spite of early challenges to appropriate and describe the CreEM project, the HIRF fund did enable a valuable kick-start to the work, which was awarded just under half of the 12K match required to get the project started. In hindsight this was a highly under-ambitious sum, given the level of interaction and co-ordination throughout the duration of the project. This is unfortunately synonymous with many applications from the arts and humanities, who often think that if they ask for less they are more likely to get the money. In the sciences it tends to be the antithesis in requesting more in the hope that one will get a good proportion of the original request. In Chapter 1 we see this mentality is somewhat rooted in a much deeper debate about perceptions of value and their capacity to deliver on their interests of others.

In applying for an early stage regional investment fund CreEM set out six clear objectives which would lead into a larger, more ambitious application for Research Council funding towards the end of 2002:

- To explore the potential in the regional partnership and develop closer links between research methodology and partner practice. The focus will be on analysing cluster formation and the strategic importance to regional strategy and policy development.

- Create a cluster development model that will explore both generic and specific target cluster groups whilst addressing the longer-term and contemporary perspectives.

- Use Nottingham as a case study within the main body of research to amplify and define its regional positioning on cluster development in the target groups.

- Explore two of Nottingham's sub-sectoral strengths in the Creative Cluster (CC) network in music and digital media.

- Engage with small and medium-sized enterprises (SMEs) by hosting a virtual web community for discussion, publication and debate.

- To include an analysis of intellectual property (IP) and commercialisation in Creative Cluster formation in the Nottingham case study.

Professor John Wilson, Director of the University of Nottingham International Business History Institute (UNIBHI), had worked on life cycle modelling and clustering of major industries and was approached to explore if such an objective analysis of the links between historical and contemporary trends could be transferable to the CI sector context. The methodology behind this research project was based on the transfer of an existing model of cluster development used in the biotechnology industry, which was distinct from current work in the creative industry field. Wilson's contribution would be instrumental in demonstrating both the transferability of his knowledge, but also the flexibility and belief in how this might impact beyond his disciplinary field.

The CreEM project started by considering the longitudinal perspectives that arose from Wilson's long-standing work into cluster formation and business evolution. Some of this work was brought together in *Industrial Clusters and Regional Business Networks in England, 1750-1970* (Wilson & Popp 2003).

By comparing cluster formation and performance across a wide variety of English regions, Wilson's publication developed some lasting conclusions about a series of key issues. In particular, generic ideas were developed concerning the reasons why clusters emerge in the first place, how they operate (especially in the context of networking and social interaction), why they fail, and what can be done to revive ailing districts in any given region. A life-cycle model was applied to several of the clusters, identifying both the key stages in their evolution and how strategies can be devised to ameliorate decline.

The question in this programme of work was how far this may be applicable to ameliorate decline common to the CI sector through the dedicated translation and transfer of existing research knowledge tested in a different sector. It was hoped that this approach would provide a genuine insight into these issues at a time when there was considerable interest in the capacity of the CI sector internationally to support high-income generation as a "driving force for a nation's economic growth" (Florida & Tingali 2004). Furthermore, a comparative analysis of regional activity was also conducted, reinforcing any model that arose from the research, of particular benefit to the regional stakeholders and focus groups involved in the project.

The CI sector was somewhat of a diversion for Wilson, as was the potential transferability of his previous work into an uncharted sector, therefore this would be a considerable test of his ability to diversify his model and make his work applicable in a new environment. Equally the sector was being tested as to its willingness to diversify the way they might approach new implications on CI policy, as well as engage in new research approaches. In both cases each had existing opportunities and constraints that would hinder or support collaboration. These are explored further into this chapter where we briefly expose publishing practices and the limitations of policy development in the CIs.

Wilson introduced Dr Paul Bracken as co-investigator on the project to further support knowledge required specific to the music industry focus. Bracken's work at the time was rooted in the place of music in cultural and heritage industries, offering historical insights to contemporary issues of current concern. Bracken offered the team an invaluable perspective on how practitioners developed their work and businesses reliant upon sector clustering to support success. In bringing business history and

expertise in the revival and preservation of ancient music traditions, Bracken was able to move the historical context into a contemporary setting, offering new insights relevant to cultural tourism today. This enabled a critical perspective on the sub-sector that could help Wilson to reflect on the applicability of the life cycle model and the impact upon a sector that was new to him. The 'value chain' therefore grew to include a variety of 'knowledge providers' as actors essential to any interdisciplinary approach requiring the amalgamation of both contextual and methodological knowledge (Giddens 1984). The CreEM value chain is further developed in the next section, where it exposes the role of particular players and a framework in which they were to act.

In order to ensure that a modest twelve month period offered the best chance for the project to come to fruition, there was a need to bring together a group of knowledgeable players in the CI sector who would enable researchers to be swiftly embedded in the regional business environment. Therefore the early stage of the project was set up through the HIRF fellowship to identify and forge those alliances around one sub-sectoral case study. The collaborators were formed from key agencies in Nottingham who supported the development of the sector and consisted of the Creative Industry Business Manager at the East Midland Development Agency; the Business Development Officer responsible for the sector in Nottingham City Council; the Business Development Officer for the regional Screen Agency EM-Media; the Regional Arts Development Officer at Arts Council England East Midlands; and academics from a partner institution at Nottingham Trent University, who were developing an MA in Entrepreneurship for the sector. It is important to stress that the project set out as much to find out about the consortium participants as it did to undertake joint research, which was to become one of a number of defining features for the projects success.

> "…it would have been extremely difficult to bring together this multi-layered and multi-talented team. As it involves academics, practitioners and IT experts, this provides the kind of proactive mixture that is essential if meaningful engagement with the creative industries is going to be achieved."
>
> (HIRF Report 2003)

3.3 DEVELOPING THE VALUE CHAIN

In order to present a coherent structure for the case study the following narrative relies on three key elements:

- A 'value chain', an analogy which defines a set of individuals who are linked together in the pursuit of a common purpose, in this case CreEM.
- An action framework that supports an historical step-by-step account of activities
- A reflective and retrospective evaluation of CreEM as an example of knowledge transfer or exchange

In the CreEM case study individual players are exposed as central to a 'value chain', or organisational framework, in which cooperation and models of collaboration may be more closely observed and tested (Hord 1986). Such value chains also allow us to denote where organisational norms may influence the effectiveness of collaborative activity particularly where an individual brings new approaches or practices to the fore, and as such becoming an essential component in the effective exchange of knowledge. The CreEM value chain helps explore how a particular framework was utilised in the collaborative process, who became essential to the exchange of knowledge within that framework, and finally an analysis of the views, arguments and recommendations that will inform chapters 5, 6 and 7, where the relationship between individual academics and organisation will be articulated to expose their interdependencies around KT.

3.3.1 Sum of the parts: Individual roles in any given value chain

Current value chains involving researchers, universities and external collaborators tend to take a retrospective look at the collaboration, often failing to see how individual practices and behaviour contribute to the collaborative process. In order that we might uncover a more in-depth perspective to collaboration, the CreEM case study helps set the scene on the notion of specific types of players or social actors (Giddens 1984) and the role they might play in a successful programme of research. We do not go into detail about the key individuals in this case study, as we are concerned at this stage with the nature of interactions, rather than the role individuals play. However, chapter 5 focuses in on the individual academic in a value chain and considers their perceptions and motivations for collaborative KT.

3.3.2 Key players in the value chain

These roles are central to any value chain and act as the medium by which knowledge is developed, tested and furthered. It is a term with multiple meaning and denotes both the academic researcher, but also includes those contributing to knowledge situated outside the academic base such as expertise from the policy advisor or those with specific knowledge in business sectors. With regards to CreEM the primary knowledge provider was Professor Wilson in collaboration with his Co-Investigator, Dr Bracken, and Research Associate Dr Kostova.

Brokers

Brokers are often those responsible for linking the elements of the chain together, ensuring a coherent communication flow, negotiation and brokering mutual benefits across multiple interests. These roles often know about the wide terrain between academia and the outside landscape. They facilitate institutional involvement in strategic investment and have an ability to translate the nature of the project into a range of languages: business, policy, artistic, educational, and intellectual. This role is further elaborated upon in chapter 7 where we describe the multiplicity of the role and the variations found in UK institutions. With regards to CreEM the primary broker was the Research and Business Development Officer, Lisa Mooney Smith.

Change agents

These roles are considered key agents in the chain who ensure the process, methods and lessons penetrate the systems, processes and methods of the external collaborator (Beckert 1999). They often secure longevity for research to develop and are concerned about the impact of a project on their organisation. They often enable new ideas to be applied and adopted within the organisations systems, processes or methods and so on. In a wider sense 'change agents' facilitate change, particularly in procuring a culture shift or a change in the perceived benefits of research to the organisation. With regards to CreEM the primary change agent was the Creative Industry Cluster Manager at Emda, Chris Ward Brown (currently Construction Policy Advisor, Emda).

Investors

This role is one of the most important elements of the chain that can help support both the development and delivery of successful projects. They are often concerned with insights into what drives the need for investment, and what elements can be pursued to make projects attractive to secure further financial stimulus. The primary investor in CreEM was the University of Nottingham in collaboration with the Higher Education Innovation and Regional Fellowship scheme (HIRF), co-supported by Emda and HEFCE. Secondary funds were also to be offered up by Arts Council England and Nottingham City Council.

Stakeholders

As this implies, this element of the value chain have an important and significant 'stake' in what the project wishes to achieve. They connect the required intelligence to the practical delivery of hard benefits. They often act as support agencies with a vested interest in underpinning and ensuring the growth of the sector involved. These generally work at local and regional level, but are often devolved from Non-departmental Public Bodies. With regards to CreEM to primary stakeholders were Tina Smith (then Creative Industries & Regeneration Officer, ACE East Midlands), Suzanne Alizart (then Business Growth Manager, EM-Media and now Head of Content Creation, EM-Media) and Serena Lindsay (then Economic Development Officer for Creative Industries, Nottingham City Council and now Museum Business Development Advisor, MLA).

Focus groups

This denotes those the research is often focused upon and which without their direct intersection, the outcomes would often struggle to be applied, adopted or used in practice. This group is less commonly associated with research in the arts and humanities, but increasingly a group that may impact significantly upon the success of their KT interactions. Often Focus Groups are facilitated or supported to engage in projects, and this varies from one off focus group sessions to solicit feedback or engagement, through to more intensive interviews or consistent aided interaction mechanisms, such as that devised in CreEM through InnovationOnline, which is described later in the chapter. The primary focus groups in the CreEM project were forty representatives from across the music and digital industries in Nottingham and they were facilitated to engage through both feedback sessions but also through an online portal where the groups could interact with the research process.

CreEM was a model of research exchange in which academics acted as the knowledge providers, a regional consortium the value chain of key stakeholders and focus groups, and the broker the glue by which the partnership remained mutually explicit and productive. The following section situates these players with one type of action framework where their roles become intertwined with the day-to-day activities that shaped the collaborative team and the way in which they interacted.

To contextualise CreEM activity in preparation of the next section on action frameworks, the following highlights the key outputs that the group set out to deliver upon in their first HIRF application:

- Seven key partner meetings in the initial 12-month period to determine progress, methodology, approach and practice.

- Link in a number of 'critical friends' at key strategic points in the study.

- Host a comparative workshop between our partnership and two other Regional Development Agencies (RDAs), Higher Education Institutions (HEIs) and Local Authorities (LAs). This will focus on exploring current methodology, practice and policy surrounding cluster development, with particular emphasis on the Creative Cluster case study.

- Create a Virtual Community (VC) hub through the University InnovationOnline Team.

- Deliver an interim and final report to the local authority on fostering and promoting the existing Creative Clusters in Nottingham and the potential links to greater sustainability and survival. These may be utilised in current work on the Creative Industry Strategy and work being undertaken in the city to apply for money from the European Social Fund (ESF) and to boost inward investment.

- Deliver an interim and final report to the East Midlands Development Agency (Emda) that builds on their current mapping of the sector and addresses the notion that "effective clusters will lead to enhanced competitive advantage in the East Midlands."

- Contribute a paper on the subject at a major national conference.

- Deliver several articles on the subject in leading journals and publish both nationally and internationally.

These outputs occurred at different and often multiple stages throughout the lifespan of the project and the action framework will attempt to highlight how these came about and where key challenges were faced in delivering them.

3.4 USING AN ACTION FRAMEWORK

There is often a universal assumption that all interactions act within a framework within or outside a particular environment (Rogers 1978). Whilst this is true for many, the value chain we wish to present is one that has undergone little scrutiny and therefore may be considered an immature representation of a common framework with comparative evidence structures. With this in mind we would like to do an indicative base line study which looks both at matching known patterns (Campbell 1966; Trochim 1989), as well as suggest there may be a new paradigmatic case able to expose a less generalist view of a seemingly immature field of research (Kuhn 1970) that highlights where barriers arise at particular stages of interactions.

The action framework used here outlines five simplified steps in a project's development from inception to completion and evaluation. It acts more as a tool to articulate activities at key stages in a projects development than presenting a methodology for closer analysis. It does, however, allow a systematic evaluation of the activity of participants in the value chain and sets out a range of outcomes, defined by the stage at which activities occur. In chapter 7 we attempt to clarify the action framework as a possible tool by which we might develop and monitor KT interactions in order that the participants might better understand the challenges and impact of the work they are developing.

3.4.1 Stage One: Setting the stage

An immense amount of preparation is required to bring complex collaborations together. This element is often overlooked in accounts that are reflective, thereby missing an essential part of how a project comes into being in the early stages. This is the phase where players are prepared and the stage is set.

The catalyst to enabling CreEM and similar projects to come together is in making early connections between research expertise and sectoral problems. A major stumbling block to making such effective connections has always been the way universities and business have traditionally attempted to interact

through dedicated 'gateways' or units purposefully set up to be a 'bridge' between the two. These may be internal support units reactive to external business enquiries or units attempting to be more proactive, through responding to the HEROBC agenda (Higher Education Reach out to Business and the Community), and setting up mechanisms to 'reach out' beyond the parameters of the university.

As a broker for research and business development, making such connections is increasingly the primary remit of an outward facing university role, although not all roles act in the same way, or pursue the same methods. In this particular study the academic broker had both the experience, as well as institutional autonomy, to move between and beyond disciplinary and sectoral silos, identifying the limits and potential scope of activity. As the broker navigated the territory they created a map of academic and sectoral interests that, if brought together, could have mutual capacity to affect both intellectual as well as industry problems. In this case it was not just the mapping exercise, but a recognised background gained in the public sector that enabled them to confidently identify the right players and the mutual research benefits. The role of the broker is explored in more detail in chapter 7, where we attempt to position them as a key contributor to effective adoption of KT practices.

Once the right people are found for a research project or 'value chain' there is then a process of promoting an effective culture for collaboration and teasing out each player's motivations and impetus for engagement. Birnbaum (2000) talks about the importance of identifying shared norms and values and in this case the broker designed a number of tools to help find common denominators across the value chain and bridge the 'norm distance' (Gersick & Hackman 1990). A 'policy matrix' was designed to address differing sectoral values (see Appendix 1a), and a series of online tools were created to help demystify sectoral cultures and unfamiliar practices. These are further highlighted to illustrate the range of research methods in reference to building infrastructure tools, and could be used in building future research consortiums. These tools are useful, but by no means replace the interactions established at a more personal level, and act more to add value and infrastructure support.

The initial aim of the CreEM project was to mobilise the inherent strengths within this partnership, by meeting and discussing issues regularly, thereby injecting fresh and dynamic ideas into the policy-making arena. Regular meetings, dissemination of discussions and formalising actions became an

essential part of the scene setting for CreEM and were maintained throughout the lifespan of the project. This promoted communication, enabled the participants to continually test and refine ideas, and perhaps more importantly at this stage, build their knowledge of the other organisations and cultures involved.

> "It did succeed in forgoing some collaborative activity and contacts which would not have been created in any other way."
> (Respondent no.2, CreEM Questionnaire 2007)

This stage requires the players to think both laterally and critically about the intended design of the research and the methodologies that may be pursued. Gaining consensus across the value chain was seen to help move the project onto the next stage. The presence of the broker throughout meetings and events served to ensure difficulties were translated and overcome, and actions brought to the fore.

The caveat to this phase is in raising expectations beyond the capacity of those involved and overloading it with unobtainable outcomes. This is often about being realistic and cautious, whilst enlivening the debate and the impetus of those involved. CreEM was both enthusiastic and optimistic, which are strong qualities, so issues around expectations and outcome were sometimes masked and therefore often overlooked.

3.4.2 Stage Two: Preparation and roles

This is where the qualities and skills of the value chain players come to the fore. It is where the connections between the players are cemented and their efforts realised. Without this phase a project often fails to develop advocates and drivers, who become critical to the ultimate success of the project. If the previous phase has been successful, the project is given the solid foundations required to get them underway.

The minutes generated from meetings demonstrated the emerging dynamics of the group and the roles that particular individuals started to take on. At the start of the project it was evident that there was some reticence across the membership about how they would take the message back into their

respective organisations. There was a period of three to four months where the emphasis in the minutes was clearly on definitions, applicability and dissemination through and beyond the group. This is reflective of this stage, where confidences are nurtured and the players begin to make sense of their role in the delivery of the project.

Players in the chain were asked to find senior advocates within their agency or organisation that may further advocate the project when in different working circles. The aim was to embed the project into a wider environment and increase the stakeholder interest beyond those involved. The project was launched in a popular venue in Nottingham City Centre and signalled the success in marketing and promoting the project in a number of diverse ways, including the use of a variety of marketing and online community tools, which are further elaborated upon n the next stage of the framework.

In order that the academics could concentrate on delivery of a useable report in the twelve-month period, a PhD student, Ekaterina Kostova, was funded from the University of Nottingham International Business History Institute (UNIBHI) to perform much of the empirical investigation, while Wilson supervised the work and wrote the various interim and final reports alongside his co-investigator. This provided an opportunity to delve even further into key issues, producing recommendations that are firmly grounded in conceptual and empirical research. By comparing results with similar work on other British and international clusters, the recommendations were strengthened even further.

Through the groundwork prepared by the PhD student, it was evident that the project would need a mechanism for engaging the sector in evidence gathering as well as participating in the testing of concepts and ideas applicable to their businesses. This is the point at which the University of Nottingham InnovationOnline team were approached to consider taking the project on as one of their focus programmes to deliver online communities of practice. CreEM's virtual community was established in consultation with the consortium members and populated by recommendations from the PhD preliminary work, but more importantly, by the sector stakeholders from within the value chain. InnovationOnline, and other mechanisms for interaction, are explored further into the chapter.

3.4.3 Stage Three: Building the right infrastructure to do the work

With the stage set and the players in place, this phase was concerned with finding and implementing a solid structure in which the project can be monitored, discussed and delivered. This phase is often about putting processes in place, a supporting infrastructure that allows both pragmatism and creativity. The balance between these elements varies according to each project, but is essential in stimulating people, ideas and outcomes.

In order that activity and deliverable outcomes were suitably planned for over the twelve-month period a project management tool was utilised to outline activity and identify where tasks may need more input, or delays planned for. A Gantt chart (see Appendix 1a) was incorporated into the application for HIRF funding and continually revised to include changes or new activity. It had been the first time that most of the participants had utilised a Gantt tool collaboratively and it served to introduce both academics and their partners to the roles they were to play and the responsibilities they had to deliver on particular aspects of the project.

A marketing profile had also been trialled across the chain where each player was asked to provide us with a list of contacts. These ranged from academic journals and peers, through to government agencies, broadcast industries and business entrepreneurs, this enabled the team to mail out information and alerts to keep people abreast of CreEM activity and the outcomes. This also created an environment where the Group and individuals were recognised for their contribution to the Creative Industries and often asked to present papers (Creative Clusters Conference, Brighton 2005) or join meetings focused on similar topics (NESTA, Nottingham 2006).

In support of raising the profile of CreEM the project was to experience a branding process with a local design firm, who, having worked extensively between academia and the public sector, was able to effectively combine the two landscapes and produce a recognisable logo for the group (see Appendix 1a). All players were given branded cards, letterhead and a brochure to use when representing or talking about the CreEM work. This shared 'brand' began to cement the group into a recognisable consortium across the East Midlands and further a field. This is an unusual process for academic projects, as it was not usual to actively seek to move beyond the traditional academic audience. With increased interest from RC's to disseminate research and find new ways to make it more accessible to

new audiences, this project was in fact utilising these tools a couple of years before the demand would be found in criteria and funding guidance. In raising the profile through a recognised and shared tool, dissemination became a combined activity, rather than the expectation of the academic or academic institution post project completion. This type of branding has continued to be used by the broker in subsequent projects to similar effect.

As CreEM was made up of so many players it was evident early on that we needed a mechanism to join up interests and match potential outcomes with stakeholder ambitions. In a large project this can often be complex and burdensome, but without it a project struggles to retain agency involvement. It was clear from the early meetings that until these connections were made, the membership was fragile and without clear remits for continued involvement. A Policy, Publication and Public matrix' (PPP) was created as a possible tool to make sense of the complex agency drivers (see Appendix 1a).

> "The creative industries do not exist in isolation but interact with a wide range of other policy agendas. They are not unique in this respect but do, nevertheless, have a particular propensity for transcending traditional boundaries…. These relationships are two-way leading, in the best examples, to improved performance on both sides but, too often, these interactions are left to chance and are not properly mapped or understood in policy terms."
>
> (Emda 2003)

An essential element of the CreEM value chain focused on the creation of a virtual community (VC) to engage key focus groups. The VC would be capable of engaging both regional groups and individual firms in a meaningful dialogue about clustering and networking. In order to ensure a meaningful level of interaction between the projects focus groups and the rest of the value chain players it was vital to have dedicated and experienced support.

> "Setting the parameters for the focus groups will be paramount and to 'plug' as many groups and individuals in to the online portal as possible. Those contacted have been very keen to get further involved at the research end of their sector and to have direct access to what the core partners are actively working on in the region with the online diary."

(CreEM minutes March 2003)

This work built on the achievements of InnovationOnline, a web-based project at the University of Nottingham with which Wilson worked alongside for several months. Bringing these groups together and utilising their extensive knowledge of the practical issues involved provided valuable input into the results of the research. To place this in a broader context, the University had extensive experience of the formation of virtual and standard networks through InnovationOnline and with their previous project, Technology Transfer Network.

"We have experience of the formation of virtual and standard networks through InnovationOnline and the previous project - Technology Transfer Network. We've learnt a few lessons along the way. Formation of viable and vibrant communities is difficult and takes lots of 'on the ground' work. It needs to be driven from the grass-roots upwards to be truly effective."

(InnovationOnline Notes 2003, Appendix 1a)

The VC was of considerable benefit to this particular research by enabling the easy publication of materials about the study and, more importantly, by providing an interactive platform for music practitioners to feed into and comment directly on emergent research, thereby developing a closer link between researcher and researched. As participants had an established network and a quality rapport with the sectors, that greatly influenced the uptake of the VC.

The VC team had to fulfil strict European Regional Development Fund (ERDF) targets in order to secure their involvement in this project and they therefore aimed to support the project by enhancing the connection of companies in the ERDF Programme Area to the expertise and knowledge in the Universities and other research centres. "The emphasis was to be on supporting technological development and innovation within companies, and the establishment of networks" (Emda SPD 2006). Their aims were quite different but allowed pertinent confluence between a research programme and a university technology initiative, agreeing to combine the 'network' elements to best effect.

InnovationOnline also managed most of the content including regular opportunities pages, jargon buster section and an online diary. The diary was where all involved took time each week to tell the wider group what they were doing in their individual roles. We hoped this would open up the roles of the CreEM participants to others and show the eclectic mix of expertise involved across the consortium. Although it relied on busy people to contribute, the entries were an insight into the type and range of work each individual undertook beyond the project in their day-to-day jobs; the academic environment, the RDA business cluster activity, the arts officer and local authority worker and the world of the individual musician.

Unfortunately the University did not maintain InnovationOnline beyond their ERDF funding and as it had not found alternative income, the team was disbanded. In hindsight perhaps more could have been done to ensure senior posts were aware of the value of the work being undertaken and the consortium more attuned to the risks earlier. It was noted by many of those involved, that this was a huge loss to the project, as it meant the dedicated connection with the musicians and digital media companies would be mostly lost.

> "I wasn't invited to comment or feedback on the final report and all contact stopped once the report was completed, which was a shame as the network could have gone on to do more projects."
>
> (Respondent no.4, CreEM Questionnaire 2007)

3.4.4 Stage Four: Assessing and evaluating

This is often the most complex of all the phases in a project's lifespan, and one often underestimated and ignored. 'Doing the work' is only part of the picture, the other is in understanding what enables the work to happen. In any project things change and ideas modify or shift. This phase is very much about readdressing the project directions, revising and adjusting to change. This is the phase where a project has the chance to evaluate success and recognise failure. Preparation for the future of the project is also contemplated and realised in this phase, foresight to anticipate the future needs and prepare for where funding or extended activity may be required is essential.

Midway through the project the team convened to focus on the future of the project and the possibility to scale up the work. The group knew that evidence based outcomes were beginning to be evidenced in reports at a local policy level already through inclusion in Nottingham City Council Services Report in 2002 and the possible inclusion in Emda's cluster development priorities in 2003. We had created a comprehensive network of players that were becoming recognised as a valuable resource for Creative Industry development in the City, and therefore extending the work seemed a logical progression. The Group had also been contacted from numerous organisations that had heard about the project, and others were keen to either get involved or replicate a similar network, or 'value chain' in their region.

> "LMS informed that Tom Holiday (ISIS) in Glasgow is keen to set up the same project. Digital Media is their strongest. Could we set up an exemplary model workshop for stakeholders in the region?"
>
> (CreEM minutes, October 2003, Appendix 1a)

In October 2003 'The next phase of research funding – The Research Council proposal' and 'Ownership of research outcomes – A place for our partners' appeared as key agenda items in the minutes (see Appendix 1a, Minutes). The CreEM minutes (see Appendix 1a) dialogue was highly representative of how the group had begun to overcome language and gain more confidence in making links and connections in support of the projects continuation. This was highlighted around the question of match funding from stakeholders to show commitment across the agencies to support a large-scale AHRC or ESRC bid. The commitment of 100K across the group was confirmed as a real possibility, an outcome of which just six months before, would not have been possible.

Although the project gained much attention it is fair to say that this 'assessing and evaluation' stage was not fully capitalised upon. This is partly due to the subsequent loss of the key academic to another university in another region, and partly due to the group consisting of very busy people who could not always find the time or support to move beyond the remits of their jobs. It was clear that the team had underestimated the role that an individual could play in this stage, the importance of innovative engagement, as well as the increased pressure a project of this nature could have upon the membership had been underestimated. The broker on this project had to ensure that such 'risk factors' were built in

much earlier to discussions where the group were considering the design of the research and the scale of the value chain required to deliver it. Risk is often one of the most neglected elements in the design of research partnerships, yet one which enables participants to anticipate difficulties and explore how they might be resolved if they were to occur. Risk is also a useful consideration where a project may have begun to fail, lose direction or fall out of sync with what was planned.

3.4.5 Stage Five: Setting the scene for utilisation and/or extension

This phase is both reflective and responsive. It aims to look back as well as forward; has the project been successful? If it requires continuation, consideration of what has to be put in place to enable that must be articulated early enough to put it into action.

The CreEM project never incorporated this stage into the scheme of work, although there was a considerable body of evidence that could have enabled a comprehensive review of activities and outcomes. This case study is the first time that this evidence has been compiled and made sense of. Although retrospective the following section attempts to consider the impacts of the project, what worked and what did not, what could have been changed or modified. As a reflective evaluation it is hoped to show where things did not go well and expose where critical issues may have been overlooked. These issues raise intrinsic questions as to what factors might make the exchange of research knowledge for the arts and humanities more successful.

3.5 CreEM OUTCOMES

3.5.1 Key Achievements

(See Appendix 1a, HIRF application)

- Development of a distinctive partnership with a distinctive contribution to regional strategic policy development.

- Bringing comparative studies, cities and partnerships together to address the national perspective of regional development.

- Helping Nottingham to explore the possibility of repositioning itself as a cultural centre in the region.

The research was established in response to the need to 'map' the creative industry sectors, and in particular to identify key features into which the Arts Council and EM-Media agencies may direct future investment. The following is a list of the anticipated and delivered outcomes, which came about through the dedication of those involved to match agency remits with burgeoning question about how we collectively support the CI sector is to be collectively supported.

3.5.2 Impact on the strategies of external bodies

Emda – with regard to their Action Plan *Supporting Technological Development & Business Innovation.*

We brought together a vital, historical, contemporary and long-term perspective to their current mapping of cluster development in the digital media arena to support their key strategic priority of "forming effective clusters that will lead to enhanced competitive advantage in the East Midlands" (Emda-RES 2002). The study triggered discussion and debate between other RDAs, such as Yorkshire Forward, and promoted some sub-regional debate.

Nottingham City Council – with regard to their Creative Industry Strategy and current work on the European Social Fund, the study helped to foster and promote existing Creative Clusters in the region. Bringing added benefit to their key strategic priorities, working in partnership, comparative performance with other councils and greater consultation with external partners and businesses was actively promoted.

Opportunities for new interactions with business and/or regional bodies:

Through the creation of a Virtual Community, the study instigated greater engagement with both local and regional SMEs and encouraged greater discussion with businesses within the region's music industry and digital media forum. With the help of the Comparative Workshop, local businesses, local authorities, HEIs and RDAs came together from at least two regions to explore exemplary practice and debate.

A beneficial impact on the regional economy:

A report was issued to the City of Nottingham Council and Emda and utilised the model to provide information on how they can foster, promote and sustain Creative Cluster formation, for regional economic growth in this sector.

Commercialisation opportunities:

The study was to include an analysis of Intellectual Property Rights (IPR) and commercialisation in the target cluster groups in the Nottingham case study and contribute to developments at the University, on models of successful practice in this field. This was not achieved in the period of this project, but had been anticipated as part of any extended work after completion of this initial stage of the project.

Creating new opportunities for industrial research:

The local authority has access, for the first time, to a distinctive and strong research base that may be able to underpin their current work in this field. The University now has increased access to Nottingham stakeholders in two strong areas of cluster development and succeeded in developing a network of key individuals that could be utilised to work in a similar way on different collaborative research projects.

3.6 REFLECTION EVALUATION: RESULTS FROM A RETROSPECTIVE QUESTIONNAIRE

> "An organisation that is adaptive and able to take on new ways of working is often referred to as a 'learning organisation'."
>
> (Starkey 1996; Bhatt et al 2000)

In response to developing the CreEM case study a small-scale retrospective questionnaire was devised to gather insights and perspectives on the project and its outcomes (see chapter 4 on methodology). An analysis of data from the questionnaires of key participants in the CreEM project, suggests a number of key factors that may have affected the successful transfer of research knowledge amongst and beyond its participants. Five responses were collected over a four week period from the participants involved in the project, supported by three telephone interviews representative of the core sectors involved. The

questionnaire was a retrospective review of a completed project, and in no way reflective of the project during its delivery.

Although small-scale with only five key individuals approached, the findings from the questionnaire and subsequent follow-up phone interviews presented some interesting data. The exercise was obviously limited by the fact that three and a half years had passed since the project was completed, so rather than offering a 'living account' of activities it relied upon memory and experiences that may have shaped the way they now viewed the project. An historical account of any project allows us only to add methodological challenges to the evidence we can gather, rather than supplant methods at the heart of the process (monitoring or evaluation tools etc) and therefore somewhat limits in-depth analysis or statistical credibility where we rely upon personal accounts post event. Future case studies would greatly benefit from live interaction of participants or actors pre, during and post project, in which specific tools can be adopted to gather and analyse qualitative and quantitative material.

The following section offers up a series of key factors uncovered through closer inspection of the value chain and CreEM documentation, minutes, questionnaires and interviews. This section relates only to evidence collated through the CreEM case study and relates directly to activities highlighted in the action framework. Further exploration of the role of key individuals and possible KT 'enablers' are explored throughout chapters 5, 6 and 7 and add value to the following factors uncovered through the observations in the CreEM case study.

3.7 KEY FACTORS AFFECTING THE SUCCESS OF THE CreEM PROJECT AS A MODEL OF KT

Increasing uptake:

Uptake of KT is slow as it is a relatively new territory for the arts and humanities. The AHRC KT schemes were running into their third year at the time of writing this thesis and already seeing a marked increase in applications. Although this is positive, the uptake of the more traditional humanities disciplines is relatively low and new ways to introduce them to the KT environment is required. In 2006 the AHRC decided to support a proposal for the development of the first UK Research Exchange Network (REN) dedicated to supporting academics and research development staff in the exchange of

research knowledge across the arts and humanities. It aimed to enable academics and those who support them to share and access information more effectively and help promote research opportunities for engagement and collaboration both within and outside academia.

> "I feel that the REN approach of people centred interaction and networking is essential to build a community who believes in and gets on with KT. When there are enough demonstrable benefits and progress, others will start to come on board, but we need some committed individuals to start off with."
>
> (REN Broker Report 2007, Appendix 3a)

REN is described in more detail in chapter 7 where we suggest that a dedicated mechanism in support of building collaborative interactions is much needed in the arts and humanities and could utilise the CreEM case study as a basis for further development and evaluation of future KT collaborations.

Building a comprehensive picture:

There is a need to build up a good picture of the research and policy landscape, its inhabitants, language and current demands if we are to identify what may motivate all parties to engage in collaborative research. Dedicated roles in academia have begun to emerge which are set up to instigate links between the academe and wider community, including business, public and government sectors. Taking on collaborative interests enables a role like that of the broker to build a picture of the institution and external players which may be instrumental in raising academics capacity to build informed consortiums and collaborative teams. The most significant comments in all the questionnaires undertaken during the developing of this thesis was about brokerage and facilitation being central and key to success, strengthening bi-lateral activity during and after the CreEM project. In the final chapter of the thesis we expose a number of facilitatory mechanisms that may support similar projects to build their value chains and monitor their success more effectively.

Working collectively:

Communities of Practice (CoP) enable groups of individuals to share common issues or problems and work collectively to articulate or resolve them (Wenger 2002). New knowledge is often created

through this shared experience, and often little is captured to enable the process to be of benefit to others (Bhatt 2000). Knowledge sharing has a complex history in academia, as it is often the retention of expertise and knowledge that enables an academic to maintain their disciplinary standing with peers and publishers. A culture of keeping one's work away from public scrutiny often vies with cooperative benefits, and Bhatt (2000) suggests this is particularly hard for academics and their universities to negotiate. CreEM was viewed as a successful CoP by all involved, although participants were critical of the fact that, as a CoP, it was not enabled to continue to develop a larger scale funded project and expand on the investment of key individuals in the early stages of the project. As is often the case the CoP was seen to exist only where funds were available. However, there were instances where the group re-formed to tackle other issues and projects, such as the regional NESTA visit (2005), a joint response to the Lambert Review (2003), and a joint paper for Creative Collaborations (2004). It is often the case that early stage projects such as CreEM 'resonate' many years after their completion, resulting in further reaching links and activity, as reflected in the CreEM questionnaires (see Appendix 1a). When asked if "there were any elements of the project which resonated beyond completion" both those from the music and digital sectors commented positively on making new links and contacts that may have not happened if it was not for the focus groups. Although the sector had limited interactions in the project a number of the stakeholders felt that the project suffered from not having developed further to utilise the valuable expertise, which for a period of time, was recognised as unique.

> "Some of us met beyond the project as the workshops gave us a good network to talk with people we hadn't met. One person I have already collaborated creatively with and I've gone on to explore funding through universities… which is new to me."
> (Respondent no.4. CreEM Questionnaire, 2007)

In any CoP there are issues to tackle around expectations and mutuality. Nankani et al (2008) describe a continual exchange which forms a rapport amongst collaborators from different disciplines. The CreEM case study describes similar factors where this type of exchange enhanced the relationship through specific tools, such as online diaries of the participants and feedback mechanisms for those the research was focused upon to influence the development of the report.

Co-constructing and planning KT:

CreEM academics developed an understanding and belief in the professional expertise of the external partners, which grew with exposure to joint debate and meetings over time. Building collaborative teams, preparation and organisation seem to play an intrinsic part in bringing quality projects to fruition. As described in the action framework, planning and co-constructing the design of the scheme of work to be pursued, played a huge part in the success of building the CreEM team. There was, however, some reticence from the academics regarding how far the team could jointly design the research, as this was thought to be the primary role of the academic. In the case of CreEM the group had confidence in the academics ability to represent their interests therefore these issues were not identified as a barrier.

In chapter 5 we describe the challenges faced by academics in the co-production of research with non-academic partners, suggesting that different academics with differing behaviours and motivations approach the co-production and c-design of research in different ways.

Deciding on scale:

Scale plays an important part in the deliverability of a KT project, as it challenges those involved to address issues of capacity, funding and deliverable ambitions. CreEM was an example of a large-scale value chain that was often complex and very ambitious. The CreEM case study suggests a number of indicators for success, but the scale of this project does in fact offer up a number of caveats pertaining the effective sharing of information and the meaningful engagement and involvement of the focus group players. Although CreEM wished to involve multiple players it was not always able to ensure that the level of engagement was sufficient. Here brokerage and facilitation become critical and the regularity of meetings and interaction central. It is also important to remember that the scale of the project and the scale of the partnership may also be quite different. A large-scale project does not always equate to a large-scale value chain and vice versa. In many cases it is often the scale of funding that dictates the scale of operations in a project requiring a longer-term period of enquiry. With respect to CreEM the project was modest but highly dependent on the complexity of key stakeholder involvement. If they were able to go on to seek further funds it may have been a greater challenge to bring along all the participants and ensure the experience continued to be mutuality beneficial and

meaningful. Scale is therefore also connected to timeliness and in fact may also vary throughout the development of any project. This must be made clear at the outset in order to instil confidence in the value chain that the project is both well thought out and highly realistic.

Meeting in different environments:

Meeting regularly in a range of venues reflective of the environments in which the CreEM stakeholders were familiar, was an important element defining a collaborative ownership of the project. The consortium met regularly every two months and briefed on all bilateral activity and asked to feedback and comment on actions for the coming months. The researchers on the project and the user group managers met more regularly as a sub-group after each core meeting of the consortium, which helped to tackle more specific problems in a more targeted way. Venues were rotated to enable stakeholders to feel that this was not solely a University based project, but one reflective of the range of partners and agencies involved. It also helped to introduce participants to each other's environments, breaking down perceptions and possible barriers as to their openness and willingness to work across sectoral boundaries. In chapter 6 we explore the university as a business that enables or inhibits effective KT collaborations, and describe some of the ways the institution attempts to work and attract external interests. We suggest that the institution rarely explores how the arts and humanities disciplines in particular may require different support structures to enhance their KT environments. This often results in many academics choosing to develop collaborations in isolation from their institutional support.

Building tools and processes:

There is a lack of existing dynamic and adaptive processes and tools for the arts and humanities to embark on KT in the way they wish. New methodologies may need to be devised to introduce and engage these disciplines, some of which will also refer to the need to combine these with those of their partners. The CreEM project demonstrated that methods and tools needed to be flexible and often emergent as a result of the landscape being so new. Taking a multi-method or multi-modal approach meant flexibility was ensured throughout the CreEM project and through many tools being devised jointly, ensured adoption was procured across the group. The Policy Matrices (see Appendix 1a) and online virtual communities were but two examples that helped to convince investors and stakeholders

of the benefits of the collaborative approach, and there is a pressing need to uncover other similarly tailored tools for the arts and humanities to consider in enhancing their KT endeavours more broadly.

Developing new points of reference:

Terminology and the use of specific language references can often be seen to deter engagement. Thomasgard et al (2004) suggests the 'discipline-specific codes' lie at the heart of poor communications, where collaborators were not able to share a recognised body of terms and references.

> "We had to spend quite a lot of time in our own project understanding how to speak to creative practitioners, who sometimes attempted to characterise their own practice in terms of what they thought industry expected, rather than how it actually was."
> (Respondent no.2, CreEM Questionnaire 2007, Appendix 1a)

The CreEM project created an online glossary of terms, or 'jargon buster' (see Appendix 1a) that was added to as the project progressed. Language issues were central to all CreEM meetings and as the project progressed, all parties became conscious of avoiding acronyms and learning to describe terms from a lay approach. 'Overcoming' and 'familiarising' were terms that came up throughout the questionnaires and interviews. Academic researchers and policy officials felt that their involvement in the research group had encouraged a greater understanding of one another's perspectives, which in turn helped the adoption of language and organisational specific references. This acclimatisation is further explored in chapters 5 and 6 where we suggest that the act of doing KT often overcomes barriers the arts and humanities have often been reticent to engage with.

Role of Technology:

There has been a strong emphasis upon technology both as a tool for effective KT as well as a product of KT.

> "Technology is often regarded as a panacea for KT. Nevertheless, whilst technology has advantages to offer, organisations should be very cautious in regarding technology as a remedy to knowledge production and transfer issues."

(May, Perry & Simpson 2006)

Industry, academia and government have jointly proliferated these activities, which has meant those disciplines with little connectivity to the use or delivery of technology have, to a certain degree, been perceived to be either disadvantaged or of little benefit to a KT economy led by technological innovations. Much of the research in these two areas focuses either upon the production of knowledge for high commercial value (Powell and Owen-Smith 1998) or the use of technology as a 'codifying' tool enabling knowledge to be more widely transferable (Kesner 2001). The former has become paralleled with a rising interest in the impact knowledge, rather than just production, can have upon the economy and the latter is realising that technology does not work alone in ensuring the transfer or exchange of knowledge (O'Dell & Jackson Grayson 1998) but acts as one tool within an increasingly complex environment. Bailey & Clark (2000) state that the management of knowledge may be aided by technologies but does not work effectively in sharing or facilitating exchange per se and should be an extension of more intimate activities.

"An online presence is a weak form of glue."

(Respondent no.2, CreEM Questionnaire 2007, Appendix 1a)

Some research suggests that technologies are particularly useful in gathering personal accounts and snapshots of interaction for reflection for future consideration. It suggests these types of uses may be conducive to empowering participants with a sense of ownership and engagement with research developments (Kim 1999) but they must be supported by real activity and engagement and be continually enlivened and updated to ensure people return to them. In chapter 7 we introduce the Arts and Humanities Research Council, Research Exchange Network (REN) as one possible technological tool to aid communication across similar value chains. The Network is also considered as a place in which to develop early stage value chains and an emergent body of knowledge around KT in the arts and humanities.

Moving from transfer to exchange:

KT is often viewed as moving in one direction when in reality the best forms of KT are those where knowledge is exchanged in multiple directions with multiple benefits. There is also no ideal point at which KT is best pursued, as this is dependent upon the nature by which the collaboration is realised and delivered. It is commonly thought that KT takes place at the end of the research process and mistakenly confused with dissemination, or the one-way act of distributing research amongst potential users. At the other end of the scale, assumptions that transfer enables research at the beginning and then becomes less valuable as the research becomes more complex, is equally dependent upon how the project is designed and realised. In CreEM the design naively thought that engagement would sustain itself when it came to the Music Industry participation. In hindsight expectations were raised beyond capacity and that engagement failed to extend beyond early discussions and workshops.

The continual interplay and exchange required to work collaboratively is something that has to be nurtured and brokers are often seen as key to ensuring communication and continual dialogue is sustained. This notion is further elaborated upon in chapter 7 where we suggest that brokers act as 'human curators' between the academic and non-academic environments, continually ensuring a flow of ideas and information between individuals and agencies.

Learning from bad experiences:

Reflection upon the pitfalls and poor experiences adds to a greater understanding of KT. Some of these are rooted in organisational barriers, others in personal inexperience, but both rely equally upon a willingness to change and adapt with each undertaking. Reflection or evaluation is not always given enough weight in research, where there is a culture to move from one project to the next in quick funded succession. The CreEM questionnaires uncovered this as a major failure of the project, as there was no chance to further the research ambitions, and no time identified for participants to critically reflect on the experience.

Managing risk and change, as denoted in stage four of the action framework, is often overlooked. Individuals encapsulate particular skills and qualities which, when they depart the project, more often than not go with them, which can jeopardise the success or completion. Although one cannot anticipate fully where problems may occur, such factors as key skills, investment and outcome requirements can be discussed, and interim solutions decided upon at an early stage. Some elements are often over-

ambitious, and one has to be realistic and honest about this before the project comes into difficulty further down the line. The CreEM participants were all new to this type of working and they were presented with some difficult lessons that might inform the way they approach and engage in the future.

Speed of delivery and funds:

Timeframes for delivery of research outputs are often in opposition to the expectations of the external collaborator, for example between academia and the fast pace of public sector policy, where results may be required quicker than researchers are able to deliver.

There is also a perception that working with outside agencies often results in short term, narrowly defined and methodologically poor outcomes, which are dictated by commercial viability or co-opted by the demand for new research income from diverse sources (Press & Washburn 2000).

CreEM overcame the individual demands of the multiple sectors by clear definition of the programme of work to be undertaken. In using the PPP Matrix (see Appendix 1a) articulation of key benefits and continual cooperation of the key stakeholders, meant funds and delivery were generally well understood and laid foundations for each to take the CreEM message confidently back into their organisations. Without the PPP Matrix, it was unlikely that we would have been able to convince the stakeholder agencies and the 'change agent' participant that the project was able to impact upon their policies and interests.

Institutional incentives:

Institutional hurdles are often inhibiting change in institutional cultures. Key institutional forums or documents often tell us much about how the arts and humanities are supported or not to explore KT activity. Research strategies, management committees and even the openness or otherwise of a Dean or senior mentor offer us a snapshot of how effective the adoption of KT is in an institution. Central to the success of CreEM was the senior buy-in gained across the organisations. Both the Dean and Director of the Research Support and Commercialisation Office were key to early seed corn investment, as were the 'change agents' who secured funds from Emda, Arts Council, Screen Agency and the Local Authority.

Enabling KT to be co-supported within an institution rather than pursued independently ensures that there are safeguards in place to protect knowledge, and more importantly to provide evidence of the benefits of pursuing and investing in KT in the long term (Cummings & Teng 2003). The CreEM project did lay down foundations for creative industry research to mobilise across the disciplines, and although nearly six years later, the landscape looks quite different and more attuned to the impacts the CIs are having on the knowledge economy more widely.

In chapters 6 and 7 the role of the institution in shaping the adoption of KT practices is furthered, and we suggest that it must play a more significant role in building the evidence base for arts and humanities research to gain the recognition it has traditionally found difficult to articulate.

Identifying who benefits:

Communicating research findings and benefits effectively at the right level and supporting efforts to implement or adopt outcomes seem key to successful KT.

> "…it is hard to see how this would benefit me personally but if you took the time to unpick the report, it did say some interesting things, but we all needed help to see how it was relevant, as well as how it could be used."
>
> (Respondent no.4, CreEM Questionnaire, 2007, Appendix 1a)

Benefits are not always immediate; with resonance occurring long after the project is completed. All participants in CreEM denoted 'after effects' from the project, some realising activity as stemming from the research some six years later. The academic felt the experience gave him a "much better understanding of the creative industries" as well as making Nottingham more visible as a centre for this type of research. Participants denoted that new relationships had been forged and one musician had gone on to pursue collaborative research that he previously would not have considered. However, it is not all positive as some felt that they were not enabled to continue the link once the research had completed, partly due to key people leaving posts and the broker moving onto administering other projects.

However, the project did have the ability to influence policy and key strategic documents, but this was heavily reliant upon the creation of tools to help articulate such benefits. Convincing people that the project can deliver such outcomes is a complex scenario reliant more upon the meaningful interaction at a more intimate and personal level. CreEM tried to find ways to integrate practitioners into the research process, but it was often difficult and hard to sustain. Expertise was lost when the Innovation Team was closed down internally in the institution, signalling a point where dissemination rather than true involvement was all that could be maintained with this group. In chapters 5 and 6 we explore in more detail interactions at a more intimate level, where key individuals play an intrinsic part in defining and delivering benefits across the value chain. In concentrating on individual players we are able to see how behaviour and motivation of a group of arts and humanities academics play a significant part in the success of their collaborative research endeavours.

Publishing environment:

Where KT orientated work is published is a crucial factor to the adoption of KT (Terpstra & Rozell 1997). In the case of CreEM the academics were clearly aware of the publishing limitations of this project at this particular stage. In this project the academics were investing their time to build the knowledge of the partners in preparation of a larger scale and 'more academic' phase of research.

> "I always felt that it would have been difficult to convert the report into an academically-acceptable research journal output. The two are incompatible."
> (Respondent No.1, CreEM Questionnaire 2007, Appendix 1a)

CreEM sought to overcome this challenge by ensuring the outputs for the academics were possible alongside the partner expectations. Unfortunately it is often the investment in early stage relationship building and policy relevant outputs that take precedence. Publishing opportunities are only just surfacing for the academics involved and are reliant upon their ability to embed this type of work into other academic texts, rather than as stand alone works credible in an RAE setting. In order to overcome this issue projects need to explore larger scale funds that allow academics time to pursue completion of academic texts. This needs to provide time unencumbered by the demands to deliver speedily on swift moving policy requirements and even more so to extend and test the assumptions arrived at in applied

settings. Later in chapter 5 we expose the viewpoint of the academic on how KT affects their publishing record and how that is a major concern, particularly where one is establishing oneself at an early stage of one's career.

Poor data and evidence:

A recognised absence of quantitative and qualitative data in support of both KT interactions and interventions has hampered the arts and humanities in their pursuit to be recognised and valued (Wynne 2004). CreEM, as an historical account, attempts to re-capture some of the impacts in order to demonstrate the potential of KT. However, a live study would provide an ideal environment for evaluatory methodologies to be built in, providing evidence-based data suitable for further analysis of factors for success. This would also provide an opportunity to explore the role of individuals in action and the relationship between behaviour, knowledge systems and brokerage that the thesis denotes as central to understanding both the impact and adoption of KT practices. In chapter 7 we explore impact as a developing area of interest for the arts and humanities and suggest a possible extension of the CreEM case study to further study the gathering of evidence generated throughout the lifespan of a KT interaction.

Flexible and targeted funding:

Seeking investment and gaining knowledge of public monies and how to tap into them takes time. The 'fit for purpose' analogy relies upon devising a creative solution for these new types of interactions, and often this is where new types of tactics are exploited to best effect. CreEM devised a process of 'acclimatisation' for all those involved, where the benefits can be made explicit over time. Partners are often willing to find money to bring to the project if they can demonstrate how the project may address key priorities of their respective agencies. Investment can also be flexible, providing key monies at key points in the project's development. In the case of CreEM early pump priming money coincided with early discussions, midway funds were found to target dedicated responses to key agency documents and academic funds were being planned for medium to long term continuation. This type of flexible investment plan allows projects to prepare the ground for larger scale ambitions and often ties well in to the difficult timeframes of public sector and academic funding cycles.

Managing change and using foresight to identify where things are most likely to occur is vital in any project management and this includes building an awareness of the impact on the project if early stage funding comes to an end before further investment is found.

Impact beyond the project:

As described briefly earlier, retaining links may not always be pertinent in a research project, but where valuable alliances have been made mechanisms to do so are highly valued. The CreEM network has reconvened several times between 2003 and 2008 and the individuals have embarked on several spin-off discussions and projects with the University sector as a result. It is often the alliances that are forged in productive and effective value chains that often go on to repeat or emulate similar patterns of experience or behaviour. As with many research projects, impacts are rarely captured during or after completion, and this is something both academics and their investors are increasing being asked to consider. In the intervening years between the start and completion of the thesis, little credible articulation of impacts in the arts and humanities has been produced. At the close of the thesis at the end of 2008, the AHRC announced that they were to embark on a renewed effort to 'refocus' their collaborative activities in order to align themselves to the new economic impact agenda. In chapter 6 this is contextualised further to consider the dynamic of impacts from both the perspective of traditional scholarship and knowledge transfer.

3.8 SUMMARY OF KEY OBSERVATIONS FROM THE CreEM CASE STUDY

1. The uptake of KT is slow as it is a relatively new territory for the arts and humanities.

2. There is a need to build up a good picture of the landscape, inhabitants and language.

3. Communities of Practice (CoP) help keep people and information 'glued together'.

4. Co-constructing and planning KT is crucial to finding intersection between multiple participants.

5. Problems of mutuality can be overcome through finding and adopting a range of tools to articulate the links between participants.

6. Scale is an essential element in deciding on the complexity of a project to deliver the outcome required.

7. Brokers and facilitation are central to both successful communication and managements of KT projects.

8. Meeting regularly in a range of venues supports the development of joint ownership of a project.

9. New methodologies need to be devised and adopted to reflect the characteristics of multiple players.

10. Devising ways to overcome specific language references and terminologies encourages a greater understanding of one another's perspectives.

11. Technology adds value to communities of practice but will not work solely as a device to communicate and undertake joint work.

12. KT is often viewed as moving in a particular direction and any project must find ways to bring benefits to both academia and the external partnership.

13. It is important to encourage reflection upon the pitfalls early, particularly in managing risk, change and over ambitious enthusiasm.

14. Academic and public sector landscapes move at different speeds and any partnership has to decide on what is possible to achieve given this dynamic.

15. It is important that KT projects are co-supported within an institution if we are to overcome institutional hurdles which often inhibit change in institutional cultures around KT.

16. Communicating research findings and benefits effectively at the right level and supporting efforts to implement or adopt outcomes seems key to successful KT.

17. Gathering evidence based data supports new interactions and underpins perceptions of the value of KT in the arts and humanities.

18. Finding suitable funding that's 'fit for purpose' takes time, but is an essential element in securing buy in and longevity to any partnership.

19. Retaining links may not always be pertinent, but where valuable alliances have been made, mechanisms to do so are valued.

3.9 CONCLUSION: CONTEXT FOR THE RESEARCH EXCHANGE NETWORK

Previous work, embedded in social science methodologies, observes and explores the changing nature of interactions at a more micro, rather than Macro level. There is increased interest in success factors relating to KT more generally, as evidenced in the CreEM case study, but little has been explored at the early stages of interactions. As there is more evidence on how KT is being defined and articulated in an applied setting, a more in-depth perspective may help uncover particular types and levels of adoption and uptake more specifically related to individual players in the value chain.

The Scottish Executive have implemented a five point *Research Transfer Plan* into their organisation (Scottish Government Briefing Paper 2005) which requires specific tasks to be undertaken systematically, such as the identification of target groups, the correct timing of their engagement in the research process, a plan of how knowledge will be exchanged and disseminated between all parties, awareness of opportunities, constraints and tools for evaluating the process, and a system in place for judging the success of the outcomes.

These types of broad KT systems, or codified processes, occur in a number of research and business settings, and they all suggest the utilisation of the critical elements that constitute successful KT. Having explored sectoral models, it is evident that these are mostly anecdotal and untested. The extension of this paper further into the thesis will allow further exploration of those models through reaching deeper into the early stages of KT interventions where the behaviour and knowledge of individuals may be critical to the success pathway.

Having laid out one historical account of the players and activities pursued in a larger scale value chain we have developed a body of evidence that will be open to much further scrutiny and evaluation. Returning to the structure of the action framework we are able to unpick particular actions and activities that may expose where critical issues might have been overlooked or success highlighted, and more importantly, what elements might make similar collaborations successful in future projects. In order to compare and analyse what components contribute to the success or failure of knowledge transfer it will be vital to present a range of 'transactions' with different variables that work at different scales and which demonstrate distinct contrasts in the way individuals in a value chain operate. This may offer up insights regarding the smaller scale relationships represented by the lone or individual scholar, pursuing research in a purely academic setting, and perhaps the most familiar introduction to the exchange of research knowledge between two entities. This is explored further in the final chapter (see Chapter 7) where we propose an extended study to develop the Humanities Value Chain as an observational tool in furthering the adoption of KT practices across the arts and humanities.

> "University staff speak of a change in research culture since 1986 (the first RAE). This change has introduced institutional structures and procedures to guide research and has led to widespread individual acceptance and ownership of research management. Much of the improvement is attributed to better research management systems at university, departmental and research group levels. The system overall is able to operate more effectively because research is supported more effectively."
>
> (Evidence Ltd 2000)

As research has diversified, so have the systems by which research has been supported and managed (Shattock 2003). It is well recognised that this has contributed broadly to the success of research, but it is success attributed at multiple levels (Bushaway 2003; Leisyte 2007) which offers insights as to how that might have come about, and what might be done to enhance and underpin future success.

In 2005 the AHRC were approached to consider the development of the Research Exchange Network (hereafter REN) that is described in further detail in Chapter 7. This was in direct response to the assumption that the arts and humanities may not yet have devised and accumulated an appropriate set of tools and mechanisms to navigate confidently across the new knowledge transfer arena. In identifying a lack of multi-levelled support networks, both at institutional as well as funder levels, the proposal set out a simple framework for the AHRC to support their community central to their Knowledge Transfer Strategy.

As outlined in the case study of CreEM, there are particular known variables regarding the role of the broker, scale, communication, shared outcomes and so on, which affect the overall success of knowledge transfer interactions amongst this community. REN proposed that these and other elements be further supported by creating a network of peers and brokers better enabled to access and connect into a tailored KT knowledge base, the AHRC schemes and potential partners beyond their institutions.

> "A targeted and specific Network for the arts and humanities research community embarking upon, or interested in the exchange of research knowledge. It will offer insights into the changing landscape in which Knowledge Transfer (KT) is becoming central, and open up ways in which researchers can be supported to engage, communicate and collaborate within and outside of academia. It will also act as an exemplary repository of peers, institutional support mechanisms, methods and case studies, as well as sign post to a wealth of tools and information."
>
> (REN Mission 2006)

As previously stated, 'an online presence is a weak form of glue' and it is at a more intimate level of engagement that we hope to see an impact. The online network was meant to provide a support

mechanism for the arts and humanities community to develop a repository of KT orientated materials, currently unavailable in a collected form, as well as act as a tool to enhance connectivity and communication.

In order to enliven REN beyond providing online tools, it is an imperative that a key function should be developed to 'curate' and animate the online presence and membership through a dedicated curatorial post. The term 'curator' moves us beyond the notion of the traditional librarian role, equally recognised as an untapped resource in the wrong conceptual model (Davenport & Prusack 1993), and requires a person astute at making links and connections between and across people, information and technological tools. This role must go beyond the 'knowledge guardian' to become the "information navigator, organizer and creator" (Koot 1993) rather than the more tradition perception of the guardian or keeper of knowledge. Although the term 'human curator' is rooted in genome research, the arts have long recognised the term as a way of moving information beyond the automated or manual into relationship building and sense making within a gallery or arts based setting (Obrist 2003). REN hopes to emulate relationship building at both a macro level through curation centrally in the AHRC, and at a micro level through brokers based intimately within our institutions.

> "We recognise that we will be most effective in achieving these aims if we work with others to achieve common long-term goals for the city and the community. We are proud of the partnerships we have developed over the years, and want to build on their successes."
> (HEIF Report 2003)

CreEM set out to achieve a range of evidence based impacts, and as reflected in the aims from the first proposal, did in fact achieve what they set out to do. As this paper demonstrates, they in fact gained much more, which is evident in the learning and exchange that went on beyond the research ambitions. In the next chapters we look beyond these initial indicators for KT success and concentrate on how KT is supported at a micro level within academic institutions. There are an increasing number of papers beginning to explore the impacts and indicators for KT success, without consideration of early stage intervention and influence.

Although we have not yet outlined REN in any detail as a concept or tool (see chapter 7), the CreEM case study has offered up an invaluable set of principles on which REN was to be established. It was critical in the early discussions with the AHRC and was continually used as a model of practice when discussing how REN might add value to similar interactions. The next chapter lays out the varied methodologies pursued throughout chapters 5, 6 and 7 and attempts to shift the emphasis of the thesis away from the essential background and exemplars in KT practices, to concentrate upon a close inspection of the individual academic and the institutional environment in which they reside.

CHAPTER 4

A NEW ETHNOGRAPHY: BUILDING AND COMBINING

METHODOLOGIES

4.1 INTRODUCTION

In setting the methodological scene at this stage in the thesis it is hoped that the means by which the evidence was derived might contextualise the role of the observer in the process, the academic contributors and the environment in the KT narrative that has begun to play out.

This thesis utilises close scrutiny and review of a broad range of historical and contemporary literature on the nature of changes affecting arts and humanities scholarship, and the parallel observations on the socio-political climate shaping this particular academic landscape. The early chapters of the thesis concentrates on setting the scene on how current thinking around KT is shaped, in part by the historical as well as recent history, in which scholarship is evolving. In the latter part of the thesis there is a noted shift from the macro to the micro view of scholarship, with the emphasis moving from the broad landscape to the intimacy of an institution and its inhabitants. Interspersed amongst the main body of text, as well as this latter section, is an extended ethnography of an emergent KT community built up from first hand personal accounts, interviews, questionnaires, minutes of key meetings and conversations. Essentially developing a loose heuristic method this discursive and highly observational study aims to make sense of disparate knowledge, and at times, challenge the perception of the reception and adoption of Knowledge Transfer by academics in the arts and humanities disciplines.

> "…interpretive methods are designed to produce a record of "local" knowledge (Yanow 2000): Detailed descriptions of the activities that groups actually engage in, and members' sense making of those actions from their own points of view. In accessing the local knowledge that is the possession of the actors in the situation, interpretive studies seek to understand lived experiences of the realities of the workaday world."
>
> (Nicolini, Gherardi & Yanow 2003)

4.2 LITERATURE AND POLICY REVIEW: PLACING MARKERS BETWEEN THE ARTS AND SOCIAL SCIENCES

The literature review continues throughout the main body of the thesis. It is comprehensive by virtue of the need to bring together the multiplicity of information that would set the scene for the closer observation of academic practices. It is both historical and theoretical, as well as offering continual reference to theories embedded in business and institutional settings, it also touches upon methods rooted in theories of complimentarity, ethnography and heuristics.

Where the literature review focuses upon the development of educational policy it is pragmatic and uses a traditional chronology that lays out the shifts and changes in the research landscape according to governmental and public policy influences. This material does not currently exist in any one publication and therefore the thesis will offer up the first systematic review on key events and policies of relevance to the arts and humanities community. In bringing together the political and educational timeline, historical antecedents for KT, and insights in to current KT practices, the literature review will contribute breadth, and a degree of depth, not currently available in one form.

The majority of KT based studies of this type focus very much on the experience of scientific and health disciplines, with very little having been exposed in relation to the arts and humanities. The work therefore draws strongly on the more descriptive parallels and comparisons from within a social science context. For example by using a number of tried patterns to mirror activities, particular situational nuances and characteristics are uncovered and observed from a range of perspectives. The current thinking on disciplinary specificity (Becher 1994), organisational behaviour (DiMaggio 1988 and Weick 1995) and inquiry-guided methodologies (Mishler 1990) for example, have been utilised to compare and uncover situational practices in KT. In this way a study of the applicability of historical and contemporary narratives from the arts and humanities can also be interwoven with a number of well-known sociological methodologies.

The literature on ethnography and narrative development is widely respected and growing in usage as a valid form of analysis. It is no longer the sole premise of literature and historical study, but can also be

increasingly found in the human sciences (Cronon 1992), psychology (Mishler 1999) and medicine (Greenhalgh and Hurwitz 1998) amongst others. The following text aims to set out the framework by which a new ethnography may be emerging from the collective knowledge and methods brought together in this thesis.

4.3 DEVELOPING AN IN-DEPTH APPROACH: A REFLECTIVE TOOL

Micro-sociology attempts to uncover the place and function of the individual in a smaller scale social order (Garfinkel 1964, through to Giddens 2006). It seeks to inform us about the role and status of a person within a particular social structure, as well as how they might make sense of their situation through an understanding of inherent or learned behaviour, signals and associations. Whilst this study observes activity in situ and asks academics to tell us more about the way in which they reside within KT structures, it does not utilise hard-and-fast sociological tools to do this. Instead it first describes KT in a way that situates it firmly in the disciplinary context and then exposes the players and scenes to known sociological frameworks. In this way the outcome can be observed and described rather than qualified. In taking this approach particular *indicators of,* rather than *outcomes from* 'socialisation' in a KT context can be gathered. Normative *experiences* of, rather than *outcomes* from 'sanctioning' particular practices can be pieced together. Finally the *determinants* of (rather than the outcomes from) 'rituals' can expose what aspects of KT activities might be dependent upon disciplinary persuasions or institutional boundaries, for example. Therefore the study is not bound by the constructs of the method itself, but utilises the method as an additional descriptive and highly reflective tool.

4.4 STORIES AND OBSERVATION: A NEW ETHNOGRAPHY?

> "With narrative, people strive to configure space and time, deploy cohesive devices, reveal identity of actors and relatedness of actions across scenes. They create themes, plots, and drama. In so doing, narrators make sense of themselves, social situations, and history."
> (Bamberg & McCabe 1998)

The part of the situated narrator in building up a new body of knowledge is key, as they ensure a study is continually rooted in current everyday practices and tested within the community it observes. There has to date been little site-specific observation of KT practices in the arts and humanities and even less

research documenting the history and journeys of this group over a given period. Few institutional roles have been dedicated to supporting this community of scholars and therefore the voice and experiences of that community has not been systematically collected.

Although the thesis is written in the third person it is important to place the role of the writer into the frame of the thesis, in order to highlight their situation in a unique and observational position. The entire thesis has been developed through the first hand experience of the writer as the broker, able to observe the nature of research support practices in situ within the institution, and as a key player in one particular 'value chain', described in Chapter 3. This perspective offers the thesis a viewpoint rarely articulated in current literature and enables the reader to piece together the relationships that ensue between academics, brokers, collaborators and the institutional environment in which they often reside. In utilising the writer's perspective as a descriptive tool, the thesis gains a richer level of dialogue, and is better equipped to animate the findings therein. Although there is a noted shift in style and commentary throughout the thesis, the collected body of narrative and accounts contributes a valuable meta-research perspective on current KT interactions rarely documented in this way.

4.5 VALIDATION: ISSUES IN ADOPTING NEW PRACTICES

Mishler (1990) as a scientist is concerned about the limitation of scientific enquiry, but also the limitations of methods that discredit the validity of the human voice, the conversations and stories and the context in which science sits. In seeking to avoid the dehumanisation of evidence he chooses to seek validation of research using inquiry-guided methodologies. He recognises that human intervention in any methodology is "marked by uncertainty, controversy, and ad hoc pragmatic procedures" and therefore by nature cannot fail to impact upon the science itself. His work is extremely valuable in demonstrating the adoption of new practices in a field dominated by evidence and quantifiable data, and goes some way to extruding new forms of research validation and scrutiny steered by the richness of inquiry-guided methods. In attempting to uncover a new ethnographic account of that equally 'ad-hoc' landscape within this thesis, there is little evidence of prior attempts to do the same, and certainly little 'science' from which to test assumptions. Therefore, like Mishler's 'storybook of science', the thesis is somewhat reliant upon piecing together a new narrative from within a complex network of existing accounts, prevailing beliefs and assumptions. In light of this, there is recognition that validity

and rigorous scrutiny of these sources and stories may uncover a patchwork of methodological challenges and anomalies. However, this collected body of work seeks only to place an early 'footprint' from which validity may be further substantiated and extended, as KT becomes a more naturalistic and normative element of arts and humanities research.

4.6 METHODS: LIMITATIONS AND SAMPLES

Throughout the thesis the predominant focus has been upon piecing together existing source material, as well as the later utilisation of comparative theories on particular practices and observations. The latter in particular qualifies the need for a distinct bias toward data gathered from within one particular institution, and although specific to the Russell Group, opens up distinct parallels to institutions outside this framework. Although narrow in terms of sample, this approach enabled the study to observe the combined history, characteristics and behaviours of a relatively new and emergent community. Findings in relation to KT practices suggest that the arts and humanities do indeed share some common patterns with other disciplines, but it is perhaps the deeper level of knowledge concerning individual and institutional behaviour where much of the mystery lies around KT. It is here that the thesis seeks a range of methods to uncover and better describe these new practices.

4.7 OBSERVATION SITES AND PLACES

4.7.1 The University of Nottingham

Throughout the thesis there are a range of observation sites and places in which the study situates itself and the context in which the findings are drawn, place a specific emphasis upon one institution and its inhabitants. The University of Nottingham is a large HEI institution with over 6,500 staff and 30,000 students. It continually excels in World University Rankings and has grown to administer over £125m of research awards (University of Nottingham 2008). It is part of an elite grouping of UK institutions known as the Russell Group and benefits from a well-noted international portfolio of research and teaching expertise.

As a large institution it has an equally large and complex infrastructure in which research and KT is supported and delivered. The institution follows a structure of devolved administration whilst maintaining a range of core administrative support hubs, such as the Graduate School and the Research

Innovation Services. Although much of the management of research sits in the devolved faculties, the institution is not one that fully devolves all its provision out to the faculties. This is a particularly important feature in the latter part of the thesis, where we question how far the management and administration of research is able to moderate academic activities and behaviour (see Chapters 5 and 6).

4.7.2 The Humanities & Social Sciences Research Centre

Within the devolved structure Nottingham has also developed a range of satellite centres supporting research and KT at a more intimate level within the faculty structure. One particular Centre is touched upon in Chapter 6 is called the Humanities and Social Science Research Centre (hereafter HSSRC). The HSSRC was an important feature in comparing support for KT at the macro and micro level, addressing how far support might centralise or devolve to offer the best quality driven provision for the arts and humanities disciplines.

"The Humanities and Social Science Research Centre (HSSRC) of the University of Nottingham facilitates interdisciplinary research across the Arts, Social Sciences and Education, encouraging and enhancing research synergy among scholars both within the University and in the wider academic community."
(HSSRC 2009)

The HSSRC has always been directed by a senior academic lead that oversees the strategic developments of three faculties, alongside a Centre Manager who supports the operational side of the research, business and funding support staff. Having been set up in early 1995 the Centre grew from three core staff to nine by 2008 and offer a range of support services from the development of funding applications and technical appendices, through to specialist support for Research and KT in the arts, humanities and social sciences and a range of interdisciplinary groupings.

In a climate of interdisciplinary activity and an increase in demands from external forces, the University sector is striving to find the best ways to support academics to translate and traverse new territory. In Chapter 6 we suggest that Centres such as the HSSRC are perhaps best placed to convene

academic expertise and external forces and could indeed play a more significant part in understanding how research and KT can find mutuality and gain dedicated and tailored support.

4.7.3 The Arts and Humanities Research Council

As well as exploring the institution as a site-specific environment in which research and KT are developed, the thesis also explores the role the Arts and Humanities Research Council (AHRC) plays as a site in which research and KT investment is both devised and delivered. We can see in the earlier chapters that the AHRC has also undergone a transition since its early inception as the Humanities Research Board (HRB) to now finding itself very much shaped by the demands of government and major investment bodies. The following chapters are interspersed with links and connections to the AHRC throughout, but it is in Chapter 7 that we introduce one particular AHRC supported initiative, the Research Exchange Network (REN). REN was set up in response to the need for dedicated support and exchange between the AHRC and those academics it was supporting to undertake new KT activities. REN is described as one site in which KT was beginning to be articulated and a community of scholars coming together to address how best to tackle the KT transition in academia.

4.7.4 AHRC Research Exchange Network (REN)

> "The AHRC is set to support the development of the first UK Research Exchange Network (REN) dedicated to supporting academics and research development staff in the exchange of research knowledge across the arts and humanities. It will enable them to share and access information more effectively and help promote research opportunities for engagement and collaboration both within and outside academia."
>
> (REN 2009)

In Chapter 7 REN is described as a tool by which academics, and those who support them, might better share and access the latest information on knowledge transfer activities. To this end REN enabled this thesis to draw upon current knowledge and experience about the emergence of KT practices aligned to the shifts and changes in KT experienced by one Research Council, and as such, become an essential methodology for generating invaluable and significantly current primary data. Through close alignment with REN the thesis benefited from knowledge gained from the writer, as both participant observer and

'active agent' in the project (as described earlier), able to ensure that the discursive narratives herein remained rooted in current and emergent KT practices and policies.

At the outset REN was set up to gather the views of a cross section of UK based institutions and to discuss how KT support for academic and broker roles might be attained and further nurtured. In order to secure a level of breadth as well as depth in any consultations or activities it was important that a cross section of institutions with a range of qualities were invited to participate. Consideration was given to inclusion of particular quality, and in consultation with AHRC staff, an institutional typology was drawn up to qualify decisions as to who to include in the early stages of discussions. This typology is briefly outlined below:

- A full geographic spread across UK universities
- Five Russell Group/Two ex-polytechnics/Two mono-techs/A min of twelve five star RAE rated schools
- Thirteen Knowledge Transfer Partnership (KTP) aware universities with five arts and humanities led programmes currently evidenced
- Ten universities with some type of broker role dedicated to the arts and humanities subjects and thwelve without these roles
- Eight good Regional Association links
- Eleven Higher Education Innovation Fund 2 (HEIF2) funded universities
- Six Knowledge Exchange leads
- Four University UK Strategy Group leads
- Four Ja.net (Joint Academic Network) linked universities
- Three existing KT network linked universities e.g. Practice As Research in Performance (PARIP)
- Three AHRC ICT linked projects

This typology was to become the basis by which further AHRC research might be generated, in order that a comparative study might be undertaken on change in KT practices over time.

As describe earlier in this chapter, the role of participant observer is a critical methodology that requires one to move between first hand observation and a critical reflection of supporting literature that contextualises those observations. In utilising multiple sites throughout the thesis the observer is able at once to stand central to the development of discursive dialogue as well as stepping outside of it to reflect upon the wider context. In situating the thesis in four distinct sites the following case studies and questionnaires take on a personality reliant upon, and influenced by, the environment in which they are framed.

4.8 SAMPLES: CASE STUDIES AND QUESTIONNAIRES

Throughout the thesis interviews and questionnaires were used to highlight the individual academic experience and the way in which the institutional setting might hinder or support KT. In approaching KT through these methods, new insights into a much under researched area has made more visible the individual and institutional challenges faced by the arts and humanities community, and in doing so opened the debate up to wider scrutiny and observation. The questionnaires present a current account of a community not yet fully engaged in KT and therefore offer up a valuable early narrative that by nature is interspersed with markers and evidence for further study. The following sections describe in more detail the context and make-up of each of the questionnaire tools utilised in the thesis.

4.8.1 CreEM questionnaire: The context

Creativity East Midlands (CreEM) was a research project designed to explore the lifecycle of clusters of companies operating within the creative industries in the East Midland region. It was the first time this kind of research had been conducted into the creative industries and aimed to try some unusual techniques to ensure its results reflected the opinions of the companies involved as closely as possible. The first stage of the research looked at the Digital Media and Music industries in Nottingham and focused on what factors contributed to companies' success or failure with a particular emphasis on how they networked both socially and professionally. The outcomes of the research were seen to offer an important perspective to development agencies and other funding bodies when deciding how to allocate their resources to the sector and understand the nature of the support required. It was important to make the research as accountable as it could be to the artists and businesses it aimed to represent, and this was often a concern that researchers faced when designing projects that relied on the

involvement of those they were studying. CreEM adopted an unusual approach by setting up an online community to accompany the research process and where companies could register their interest and input ideas and feedback into the research as it emerged. As well as publishing information about the research process, the community published information about what they, and other people involved in the regional creative industries business support networks were involved in throughout the lifespan of the project. This exposed individual players in the research development and delivery and made more visible the role they played in supporting the sector, as well as the research process. The online community was hosted by the InnovationOnline project team, based at the University of Nottingham, and served to link all players together as both observers and participants in the process.

After the CreEM project was completed a sample of project partners were contacted to take part in a study focused upon the experiences of the design and delivery of the project. The result was a series of five questionnaires with one academic, one stakeholder, one broker and two representatives of the creative industry sub-sectors in music and digital industries. The CreEM case study and questionnaires were instrumental in identifying a set of key themes or benchmarks which could be used to observe and analyse particular features of research projects, and the success or otherwise of their outcomes. These methods enabled a clustering of factors described as influencing and shaping how KT activities might unfold. Although the work does not seek to identify variation or compare between projects, it does begin to shed light upon a range of patterns sharing similarities and commonalities with KT pursued in different contexts.

The CreEM case study was developed and undertaken with a range of contributors drawn from the following disciplines and organisations, and questionnaire responses are logged in Appendix 1a and can be viewed electronically on the accompanying CD:

Business History academics (2)   RDA Officers (1)

History academics (1)   Local Authority Officers (1)

Fine Art academics (1)   Screen Agency (1)

Arts Council Officers (1)

The questionnaire was designed as a retrospective and reflective tool and solicited five responses from both academic and external participants involved in the project over a twelve-month period. Although the sample constituted all those within the project 'value chain' it was relatively small and any further study would benefit from comparison across a range of value chains drawn from different projects. It was not the intention of this thesis to undertake a wider study as it was the nature by which players and their behaviours in a project might be identified, rather than compared. Although small in scale the five questionnaires and two interviews conducted were in-depth, lasting on average one and a half hours and generating a systematic body of comparable material utilised throughout Chapter 3. As the CreEM questionnaires were undertaken at an early stage in the writing of the thesis, it has been continually referenced throughout the later chapters (notably chapter 7) where parallels have been drawn between particular social science methodologies and arts and humanities practices. In drawing upon the CreEM case study in this way the thesis has been able to move more confidently between notions of theory and how it reflects upon current KT practice.

4.8.2 Broker questionnaire

Central to the work of the AHRC Research Exchange Network it was evident that little was known about what roles had been set up to support research and knowledge transfer and their potential involvement in how KT may be embraced and adopted by the arts and humanities inside institutions. The AHRC had a history of difficulty in penetrating the activities within academic institutions, so REN offered up a small study in which a number of mechanisms for research support might be uncovered at the heart of an institution. To this end REN devised a questionnaire that looked to gather pertinent data on where these roles sat within the institution and how they were supporting and nurturing KT. Fifteen questionnaires were returned and analysed prior to convening a group of twenty-two brokers from twenty-two UK institutions, where the outcomes of the questionnaire were discussed and recorded.

As the brokers were drawn from institutions identified through the REN institutional typology, the resultant data was not as robustly gathered and therefore offered up little chance to make rigorous comparisons between findings from one institution and the next. However it did enable us to signal potential patterns that might suggest, for example, the influence on the provision of research support by

type of institution, years of experience in post and the position of broker posts in centralised or decentralised locations.

The broker questionnaire (see Appendix 3) aimed to gather data on how research and business development roles had been set up to support KT from within their institutions; how brokerage occurred in collaborative settings; what opportunities for career progression were evident in KT orientated roles, and to uncover models and methods for supporting AHRC KT schemes more effectively. It was intended to be a pilot from which it was hoped a more extensive study of the nature by which these roles are growing and adapting to the changing research environment might be pursued beyond this thesis. All questionnaire responses are logged in Appendix 3 and can be viewed electronically on the accompanying CD.

4.8.3 KT Questionnaire: Methodology and Rationale

Chapters 5 and 6 are interspersed with quotes and findings drawn from twenty-five questionnaires undertaken with a set group of academics from the University of Nottingham's arts and humanities disciplines. The findings are representative of only one Russell Group institution, and therefore represent one faction of the wider arts and humanities community. The questionnaire was split into two distinct areas of concern: firstly the individual experiences of KT in one's own institution and secondly the level to which that institution hindered or supported KT in arts and humanities disciplines specifically.

Firstly it is important to frame the questionnaire in the context of the overall thesis, as it was not designed to uncover new datasets, but to corroborate existing assumptions and findings generated in the literature review, and throughout 20 years of working closely in an academic environment. To this end the questionnaire was highly orchestrated in order to test and verify a range of existing, but highly specific notions of scholarship in the modern university. The majority of the questions were therefore pre-constructed from existing findings rooted in research developed in the social sciences, which enabled the thesis to add new perspectives to earlier work, highly reflective of the arts and humanities KT experience.

The questionnaire attempts to inflect previous findings with a richer 'meta-commentary' (Geertz, 1983) and uncover patterns and conflicts in collaborative working that may help change the way KT is received by the arts and humanities community (Gibbons et al, 1994). It tests core assumptions about academic tribes and their territories (Becher & Trowler, 2001), as well as the notion of how new KT really is as a feature of scholarly life in these disciplines (Hargadon, 2004). In interspersing the debate about KT with these social science markers, this chapter adds a much under-represented perspective to the study of academic practices.

This perspective could only be captured by demanding that the arts and humanities academic reflect directly on existing assumptions being placed upon them, as there is so little evidence as yet in the arts and humanities from which we might similarly reflect. It is therefore the rationale of the questionnaire to make more explicit the KT debate, by paralleling current and emergent practices in the arts and humanities with those recognised and well researched in the social sciences.

Twenty-five questionnaires were completed in total, of which four were undertaken as in-depth interviews. Those questioned were drawn from twelve disciplinary areas across the arts and humanities and involved a varied typology drawn together to reflect a cross-section of ages (28-60yrs), gender (18 male, 7 female), stages in career and level of KT experience. All those questioned were drawn strictly from arts and humanities disciplines, or considered to be interdisciplinarians whose work was closely aligned to the same disciplinary roots. All were drawn from one Russell group institution, other than one pre-1992 candidate who at the time was collaborating with Russell Group counterparts. These are as outlined below and the full matrix of typology and respective answers can be located in Appendix 2 and can be viewed electronically on the accompanying CD.

The disciplinary mix of those participating is outlined briefly below:

Theology (1), Art History (1), Classics (2), Nursing (1), History (3), Education (1), Interdisciplinary Institute (3), Archaeology (5), Human Geography (1), Built Environment (3), Design (1), English (2), Heritage Tourism (1).

4.8.4 General Observations

All interviews were semi-structured and in-depth, relying on a loose systematic approach to gathering a pre-prepared list of questions. Respondents were given a short overview of the context for the interview and questionnaire and allowed to elaborate and reflect on answers throughout the interview process, which enabled the respondents rather than the interviewer to decide on expanding any particular answers. Due to the location of some participants (one in the CreEM questionnaires and three in the broker questionnaires) some interviews were conducted by telephone, but all questions asked adhered to the same loose format. The duration of the interviews were extensive enough to ensure the respondents were free to discuss more complex issues in depth and that a level of constructive rapport was gained in the process of discussions. All face-to-face interviews were recorded and transcripts utilised to substantiate particular theories relating to the individual and their experience of KT practice in their own institution.

In the main, interviews utilised a particular non-standard variant to enable a wider body of data to be collected. At the outset it was unlikely that statistical, quantitative data would be generated given the small samples, varied methods and breadth of enquiry required, and therefore questionnaires and interviews did not seek to complete the full checklist or questions, although all questions were answered fully in the interview process. This approach allowed some respondents to concentrate on particular areas of importance, and parallel interviews to solicit responses to where gaps may have arisen in previous sessions. Similarly new areas of interest were able to emerge from a less structured interview that in other circumstances may have been lost.

In Becher & Trowler's work (2001) they draw parallels to a 'detective investigation' where clues are uncovered and testimony confirmed or contradicted. In most of the interviews and certainly the questionnaires, it was more often than not that findings were able to uncover patterns of responses or clear indicators of consensus.

4.9 CONCLUSION: HOW THESE METHODS AND SITUATIONS PLAY OUT IN THE FOLLOWING CHAPTERS

In the following chapters the methods we have described are made explicit and serve to introduce a range of situated experiences of KT. One may think that these experiences are highly reliant upon the assumption that academic KT is better understood from the academic perspective. In this thesis this is not always the case and therefore we also introduce the perspective of both broker and active agents involved in the research and KT 'value chain'. Collectively they have something to say about the context in which academics engage with others, but also something about the environment or site in which they collectively participate. In setting the methodological scene at this particular point in the thesis we aim to frame the academic and their institution in the historical background in which KT has evolved. We already know how the disciplines have been shaped and influenced by that historical debate and we wish to go on to explore what that knowledge means at the grass roots of research and KT in the modern university. Although the depth of the study may not be significant due to the immaturity of the debate, the breadth by which the landscape and players have been brought together is significant to moving the agenda forward.

The following chapters will explore the role of the academic as a KT engaged scholar. It will look at the importance in finding rigorous methods to qualify any significant reasons for the low take up of KT and in doing so attempt to uncover aspects of individual behaviour and the academic environment which might constitute closer inspection.

CHAPTER 5

THE INDIVIDUAL AS THE ENGAGED ARTS SCHOLAR

5.1 INTRODUCTION

"The pervasiveness of the research-practice gap has led thoughtful observers to conclude that its origins are deeply embedded in academics' and practitioners' most basic assumptions and beliefs."

(Rynes, Bartunek & Daft 2001)

The following two chapters will focus specifically upon the individual scholar, the institution in which they reside and the means by which these two entities are inextricably connected in the common pursuit of Knowledge Transfer. I will argue that until a combined understanding of the nature and style of individual research practices within the institution is scrutinised, the demands of knowledge transfer will continue to be in direct conflict with both scholarship and research management. The main arguments suggest:

1. That particular social science theories may help us uncover the emergent nature of KT as a sub-culture, attempting to influence academic traditions and institutional practices.

2. That the co-production of knowledge is highly dependent upon the environment and culture in which it operates, and as such requires the individual players and their institution to clarify their relationship.

3. That KT is not in fact a new phenomena but an extension of existing practices upon which new demands are being made that are ill equipped to function in the modern university.

In the previous chapters Knowledge Transfer as a term was described as a "process of systematically organised exchange of information and skills between entities" (Wang et al 2004), through to a more explicit relationship coexisting in "an economy of knowledge powered by engagement and collaboration." (NSW 2005)

For the purposes of the following chapters KT assumes the characteristics of the latter, where research questions and problems are often recognised to exceed the capability of the individual scholar and

require the involvement of others to inform or shape the research and its outcomes. It will not seek to explore a broader approach to KT where it is more often assumed that knowledge is both an organised and highly ordered process, running along a linear trajectory between two distinct points as described by Putnam et al (1996) and Green (2004). Much of this approach in relation to the arts and humanities has to date been predominantly inconsistent and anecdotal, and at best prescriptive.

Since Clifford Geertz (1988) first described the associations and the borders between ethnography and the novel, the ability to observe 'real people in real places' has begun to bring validity to the intellectual weight of the combined studies. In the following text I aim to expose the arts and humanities to a similar gaze, where a fiction has been continually perpetuated throughout history, shrouding these disciplines in a kind of myth and magic. I will argue that in observing both the individual and the environment in which they interact the narrative and culture of the arts and humanities may be further uncovered and therefore perhaps better described.

The thesis will not apply a steadfast micro-sociological or ethnographic approach, but piece together a qualitative snapshot of scholarship appropriate to the current KT climate. To this end the following chapters rely upon the gathering of accounts of others research findings, interspersed with first hand accounts accumulated through close proximity to arts and humanities scholarship over the last sixteen years. As described in the methodology section (see Chapter 4) some of the following accounts are also representative of the perspective of the writer of the thesis, as curator and active participant in the research and KT process. The thesis therefore offers up a discursive but highly observational account of practices in situ within the institutional environment. Whilst these accounts are substantiated through the use of questionnaires and reference to current literature, it is in Chapters 3 and 7 that the role of those within any given 'value chain' also takes on the role of the participant observer in their own research projects.

In the following chapters some of the theoretical underpinnings rooted in the social sciences are set out, but refrain from mapping the arts and humanities experience per se onto social science frameworks. I will argue that in testing and debating our role in KT in this way, the existing tropes and stories of participants offer particular points of reference that might allow us to differentiate or corroborate our

narratives. There is a burgeoning persistence that KT is pursued differently in the arts and humanities. If we were to uncover anomalies or unique perspectives, it would seem appropriate that any observation of practices be drawn from that to which the arts and humanities academe compares itself most.

The following elements of the chapter will outline how academics have particular scholarly 'styles' that when observed more closely, shape the way they interact with others.

5.1.1 Individual academic practices

There are a number of scholars whose work suggests that the personal characteristics of any academic do not necessarily shape or influence the outcome of their research (Clark 1987: 107). In exploring the characteristics of the individual academic I aim to suggest that the adverse is in fact true, and that a greater understanding of one's personal persuasions and styles of research will better equip the individual to pursue informed and successful knowledge transfer practices.

> "Engaged Scholarship is defined as a participative form of research for obtaining the different perspectives of key stakeholders (researchers, users, clients, sponsors and practitioners) in studying complex problems. By involving others and leveraging their different kinds of knowledge, engaged scholarship can produce knowledge that is more penetrating and insightful than when scholars or practitioners work on the problem alone."
>
> (Van De Ven 2007)

In comprehending their situation in the context of KT, academics are beginning to articulate their experiences, but as yet there is little evidence of how common practices and methodologies may be utilised as a learning tool for others new to KT. One particular area is that pertaining to partnership or the co-production of knowledge, much of which resides in a social science led research context, but there are particular disciplines where co-production is historical and continually practiced. Where there have been attempts to share KT practices in the context of the arts and humanities, there is more often than not a predominance towards case studies that take a positivist approach, omitting any sense of failure or difficulty in the process. These studies are therefore highly limited as a learning tool, yet still

favoured by the Research Councils (RCUK), Department of Culture Media and Sport (DCMS) and more recently the Department of Innovation, Universities and Skills (DIUS). As previously described in the CreEM case study (see Chapter 3), these KT stories are reliant upon retrospective analysis and by nature limited to post project memory and perceptions. There was a need to capture the living history of KT in order to reflect on its role in scholarship in the future and the CreEM case study exposed one particular way that might be considered more concertedly.

The AHRC has been slow to explore other approaches to exemplars of engagement, perhaps due to the immaturity of the environment and the fact that there is little history available on which to reflect. In this context the AHRC supported a project called the Research Exchange Network (REN) that aimed to capture the development and stories of those participating in their new KT schemes. It was evident that REN was conceived at a time when the KT environment was just starting out, and due to the level of immaturity it had perhaps been too early for the AHRC to recognise how it might capture that 'living history' as it emerged. Later in this chapter the development of REN is outlined and the process by which the Council began to return to some of its propositions as a reflective tool further elaborated upon (see Chapter 7).

There is a growing awareness of the wider demands upon academia, the increased emphasis upon working beyond the traditional parameters to have a marked impact upon business and societal issues more broadly. Academics are now more accountable than ever to their institutions, their investors and student 'customers'. These demands are increasingly implicating the individual academic in the core business of the institution, income targets, prestige, efficiency and a push to become entrepreneurial. In the last five years there has been a notable shift in how far academics have been required to engage in this institutional mission. The KT agenda to date has been highly reliant upon how far adoption can penetrate or drill down to School level. If KT merely sits as an administrative tool for senior management, the buy in from academics will remain slow and the uptake poor. In the following section this 'drilling down' presents a number of indicators of uptake relating to factors such as disciplinary specificity, seniority or early career positions and the support of one's institutional setting. It seems that it is with these four particular factors that KT is inextricably entwined, and therefore Chapters 5 and 6 attempts to identify how these have become of prime importance in the KT debate.

In amidst the 'business' the institution often loses sight of the individual. Burgeoning external demands require them to be highly responsive, and in doing so extreme efforts are taken to ensure they are able to deliver on those demands. Administrative support staff are mobilised into action and tasked with the challenge of bringing academics together in a concerted wave of activity purporting to be highly meaningful and promising large financial returns. In fact these acts are often serving the institutional interests rather than the interests and capability of their academic community. In chapter 7 this is exposed as a key element of the 'centralism' cycle, where what is perceived to be of importance to the organisation may not always be as important to the research knowledge base of their academics. The following sections of the thesis will be paralleled with responses from the KT questionnaire and where applicable, will make more visible the individual and institutional perspectives and their independent approaches to the support of KT practices.

5.2 REFLECTION FROM THE SOCIAL SCIENCES: APPLICABILITY IN THE CONTEXT OF THE ARTS AND HUMANITIES

Much has been written to expose the characteristics of collaborative research among social science disciplines, particularly in relation to organisational and management practices. Much of this work could indeed provide the basis for comparative study of an anthropological nature, uncovering layers of one culture (the social sciences) in order to see how far they may translate to another, in this case the arts and humanities. Trilling (1968) and Geertz (1983) both talk of the value of reflective observation, of developing a 'meta-commentary' out of which may emerge new insights from what has previously been explored or explained. The following section will outline the major influences from the social sciences and draw together a set of possible frameworks to better describe individual research styles, their modes of collaboration and support structure and the routes to cooperation in retaining and applying knowledge.

5.2.1 Change over time

Disciplines are different by nature and design. They often mutate and shift emphasis over time. Some are situated in conditions outside the institutional framework, embedded and imbricated within policy environments or similar externalities. These situational conditions can be seen to have had a marked

effect on the changes in disciplinary groupings in the social sciences, but all disciplines, to varying degrees, have changed shape in some way. The last twenty years has witnessed the arts and humanities trying to negotiate how change might affect their future. Bound by traditional antagonisms of scholarly value and identity the community has often been resistant, and as a result, perceived to be in conflict with the direction their institutions, and indeed scholarship as a whole, is moving.

In the KT questionnaire (see Appendix 2), academics were asked if their understanding of and participation in KT had significantly changed in the last five years; three quarters of respondents said it had. Most had not heard of KT prior to this period, although particular disciplines question this sudden onset of KT due to the fact that they felt that KT as a core principle was far more embedded in their discipline than in other areas. In terms of Archaeology and Classics in particular KT was considered to be a long-standing element of all their academic work and it was merely the label of KT that gave it more visibility. There was also reference to changes in leadership at School and Faculty levels and some thought that KT had been made more acceptable only where senior positions were empathetic to these activities. Although rotating tenure for Heads of Schools and senior Faculty positions go through several rounds and KT would by virtue of changing positions witness differing approaches to KT activities over time. In Russell Group institutions there are rarely KT orientated roles positioned within schools or faculties that remain a constant factor, or roles that maintain any consistency to shape and deliver a long-term strategy for KT. This will have to change in order to embed KT into the academic make-up at grass roots level.

Henkel (1997) goes some way in describing the fundaments of such change as attributed to the shift to mass higher education, which is elaborated upon through the chronology of higher education in Appendix 4 and the *Two Cultures* debate in Chapter 1. Becher and Trowler (2001) however, suggest Henkel's approach is somewhat 'monochromatic', lacking an understanding of the context in which change, and perhaps conflict, plays out over time. In introducing a number of social science perspectives on the adoption of KT, perhaps change and conflict are suitable and common denominators on which to reflect? Where academics were asked about change occurring over time, they referred to conflict of interests between individuals and their institutions as key, citing KT as often bringing about 'marriages of convenience' established to secure the funds rather than genuine working

relationships, or promoting a culture where those 'refusing to partake in KT were often grossly misunderstood' and alienated in favour of those that agreed to. As the institutions increasingly attempt to 'package KT and roll it out', some feel that individual entrepreneurs may be getting lost in the furore of the entrepreneurial institution.

So conflicts between those administering KT and those expected to adopt it as part of their day-today scholarship remains a major stumbling block, somewhat proliferated by the academic system of tenure where KT interests of senior staff generally move on with the post, particularly those rotating such as Head of School and Dean. Perhaps one solution to change, as a factor to slow uptake, could be to begin to introduce longer-term roles either dedicated to KT activities or supporting senior roles as executives or associates vested with responsibility for KT in particular. In many post-1992 institutions these support roles are increasingly common and perhaps contribute to a noted rise in the success they display in KT orientated awards and activities.

5.2.2 Reflections from other Councils

"Much of my recent work therefore has been battling against the academic tribes (Becher) in order to arrive at cross-disciplinarity and connectedness."

(Respondent No. 15, Education, October 2008, Nottingham)

As the KT environment has grown, some arts and humanities academics have attributed their introduction to KT to participation in early stage research activities, such as those that Research Councils have increasingly supported, and cite their attempts at bringing academics and ideas together as central to learning about KT as an additional factor in their success. The Economic and Social Research Council (ESRC), as a key KT enabler for the social sciences, has sat closely alongside the AHRC since they gained Council Status in 2005 and have to a considerable degree somewhat led the early Research Council (RC) activities around KT. The relationship the AHRC has with the RCs has often been criticised for the subsumation of the AHRC community where they have been encouraged to collaborate on major joint calls, such as *Designing for the Twenty-First Century* in 2006. In this 'joint' scheme few disciplines from the arts led on the clusters and even fewer disciplines beyond Design were evident in the collaborative partnerships. As this was an early intervention into KT for the AHRC,

issues of leadership in research partnerships came under closer scrutiny by both their community as well as peer reviewers. Even in 2008 the newly formed KT Strategy Working Group were trying to address how the AHRC might be better enabled to take the lead on new Science Budget thematics, rather than be led by other disciplines.

Those participating in the AHRC KT Working Group (October 2009) look to models of practice developed by the ESRC with their social science community, and saw these as exemplary mechanisms to nurture leadership as well as the KT environment. In the next year or so we will see the introduction of similar AHRC 'sand pits', 'ideas Factories' and KT 'seed corn' funds, all of which were being trialled with the ESRC as early as 2003-2004. Disciplines that move more comfortably across the ESRC/AHRC divide often consider themselves as having a unique capacity for KT, as they capitalise upon the notable acceptance of more discursive methodologies that increasingly sit alongside policy or technology driven research. Although still problematic, the divide between the two councils is becoming blurred, reflecting the emergence of cross-disciplinary and cross-sectoral working practices RCUK wish to promote.

As more organisations interested in research and KT begin to open dialogue with the RCUKs, the more KT becomes an acceptable part of their common practices. The BBC, and more recently British Telecom (BT), has tested the AHRC's capacity to move beyond its perceived boundaries, and begin to make more visible the contribution of the arts and humanities "to make a difference" (AHRC 2005). As the AHRC now sits alongside its RCUK counterparts the dialogue and opportunities between them cannot help but socialise the arts and humanities to the sciences, and vice versa, each becoming acclimatised over time to their mutual impacts.

5.2.3 Change in structures and boundaries

Randall Collins (1994) sets the scene on the study of social structures in his work *Four Sociological Traditions*, contributing widely to the historical and contemporary understanding of the social world. Rooted in Marxist and Weberian theory, Collins' traditions view social structures at a more global level, but do offer us hints as to the role of human agency and human actions in bringing about change in social groupings at a micro level. It is suggested that KT has in many ways changed the make-up of

social structures in the arts and humanities, developing new boundaries in adapting to new demands. It is important to signal these types of social science 'markers' in this enquiry, to enable us to reference the emergent KT narrative and seek some semblance of validity through critical comparison.

Social Science study of creativity may also offer up a number of parallels significant to the notion of KT as a new phenomenon. Amabile (1988) and Hargadon (2004) suggest that the study of creativity seeks out connectivity in order to move thinking beyond the usual boundaries or tracks. KT is thought to be a relatively new addition to arts and humanities scholarship, but in a social science context perhaps KT is perceived to merely be a series of reconfigured and connected actions, as Hargadon (2004) suggests, that 'appear to be new to new audiences'. A quarter of respondents reflective of Archaeology and Classics said that their perception of KT had not changed over the last five years, but had merely become more recognised through new terms of reference.

> "I have become aware that it is something I do – five years ago I didn't know what the activities I was doing were called, they are now KT."
> (Respondent No. 13, Archaeology, December 2008, Nottingham)

In the same way the study of creativity entails 'bridging' and 'building' in order to become acceptable within social structures, so does KT as described in other chapters through the act of brokerage and network building (see Chapters 3 and 7). Current studies of creativity focus upon the intimacy required between actors and the context in which the collaborative experience takes place. These activities are deeply rooted in the study of social structures (institutions) and the role of those acting with it (the individual). So what may initially have been thought of as a new form of academic activity may in fact be a reconfiguration, or a more targeted redefinition of the relationship between the individual scholar and the disciplinary context in which they already operate.

> "At the time when I became aware that there was something along the lines of KT as a kind of distinct area, and I did things which counted as knowledge transfer before, it was only in the last three years that I have become aware of it as a properly established area of activity in an academic context."

(Respondent No. 23. Classics. December 2008. Nottingham)

5.2.4 Intentions and behaviour

To understand more of how scholarship may have adapted to KT, one might also ask if there have indeed been notable changes or conflicts in the academic community, particularly in relation to changes in behaviour or conflicts of interest with one's institutional perspective, both of which are explored later in the Chapter 6. In looking to existing social science studies more might be said about how these factors might also be attributed to the introduction of KT into normative practices. Although this study lays out a series of possible factors, these are at too early and immature a stage in the KT environment, and will therefore require a more in-depth analysis. One area in particular might offer up a potential framework for further study. In a recent paper by Poliakoff and Webb (2007) the intentions of science-based academics were studied to expose a number of possible factors that may shape the impetus for involvement in public engagement of science activities. Although this study is focused on the intention (Ajzen 1991) to participate, rather than the participatory experience, it does have some resonance with a high number of responses from those academics questioned in this study, which is worth noting.

The study reiterates the increased desire by Government and Research Councils to promote and communicate their work to the public in order to justify the expenditure of public funds. In using this backdrop it looks in-depth at the behaviour this might promote in academics and the ability of both the individual and their institutions to help or hinder participation. The study exposed a number of factors around whether participation was viewed as a positive experience; whether an academic believed participation was under their control; and finally the level to which academics believed colleagues were also participating. In relation to this study a high number of academics were also concerned about the negativity toward participation in supporting one's career progression, feeling that they were being required to undertake activities which they held no control over, and often being one of the few in their discipline 'risking' participation in KT activities over the traditional career route. These and other impacts are discussed in more detail throughout the following chapters (see Chapters 6 and 7) and interspersed with personal accounts of the general collaborative and participatory experience.

Hargadon's micro-sociology of creativity (2004) says much about the role and actions of individuals in constructing or reconfiguring ideas. He affirms that the micro-approach prepares acceptance of early stage ideas in the larger social system. In the same way perhaps KT is being nurtured at the micro level in the arts and humanities, in preparation for wider academic and institutional acceptance? There are certainly indicators that this activity is at play, particularly where one sees a concerted effort to enable early career academics to take the institutional baton for KT, in preparation for them enabling a catalyst or culture shift in the way KT is adopted further down the line. These types of actions therefore place the early career academic firmly between the KT agenda and the institutional response to it. In the next chapter the notion of how KT may be shaped by the social context of the institution is elaborated upon further.

To recap, it has been suggested longer-term tenure for those Russell Group posts holding the KT mission at school or faculty level, may be a potential catalyst to ensuring grass roots level buy-in to KT. Alongside embedded KT roles within our academic communities, greater interactions between the Research Councils offers us a rich climate in which to encourage and promote collaborative expression in a wider landscape of peers. In creating these roles at the same time as bridging between communities of interdisciplinary practices, academic behaviour and the ability to be creative become intrinsic factors in a culture that is changing shape and diversifying. The following section will focus on social structures and boundaries to explore the territorial nature of disciplines attempting to come together.

5.3 DEFINING SCHOLARLY PRACTICES IN THE ADOPTION OF KT

Disciplines are often described as distinctive through their methods, ideologies or 'knowledge territories' (Becher & Trowler 2001). This section aims to define disciplinary practices through their perceived territories in relation to their pursuit of KT. In the previous CreEM case study (see Chapter 3) it was clear that rather than setting up and observing a series of similar studies of KT it was perhaps more valuable to address comparatives at a more micro-level to reveal significant contrasts between individual players and their environment. This micro-level view was explored through questionnaires and interviews where common or divisive patterns of individual behaviour started to emerge. Although the KT questionnaire offered a small sample, as described in the chapter on methods (see Chapter 4) it was hoped that this might form the basis of a subsequently wider study that considers comparisons

between wider institutional typologies, scale and disciplinary practices. To this end the KT

questionnaire offers up an interesting snapshot of disciplinary territories of 25 academics from across

twelve disciplines within one Russell Group institution.

> "We know very little about what it is like, these days, to live a life centred around, or realised
>
> through, a particular sort of scholarly, or pedagogical, or creative activity. And until we know a
>
> great deal more, any attempt to pose, much less answer, large questions about the role of this or
>
> that sort of study in contemporary society, and contemporary education, is bound to break down
>
> into passionate generalities inherited from a past just about as unexamined in this regard as the
>
> present."
>
> (Geertz 1983:163)

5.3.1 Territories and boundaries

In the KT questionnaire the majority of arts and humanities based academics described their discipline

as having a particular KT territory or boundary (Becher & Trowler 2001) this was particularly relevant

to those in the early stages of their career. Here they are closest to establishing themselves as

disciplinary specialists and diversion from the traditional research pathway is often viewed negatively

by a number of disciplinary fields. This presents a dichotomy for those interested in KT, as this group

are on the one hand seen to be driving the future of scholarly activity in the academy, yet they are also

on the other hand required to maintain a strong disciplinary lineage within the boundaries of tradition.

When asked to denote the key barriers to KT within their institution, the majority of respondents cited

as a key factor that younger staff are often under pressure to publish rather than pursue KT in order to

gain tenure, or indeed promotion. There was a noted tension in the interviews and questionnaires

around how far KT had in reality become an integral part of the Russell Group make-up to affect such

traditions.

Academics that considered their discipline to have no distinct KT boundary were either already

engaged in interdisciplinary practices or had come from disciplines with a distinct tradition of

'discipline hopping' such as English and History. Those in new interdisciplinary institutes found that

due to their disciplines being relatively newly formed from a range of subjects, particularly where

sociology and the humanities collide, were seemingly enabled to pursue KT orientated research more easily. It was perhaps more acceptable to these groups as fewer boundaries had been set up at the outset and academics in these groupings often afforded more autonomy to move between the disciplines, and indeed this was intrinsic to their success. KT in these instances 'felt easier' to strive for as the pressure on the research to follow traditional patterns was notably less.

Some felt that an 'unhealthy attitude' was beginning to creep into KT activities where staff were focusing more on securing funding, without consideration of the quality of the research ideas or the results it may generate. This was not the majority opinion however, as most respondents were actively seeking ways to publish their results in high ranking journals and as a result were less likely to pursue KT that did not enable that. As shown in the CreEM case study, it was evident that the dynamics around publishing and normative territories at that time meant it was highly unlikely that the academic would be able to publish in journals common to his discipline.

Those arts and humanities disciplines that have built external relationships over time through mechanisms such as industry-sponsored PhDs or MScs, such as archaeology and architecture for example, suggest that KT research could be a logical step on from the learning and teaching agenda, although there are relatively few awards in these areas that suggest this opportunity is not being fully realised or exploited. Archaeology in particular is quite definite about having a territory and although these are often clearly KT orientated and applied by nature, they are rarely moving beyond the tradition of commercial and community archaeology. We can see in the research awards environment that the more experimental and cross-boundary work is being pursued through critical theory-driven research rather than critical-theory driven KT. This can be seen in archaeological research that has a strong scientific context, such as materials and material analysis for example, where research boundaries are less territorial and more interdisciplinary. In this instance it is clear that even a discipline seemingly well equipped for KT has not yet found a meaningful relationship between the tradition of rigorous research enquiry and its potential application.

5.3.2 Prestige over income

The traditional tensions between prestige over income and theory over application are still prevalent in many disciplines, and it is far too simplistic to put this down to the historical makeup of any discipline. Scholarly practices have always been tied up in current measures of quality through research assessment (McNay 2003) and the continued emphasis on being publically accountable to investment. Where notions of quality and value are discussed in relation to KT in particular, not all knowledge is considered in the same way, particularly that which remains difficult to quantify or ascribe to particular disciplines. The 2003 Lambert Review describes the current business engagement landscape and goes some way to equate the poor adoption of KT with the Research Assessment Exercise (RAE), in that great effort continues to be made towards research and business interactions, whilst the reward and value systems are as yet not recognising them.

> "World-class excellence across all types of research should be recognised and rewarded by the RAE and Research Council peer review processes. Excellent research undertaken with industry or other users should be recognised as being of equal value to excellent academic research."
> (Lambert Review 2003: 2.1)

Although not entirely affecting all aspects of KT, RAE still places barriers to interdisciplinary working in particular. The current structure of peer review panels are by nature divided by their disciplinary specificity and Units of Assessment (UoA), therefore rendering those that straddle the disciplinary boundaries hard to reward in comparison to those neatly positioned in distinct subject areas. Unfortunately it is those disciplines to which KT is aligned which may not be recognised high enough in the UoA to attain future funding and therefore sustain a research environment. Although not entirely a problem of the Russell Group alone, it will remain particularly difficult to persuade the arts and humanities that 'distracting' them from the recognised rewards system is in fact worth it. On the one hand research-intensive institutions have become increasingly dependent upon income from the dual support system (as described in Chapter 1) and at the same time promoting the uptake of income from KT activities. Until the conflict between the two mechanisms is resolved it will remain a double-edged sword for the arts to shift away from excellence denoted through peer recognition of non-KT research.

"Formal incentives faced by researchers… are based on the criteria for the

RAE… the criteria have placed value on academic publications… but have

not recognised communication about research with lay audiences

including government departments and agencies."

(Clark 2006)

It was announced in March 2006 that the RAE would be replaced by a new system called the Research Excellence Framework (REF) that would concentrate on a configuration of metric indicators, bibliometrics and peer review. Although still under review at the time of writing this thesis and still very much focused on 'reducing the administrative burden', it is anticipated that REF will change the formulaic allocation of funding through the dual support system, and therefore have some impact upon activities that affect the allocation of funding according to value indicators. It is unsure how far the changes will go, but some are expecting KT to be a particular area that may gain recognition and associated income streams, and therefore change and widen scholarly practices.

5.3.3 Individuals and networks

Networks and workshop schemes have started to emerge as a mechanism to bring disciplines and external organisations together around innovative themes such as acoustic heritage, madness and literature and women, aging and media. This preoccupation with network building indirectly began to legitimise collaborative research as more money became available to pursue ideas beyond the disciplinary and institutional boundaries. In many ways KT was also beginning to become more legitimate as a direct result of networking, enabling individuals to test a loose co-production model before embarking on more intimate and often intensive interactions. Hargadon (2004) suggests that these collective pursuits have signalled networks as 'new emerging markets', attracting new customers to research activities.

Certain patterns have emerged during the study that offer us a number of possible 'markers' around this notion of reception or adoption of KT at the level of University Schools and departments. We have touched upon seniority within the institution in supporting the development of KT, but as the institution begins to place more emphasis upon targets that these roles are increasingly being challenged to

acknowledge, there are new and emergent pressures on these roles to adapt to these demands. However, for academics the requirement to respond to an essentially management driven priority, such as the Higher Education Innovation Fund (hereafter HEIF) bears far less importance than an exit and lead up to a Research Assessment Exercise (RAE 2001; 2008). Therefore the timing of two distinct and often conflicting pressures has been an influencing factor in the adoption of AHRC KT activities, which were also gathering pace in the same period. In moving from an RAE to a newly derived Research Excellence Framework (REF) there will be a significant period of observation where academics and Government will be scrutinising KT within new parameters, descriptors and indicators of research excellence. Some senior respondents in the questionnaire and interviews intimated that they were aware of the need to change their perspective on KT, but were also reticent in the hope that scholarly life might revert back to a time before KT had become a defining factor in one's work.

In general it can be said that disciplines do have territories that often define the way they may pursue KT research. However these territories are not exclusive to KT activities pursued beyond the institution, as it is clear that they also influence and shape all practices outside traditional normative behaviour. Therefore the success of both interdisciplinary and KT activities are somewhat reliant upon an individual's ability to navigate beyond the traditional parameters, whilst also gaining traditional forms of recognition, all of which are currently undergoing transition. Whilst RAE, REF and KT are in the process of transforming academic practices, academia will continue to protect their territories and be more reticent to adopt new ways of working where the reward system is as yet still unclear.

5.4 THE CO-PRODUCTION OF KNOWLEDGE: MODES OF COLLABORATION

As well as scholarly practices and behaviour affecting the way KT is received, the ability to embrace collaborative working styles also plays a significant part. Gibbons et al (1994) work around the identification of social categories or definitions of the self describe individuals according to personal attributes that may or may not be commonly shared amongst a group of individuals. Whilst this may offer valuable insights about the academic as an individual, the following enquiry will focus firmly upon styles of individual practices in the context of collaborative research and particularly practices that may challenge established academic and disciplinary traditions.

In Chapter 5 the notion of styles of collaboration was touched upon in relation to understanding what particular qualities a 'generous' academic may bring to a collaborative team. In the CreEM case study the principal investigator was clearly committed to exploring new territory, excited by the mix of contributors and most importantly, willing to go beyond their normative practices to draw upon a range of expertise and knowledge. The case study revealed that situated knowledge of both academics and their collaborators plays a significant part in all stages of the lifespan of a research project, but particularly in affecting the start-up and final application of that knowledge. The following body of material focuses on the ways in which academics collaborate, their particular styles and modes of operation reflected upon from within a number of social science contexts.

5.4.1 Relational Scholarship

Researchers collaborate under different circumstances; they inhabit and cultivate knowledge in variegated and complex ways. Thanks to Geertz (1976, 1983) and more recently Becher & Trowler (2001) multiple ethnographies of the disciplines have begun to emerge and attempt to tell us something about the way they work and the motivations behind collaborative pursuits. In some cases these motivations are masked by the demand of the discipline for continuity of the old orders and by the nature of some academic practices, often determined by such simple factors as at what stage an academic is in their career or what level of experience may have been gained beyond scholarly works. For example publishing for tenure for early career academics in Law has commonly denied them freedom to pursue collaborative research less pressured by seniority (Cownie 2004). In a number of AHRC schemes Law in particular has been denoted for its uptake in KT being poorer in relation to archaeology or history as, with only three awards in the Collaborative Doctoral Award scheme between 2007 and 2009 (AHRC collaborative Doctoral Award tables 2009). Whilst History is essentially a subject with more obvious application in the broader cultural sector, the discipline of Law has a long-standing and well-established relationship with the business sector, which would suggest they were perhaps more prepared and equipped to work beyond academia than the figures would suggest. This may in part be due to a more integrated relationship with the business sector, where the discipline may not in fact differentiate between KT and their normal application of knowledge through teaching in particular.

Ernst Boyer's (1996) more basic vision of a new paradigm of scholarship is one that integrates four interlocking and interdependent functions of research practice: discovery, integration, sharing and application of knowledge. Boyer is aware of change and the demands upon academia to respond to shifts in applied practices, which lays the foundations for later work on relational scholarship (Bartunek 2007) and engaged scholarship (Van De Ven 2007). The challenge for the arts and humanities is in part about how we understand how collaboration takes place and with this knowledge how we might change or adapt our research practices to broaden the contribution to scholarship without losing the intrinsic identity of scholarship.

In the context of KT interactions the following describes Gibbons categories for collaborative research. Although essentially prescriptive, Gibbons offers us a social science framework in which most academics could easily identify their own collaborative preferences and recognise the particular qualities inherent in each category. In the KT questionnaires all respondents questioned thought that the categories offered up by Gibbons were comprehensive in terms of academic practices, but some suggested that they might move between categories depending upon the type of research they were pursuing. Therefore the respondents were asked to define their predominant style of KT practice and elaborate on anomalies where required.

The three categories (Gibbons 1994) were described to respondents as follows:
1. Multidisciplinary, which describes an academic wishing to *attach* their expertise to a project rather than find ways to integrate it.
2. Interdisciplinary, which describes those wishing to find intersection and links between their expertise and others'.
3. Transdisciplinary, which describes those wishing to come to a project or collaboration unencumbered by their own specificity in order that new ideas and methods might emerge.

When pursuing KT collaborations academics may require expertise they themselves do not have, they may need to share physical or information resources and sometimes they are subject to artificially constructed collaborations in response to investment or career prospects. Although one respondent had never considered themselves within such a category, the majority agreed that the greater the

understanding an academic may have about their style of working, greater was the potential knowledge of the ways in which they may operate effectively alongside others. It could also be argued that in better understanding how one wished to approach collaboration, one might also be able to describe preference rather than passivity in how they wished to operate as part of the collaborative team. Often this type of unwitting passivity, in interdisciplinary activities in particular, proliferates the dominance of particular disciplines and often results in the alienation of the arts and humanities scholar. This is prevalent where academics are asked to join a 'collaborative team' as a multi-disciplinarian, requiring them to merely attach their expertise and leave. By nature, and qualified to some degree in the questionnaire, the majority of arts and humanities academics actually perceive their predominant style of collaboration as interdisciplinary, and increasingly transdisciplinary. Outside their disciplinary boundaries they are often perceived to be essentially multidisciplinary, particularly by the sciences. This suggests a potential critical factor in bringing collaborative interdisciplinary teams together for further dialogue with the sciences, and one that may have the capacity to turn around perceptions and address effective team building if overcome.

Although the majority of those questioned about Gibbons' categories considered themselves to operate predominantly as interdisciplinarians, those who had been nurtured to work on new and emergent research projects firmly described themselves as transdisciplinary, enjoying the insights others often have on the way in which they approach theirs and other subjects.

> "Most academics are too specialised in their own niche area (either for professional
> development or just scared). The most interesting projects are when you go in to things with a
> little bit of knowledge and an open mind."
> (Academic Respondent No.14, Built Environment, November 2008)

Although most respondents wanted the chance to get to know collaborative partners better before articulating a formal arrangement, some academics felt it a distinct advantage not knowing fully about a particular subject before they come together. Many felt empowered to be more critical and reflective in finding ways to make their ideas work and interact with other perspectives. Some suggested that this in turn motivated them more towards the traditional perception of scholarship aligned to 'blue sky

thinking', strengthening their understanding of what it was to be an academic researcher in the traditional sense rather than increasingly as 'an applicator of knowledge'.

Sargent and Waters (2004) describe motivation in the collaborative process in a similar vein to Gibbons' earlier work on two modes of practice (Gibbons 1994). They suggest that although researchers collaborate under different circumstances their motivations are often quite distinct and fall into one of two varieties, instrumental or intrinsic. The first tends to be aligned to more short to medium term activities and often relies on an acknowledgement of complementary skills amongst participants that may directly or indirectly enhance the prospects of the individual for further work, funds or career development and so on (Gibbons mode 1). The latter relies more on a level of altruism and the building of long-term relationships that offer enjoyment and mutuality beyond the lifespan of the project (Gibbons mode 2). Intrinsic motivation is also coined in the study of organisational behaviour and is described similarly as a positive tool for building a sense of shared purpose and fulfilment (Ghoshal & Moran 1996; Kohn 1993). Aligning the two perspectives perhaps offers us a possible signature for collaborative success where the building of such social capital amongst teams may rely in part to a high degree of altruism or some form of personal gain.

> "Although I'm aware that there might be some instrumental gains this has not been my motivation – and indeed, my failure to focus on narrow instrumental goals sees my career stuck at its present stage!"
> (Academic Respondent No.9, English, November 2008)

Although the majority of respondents considered themselves to work predominantly either in the co-production model or the intrinsic mode, some felt that this could be construed as a 'softer' rather than as a more rigorous mode of operation. It was therefore important that they were seen to be working with knowledgeable people at the cutting edge of their field, rather than working in what some may perceive as a less rigorous or demanding mode. Mode one, or instrumental, was described as the dominant mode or culture by which prestigious research was being driven (Deem & Lucas 2007), even though mode two was overtly preferred by individuals within particular academic tribes (Henkel 2000; Becher & Trowler 2001). As the pressure to drive interdisciplinary, larger scale research programmes

increases, mode one will come under pressure to shift to a co-production model or mode two perspectives. Therefore it is also evident that the general tensions around large scale operations found at the institutional level, as denoted in the CreEM case study, are perhaps similar to those found at an individual or micro level of operation, where academics are being pulled between traditions and dominant demands of current practices.

The sum of individual parts in collaborative working may not always be greater than the whole. Hinings and Greenwood (1996) suggest that each member brings elements which, when combined, can have greater impact upon the outcome of the research. As co-producers of research many of the respondents thought that more could be done to help support the building and visibility of 'pools of collaborators' from a range of disciplines. Many felt that these pools needed to build a critical mass in order to affect approaches to collaborative team building. The ESRC and EPSRC have in many ways anticipated this in establishing collaborative mechanisms for bringing new 'instrumental' research teams together in the style of the 'intrinsic' model. In attempting to bring prestige and co-production together the RCs have started to gain the attention of the Russell Group institutions, where previously the post-1992s were dominating KT by virtue of their ability to follow loose notions of co-production in both research and teaching. Having maintained a more traditional thematic research environment over collaborative team building, the AHRC are now also looking to replicate similar activities such as the 'ideas factory' or 'sand pits' as well as investment in early stage team building funds. The introduction of the new Science and Heritage programme, funded jointly by the AHRC and the Engineering and Physical Sciences Research Council (EPSRC) has signalled the first step outside that tradition and aims to "build capacity through opportunities for collaboration among disciplines ranging from arts and humanities to science, engineering and technology" (AHRC Science & Heritage Programme 2009). This programme was stimulated very much by the success of the AHRC Landscape and Environment collaborations that similarly aimed "to develop arts and humanities understanding of landscape and environment in distinctive, innovative and engaging ways…" (AHRC Landscape & Environment 2009). For the first time these two programmes had begun to raise the profile of strategic collaborative research and emphasise the co-production model in crossing disciplinary boundaries with the social, physical and life sciences.

In exploring relational scholarship across both modes of operation common to the Russell Group, and the motivations underpinning their distinct KT practices, it is evident that there is a level of immaturity around how one should operate in 'extending the reach' of one's research, whilst maintaining the rewards and prestige proffered by tradition. The following section suggests that one's modus operandi must also take into consideration the interaction experience, the way in which one equips oneself to work with others.

5.4.2 The interaction experience

Van De Ven (2007) suggests that the 'engaged scholar' comes about through the intelligent conversion of the interaction experience, and it is that experience which is in great need of capture and further debate. In Chapter 7 the AHRC Research Exchange Network (REN) is described as one vehicle that had begun to stimulate the interaction experience and lay the ground for development of new engagement mechanisms. In deconstructing the CreEM research project (see Chapter 3) to reveal the individual players and particular interactions, REN was in turn better informed by what common denominators might be required to underpin and support the KT experience.

The CreEM case study gave us a range of insights around the interaction experience, but these were mainly focused upon the influence of particular roles rather than the mechanisms and behaviour by which they might engage with each other. In questioning a range of academics pursuing KT collaborations it was evident that the single most important feature of their engagements was the ability to be open to the views of others, both academic and external. As we see from the social science research, this 'openness' often lays the foundations for trust and altruistic behaviour to thrive (Sargent & Waters 2004) both of which one cannot easily be trained for. In the KT questionnaire most of those questioned thought that the interaction experience in general could not be brought about by sending academics on training courses, particularly where the offer was generic, or as some suggested, "if not well done and if there is a hidden agenda that they might not understand". Some considered training courses more as laying the foundation for moneymaking transactions for institutions for example, rather than engagement. Whilst this may seem conspiratorial, most academics wanted the *impetus* to pursue KT interactions to be addressed and done so with greater transparency.

As previously touched upon earlier, the study by Poliakoff and Webb (2007) went some way to expose a number of factors that might suggest that the behaviour and attitudes of individual academics greatly influence participatory and collaborative interventions. Academic behaviour has been touched upon throughout this in exploring the distrust and dynamics in the relationship between the sciences and the arts; the CreEM case study and the notion of participants working toward a common aim when recognising their styles of working and themselves as participants in a 'value chain'; and the first hand accounts of those currently engaged in KT interactions. The latter in particular uncovered similarities with Poliakoff and Webb (2007) in that particular factors were suggested such as the effect of non-traditional methodologies hampering or benefiting one's career progress; approval and support of one's peers being vital to uptake and the potential loss of control of the process or outcomes tainting the experience. All of which were cited throughout the questionnaires and interviews as common to KT interactions. This level of team playing and associated altruism was thought to be important by most academics, as well as the ability to not always "focus upon one's own, or indeed the needs of one's institution, exclusively" (Academic Respondent No.5. Archaeology. November 2008).

Developing an acute awareness of timing and delivery was cited by a number of academics as an important lesson in the interaction experience. As was the case with CreEM, difficulties often arose where expectations on these were either unrealistic or poorly judged. Most environments beyond the academic institution move quickly, shaping and implementing policies, reacting to shifts in business economics and becoming highly responsive to external demands. This can directly conflict with both institutional and research funding timelines and often overlooked when embarking on collaborative ventures. Some attributed this to a lack of understanding on the part of those funding research, but equally a number of respondents suggested that this might be down to a lack of understanding of the requirements of the applied side of the discipline, suggesting many should become more aware of helping to focus research towards more efficient and more effective methodologies.

Those subjects with a longer history of working with external organisations were often more adept at recognising the limitations of the funding cycles and found ways to maintain relationships which might not be dependent upon KT funding. This was true of the discipline of archaeology where student placements and consultancy were common, and architecture where team based situations were part of

teaching practices involving industrial partners. In those questioned, teaching was thought to be an element continually overlooked in terms of KT, yet one of the most consistent ways in which scholars, students and external organisations have commonly interacted. However, few of these types of interactions seem to be fully exploited in terms of capitalising further upon the ease by which long-standing relationships might make KT more realistic and easier to get underway. One respondent said that "through modest but meaningful interactions with known communities which might benefit or identify opportunities for further uptake of scholarly findings" might we build on what we already have in our sights.

A number of respondents were interested in finding ways in which they could get to know potential partners better, establishing a basis of understanding from which KT might be made more meaningful. It was felt that too few schemes were available to support earlier stage activities other than the networks and workshop schemes run by the AHRC. As these are highly competitive and fund relatively few groupings, some institutions were trying to emulate network building initially within their own communities of scholars. Many thought the institution often ill equipped to do this effectively without academic leadership. Most respondents felt that it was the leadership of well-respected peers that attracted them to collaborative interactions, rather than the drive of the institutional ambitions to win collaborative funds.

The majority of respondents thought that external parties had invaluable insights to offer research, and that those not seeking to interact might miss equally invaluable recognition of that knowledge in their work. However there were still a number of disciplines that thought external parties had little insight to offer that could be of value to their research. This was felt to precipitate a 'poverty of interest' in some disciplines that perhaps needed greater support in embarking upon KT activities.

> "My key observation would be the mutual suspicion often visible amongst both academic and industrial partners. If academics are not willing to accept that there exists within industry a vast body of expertise that can help inform research (or that in some cases industry is already undertaking research itself that is on a par with that in universities) then there can often be significant reluctance to engage, or long lead in times once projects start. Similar views from

the industrial side about the lack of practical application within university based research etc,

lead to similar inefficiencies in their system."

(Academic Respondent No.17, Built Environment, December 2008)

Although not based within this particular Russell Group institution, there are pockets of isolated

activities where a number of disciplines are seeking to forge new relationships with industry. Both

theology and philosophy disciplines have begun to find new and innovative ways of working with

collaborative, and often challenging, partners. Whether looking at the role of faith in social

entrepreneurship or translating meta-physics into risk and causation in banking, those involved have

found ways to overcome suspicions, perceptions and barriers. In Chapter 7 the role of the broker or

research facilitator is described as a key agent in supporting those disciplines considered to be on the

peripheries of the KT agenda. It was clear in the KT interviews and questionnaires and the CreEM case

study that this role was becoming instrumental in knitting together the fabric for collaboration.

5.4.3 Enabling and motivating communication: The fabric of collaboration

"Abundant evidence shows that both civic and academic health of any culture is vitally enriched as

scholars and practitioners speak and listen carefully to each other."

(Boyer 1996)

All interactions are reliant upon some form of communication where there is a requirement to combine

efforts and view perspectives from different vantage points. In these types of collaborative interactions,

something in particular occurs to enable each party to find points of reference from which they might

uncover new insights or outcomes, as well as learn how collaborative tools and relationships are built.

This may be as a result of the role of key individuals, as described in the CreEM case study, or the

intrinsic value of the act of altruistic collaboration itself. What occurs in the collaborative process is

often a complex orchestration where bridges begin to be made between previously unconnected

contexts (Hargadon 2002) and schemas and scripts (DiMaggio 1997) are reconfigured to make more

meaningful the links between people, understanding and action. KT evolves within this type of

complex ecosystem and is rarely a repeatable or prescriptive process. Communication however is one

element of co-production that seems to engender a learning experience in KT, equipping the

participants with both the lexicon and language of KT, but most importantly the tools to reconfigure or appropriate them repeatedly. Some would argue however that it is the mere act of doing and experiencing KT that promulgates communicative learning as Hargadon suggests. Whichever is evident it is clear that the arts and humanities have begun to uncover practices indicative of a learned and transformational experience, and one which see stronger ties forming between newly emergent parties (Hansen 1999).

Does one have to have disciplinary specificity to be able to communicate? Hargadon would suggest not, but an astute ability to curate a complex network of behaviours, ambitions, drives and needs is also at play. One needs to know how research works, how it might be applied beyond its discipline and how it might transcend or communicate within systems and processes that may be restrictive or inhibiting. This does not come naturally to all disciplines. Classics and Archaeology have a long tradition of KT in that they have been continually required to communicate beyond the boundaries of their subject, where others have been somewhat confined by their specialism both within academia and beyond it.

5.4.4 Integration of the non-academic viewpoint

"We need to break down the idea of academic activity operated by a sacred priesthood of experts."

(Academic Respondent No.5, Archaeology, November 2008)

Academics were asked if establishing a 'consensual vision' (Pettigrew 2003; Teagarden et al 1995) between academics and the practices of the external partner was essential in bringing about successful KT collaborations. The majority of respondents said that it was essential, yet difficult to attain.

Understanding the partner perspective is a vital component in any collaborative process, but understanding the context by which the partner may often be defined is rather more complex. Collaboration in any context brings with it a need to understand why, how and where partners operate in order to deliver upon the interests and ambitions of those involved. In the CreEM case study (Chapter 3) it was evident that the demands of the external partners were central to how the academic designed the enquiry. Key 'change agents' were instrumental in defining what drove the decision makers to invest in the work, as well as key to taking the message back into the organisation and

ensuring a degree of application. Where change agents are not defined in a project, the responsibility to make the link between organisational interests and research design can often be missing or fall to the academic to articulate. This is where a disciplinary split seems to occur in the questionnaire responses.

The majority of respondents agreed that building a consensual vision with collaborators is an important facet of their work. However, those from disciplines more conversant and practiced at ensuring the application of research in practice, such as architecture and archaeology for example, often found the partner perspective and applicability central to the design of their proposal. Those less focused on the applicability felt that it was the responsibility of the academic or academic team to strive to direct the design and offer limited input by the partner. The latter group also tended to leave the application of the knowledge to the partner organisation, whilst the former often made recommendation on applicability and implementation.

Some academics felt that it was not always desirable to have a full consensual vision with the partner, as the research questions were not always the most pertinent or relevant elements of the collaborative process. Some even suggested that challenge and argument could sometimes be more productive than always seeking consensual agreement and alignment, particularly where assumptions had been made which research might dispel or question. Where there were particular dynamics around intellectual property (IP) and ownership of outcomes as a commodity, some academics were less sure of the role both the partner and the institution should play in the design process. In order to fully exploit the research findings academics wanted to be less encumbered by the drive of the partner until the point of licensing or the selling on of any IP. There was an overriding consensus regarding an academic taking responsibility for collaborative cohesion, but varying degrees of intervention would be required from the partner and would occur in multiple ways.

Not all research will be relevant to the non-academic sectors all the time, as sector interests, demands and needs change over time. Academics were concerned that energy was being invested in building collaborative KT teams to support particular sectoral concerns that may leave target institutes and positions vulnerable to shifts in current external trends. As touched upon previously, the speed by which change occurs beyond academia is much swifter than the research process is often able to deliver

upon, and policy requirements in particular often demands a swifter turn-around which many academics equate to a poorer level of enquiry. Some disciplines however are more adept at working to these demands, demonstrated by law and architecture, and others too are beginning to see how shorter consultancy briefs might have a place in academic enquiry. Increasing those interested in working externally, are beginning to utilise the student as the lynchpin between their knowledge and the partner, enabling smaller more discrete levels of target research to be undertaken. The introduction of the AHRC's new Knowledge Catalyst and Knowledge Fellowship schemes have enabled more flexible responses to external needs and in many cases are forming a simpler and more effective way for academics to get to experiment and explore KT at a smaller scale.

It was agreed that those investing in the research should have a strong input into it, but should they also drive the research design and development? It was felt that as KT grows as a major facet of research funding the demand on academics to be equally driven by the investor's requirements could change the nature of both quality as well as the benchmarks for what might be recognised as prestige.

> "If the partner has value to add to the framing of a problem and the identification of a methodological approach then input is most welcome. Where partners do not understand the nature of pursuing the answers to what are frequently open ended and ill understood problems, but have the expectation of accelerated time lines and concrete deliverables, it is perhaps best to either walk away or to work very hard with them in defining a programme that is achievable."
>
> (Academic Respondent No.17, Built Environment, December 2008)

We have touched upon the co-production experience and the need for academics to understand how their individual style and behaviour influences the interaction experience. We have also suggested that this needs to be coupled with greater mechanisms for getting to know the collaborators better and their motivations and reasons for embarking upon research. Next we will look at how that relationship moves from design and building to interpretation and application of research in real life settings.

5.4.5 Interpreting and applying research: A form that facilitates transfer

> "It often depends on the nature of the problem your research seeks to explore. Work tackling problems that have a practical application can none the less be rendered inaccessible by the manner of transfer e.g. within obscure but high esteem journals and convoluted presentation of the work. Researchers with whom I have been fortunate to collaborate with to date seem by and large to have the knack of rendering the findings of their work accessible."
> (Respondent No.17. Built Environment, December 2008)

In Christine Borgman's *Scholarship in a Digital Age* (2007), she quite rightly suggests that research beyond scholarship varies by discipline, but then goes on to prescribe that in comparison to the sciences and social sciences, the humanities "are directly accessible and of immediate interest to the general public." This presumes that the arts and humanities outputs are ultimately palatable to the public audience by virtue of public interest. It is a misconception that continues our association with being highly relevant, and by token, less academically rigorous. This section will explore how individual academics overcome the dynamics of relevance beyond the institution in pursuit of what is also required to be rigorous and rewardable (Pettigrew 2003).

The debate stems from research being applicable beyond academia, and a need for rigorous investigation supported by astute methodologies and analysis for it to be credible and ultimately relevant (Gulati 2007). As the research environment shifts and changes over time it is no longer sufficient to say we do research, but that we also demonstrate other outcomes, elements that add further reaching value. There is a sense that knowledge is developing a moral character, a sense of social consciousness in which it is becoming accountable to the scrutiny of those beyond academe. Prestigious academic publishing in many ways has not yet caught up with the rise in this social or moral consciousness, and as the KT environment is still relatively new, the moral character of its outputs must also find a place in which it is both acceptable to academia as well as the wider society.

The majority of academics who answered definitively on research and KT outcomes stated that it had been possible to deliver usable outcomes beyond academia at the same time as producing high quality publishable outcomes. However, many of those asked found this highly problematic and struggled to

find ways to overcome particular challenges. Overall, the respondents were split in terms of the context in which the research was framed. Some thought that it had been possible to achieve both publishable and external outcomes where work was at a smaller and more experimental scale, but then found it increasingly challenging to scale up the preliminary work to be acceptable as a major peer reviewed article or journal paper. Where academics were working at an early stage as part of a commercial or industrial partnership, this was often compounded by embargoes on sensitive material that may affect ownership or breakthroughs in knowledge. Some thought this often acted to the detriment of research outputs in particular, but also had the potential to compromise the academic team where partners may have not liked the results, or where the knowledge may have equally compromised the external partner in some way. An example of this could be where researchers act as third party consultants for a major charitable agency and the outcomes expose flaws in delivery of certain services to sensitive parties. The outcome may be that the work would not be publishable supported by contracts stating the outcomes were the ownership of the agency as publishing had not been duly considered and negotiated. Although merely an example, this is becoming increasingly common as KT increases in scale.

In the KT questionnaires some respondents stated that they found it difficult to answer the question regarding publishing KT interactions, as they were as yet still new to such interactions and in many cases part way through KT projects so had not reached the outcome. This group felt that there was also insufficient support mechanisms post award and little experience around them from senior academics to help guide them through the KT hurdles, particularly as few had experienced this way of working before. In one case this was paralleled to traditional scholarly pursuits where one benefited greatly from a supportive and engaging community of scholars with whom one tested and discussed the development of one's ideas and work regularly. Some felt that this was not present where KT was concerned in their Schools, and that it brought about a sense of isolation and a loss of collegiality. It was felt that more could be done to generate a tradition of this type for the future of KT within the institutional setting. In the following chapter we explore whether institutions can ever fully equip academics for the KT experience, or whether it is the role of the individual alone to build up a sufficient repertoire of skills and approaches to take on KT interactions.

As one would expect there were some notable correlations between the publishing question and one pertaining to the involvement of the external partner in the design of the research. Generally those who embraced the development of a 'consensual vision' in research design such as archaeology, classics and architecture, also agreed that their outcomes could generally be both publishable and of relevance to the external partner. Whilst this is somewhat obvious given their long established relationships with commercial archaeology, museums and the built environment, it does offer up some questions in relation to why this does not always correlate with the experience of other disciplines. Those respondents that gave conflicting answers, for example where they worked to develop a consensual vision with partners, but may have struggled to publish the outcomes, tended to be the more established academic with equally established recognition in their discipline. This group perhaps enjoyed a level of altruism and autonomy to branch out from their core discipline and try new avenues of enquiry. Although they may not publish directly from the KT experience they were often less encumbered by the need to continually underpin their publishing track record where it was already well established. The Principle Investigator in the CreEM case study is a prime example of this.

The mix of the respondents in the KT questionnaire included those who were within six to ten years of completing their PhDs and therefore considered as early career academics. This group cited that they had to seriously consider the role of collaborative practices in their career progression in order that they could be recognised in the peer groups as credible and committed to the disciplinary demands. In particular disciplines such as Law, it was predominantly those at an early stage in their career that sought to publish over the development of a consensual vision. This is perhaps reflective of the general practices in career progression and development, where training and research follow stricter disciplinary boundaries until one reaches a more established footing. In English and somewhat in early career archaeology, some academics felt that collaborative KT had in fact slowed down their traditional career progression and hoped that new ways of recognising this activity would allow them to pick this back up. In some of these cases, respondents were reticent about continuing to pursue KT because of this effect.

> "Until very recently (and I mean in the last five years) this was totally disapproved of in the
> academic community, 'popularisers' being reviled as having sold their souls to Mammon

though also prompting a measure of jealousy through the mistaken belief they all made loads of money. Well, they couldn't do it for any other reason, could they? I was told at one stage in Liverpool that I should use a pen name for any kind of 'popular' writing I did, as this was trivialising the results of serious research."

(Respondent No.12, Archaeology, November 2008, Nottingham)

A number of academics stated that they enjoyed working in a challenging environment where one had to work collectively to find parallels or intersection. Policy makers were given as a prime example of this, when one was able to overcome the practical demands around data, they often became fascinated by the scholarly side of discussions. Some also thought that it was important to keep talking about scholarly characteristics even where one was being required to answer targeted and specific questions, as this may help to better equip the partner with a wider sense of academic behaviour, as well as vocabulary. Most respondents suggested that the act of repeated interaction was in itself an elementary and effective tool in building longer-term relationships. On the opposite side of this were those who had experienced unsuccessful 'shotgun weddings' which had deterred them from repeating anything similar.

Much of the mutual benefit around collaboration was often described as occurring where participants were *enjoying* the experience. Although difficult to prescribe, the nature of enjoying one's subject and the challenges arising often induced a sense of trust and comradeship across the team. These were common factors where collaborative experiences had been described as a successful and repeatable process. Some thought that there should be more consideration of KT as a process rather than always as a means to a product or outcome. Process driven research was suggested as a possible tool to engage minds on the way in which knowledge was being developed and interlocked within theory. In knowing more about the process of KT, it might be further 'unlocked' and become more adaptable to adoption by others.

Although essentially abstract and deeply embedded, the tacit knowledge of any individual is rarely documented or captured throughout a research or KT orientated project. Academics are required to report on funded research and this often encompasses descriptive overviews of methodologies and

subsequent findings. Rarely if ever does it capture the interactions between those involved, describe or animate process or define the context for communication or difficulties that arise throughout the lifespan of the project. Chapter 7 explores the possible future development of an ontological KT map of the *Humanities Value Chain*, capturing consensus amongst a group of academic case studies to show linkages, lexicons and representations reflective of the possible emergence of a new ethnography of KT in the arts and humanities.

In this chapter we have explored the relationship between academics and their collaborators, the nature by which they communicate and bridge knowledge and some of the key principles by which this group apply that experience in real life settings. The next section attempts to set the scene on how all these elements come together within the context of the institutional environment. In exploring the relationship between the individual and their institution the thesis aims to make intrinsic linkages between organisational and academic behaviour as central to the KT experience.

5.5 CONCLUSION: HOW KT SHAPES THE ROLE OF THE INDIVIDUAL WITHIN THE INSTITUTION

Individual academics sit within a powerful infrastructure of management and academic administration that varies greatly from one institution to the next. Some sit within fully devolved structures where activities are reliant upon localised support from within a school or department. Others sit within centrally driven structures where a high level of managerialism drives the research support function and in turn often seeks to drive the overarching research agenda. These are two extreme expressions of institutional support in which KT currently functions, but for this section and the following chapter it is the latter support structure from which the key arguments will be drawn.

5.5.1 Person-Organisational Fit

In exploring the context for KT from both the individual and the institutional perspective it is important to touch upon what is commonly coined 'person-organisational fit' (hereafter POF) (Kristoff 1996; 2000) or 'person-culture fit' (Cable & Judge 1996) in order to describe how the KT associated values of each may either be shared or in conflict. I will argue that where KT has become of major interest to an institution, individual values about KT are often in direct conflict with those driving the agenda.

This can often result in KT management values appearing confusing or mismatched with research values, particularly where KT may not be fully embraced within related recruitment and performance processes for example. Where it is evident that there has been little formal opportunity to discuss values in relation to KT activities, this lack of target dialogue can proliferate poor POF, and in turn bring about slow adoption and uptake.

POF has well researched associations linking it to job satisfaction, well-being and retention and although this may be a simplistic view, KT, by nature of it becoming a major factor in the make-up of academic life, also contributes to this overall picture of one's satisfaction with working life. POF is often described as a mechanism by which the organisation ensures close alignment between individual behaviour and decisions, thereby reinforcing the predominant culture in which they both operate. However POF is often problematic and rarely achievable in this sense, particularly across a large and complex institution with multiple values and internal sub-cultures. The study of POF often assumes that shared values only come about where there is consensus and compatibility between individuals and the organisation, but sharing and learning between the two also opens up the potential for POF to be shaped over time and transformed by individual actions as well as organisational demands.

As close links have been drawn between tacit knowledge and POF in terms of sharing and retaining institutional knowledge and expertise (Billsberry et al 2005), perhaps there is also a similar link between KT and POF in relation to how an essentially emergent KT culture may be developed and nurtured? Billsberry also suggests that knowledge exchange occurs best where it emerges from quality socialisation (Nonaka & Takeuchi 1995) or acquired through the building of personal relationships (Badaracco 1991). The majority of respondents from the KT questionnaire also substantiated that quality academic interactions and building quality relationships are key to a positive KT experience. However, it was evident that those at an early stage in their career were actively seeking to build KT orientated partnerships central to their academic activities, whilst those at a senior stage considered this to be a normative part of their academic life rather than distinct from it. This suggests that KT may be currently more instinctively suited to established careers whilst the sector negotiates how it might make it intrinsic to the development of early careers. In either case institutions have to be mindful of how the

emergence of KT across their institutions is developing at differing paces and stages in the academic lifecycle and that both perhaps require different institutional support and approaches.

5.5.2 Operational types

Generally academics fall into or between two distinct operational types, those perceived to be operating individually within an institution, or those acting as one of a chain of individuals interconnected and reliant upon each other. Although the majority of respondents in the KT questionnaire considered themselves to be the former, these tended to be at an early stage in one's careers where they had either not moved sufficiently beyond their disciplinary area to forge networks internally, or had not yet been invited to take part in wider interdisciplinary networks developing internally. Many of these were however actively embarking on collaborating with others outside the institution, but considered themselves to be doing so as individuals rather than representatives of their institution. Those who did consider themselves as one of a chain of individuals had either been actively engaged in interdisciplinary practices within the institution or had a well established career in which they found this to be a normative part. A small number of respondents thought that it was important to shift between the two modes of operation according to what was predominantly better to attain the desired outcomes. One suggested this interrelationship was conducive for building and developing one's career through defining the KT activity as separate to their main body of research. This enabled some to avoid any potential dilution of, or diversion from, their disciplinary specificity, particularly amongst their disciplinary peers. This is common practice where diversion from the career path is considered detrimental to establishing oneself within a recognised community of scholars and most certainly detrimental to the increased uptake of KT in certain disciplines.

5.5.3 The 'small world' organisation

In this chapter is has been suggested that the engaged scholar comes about through a careful negotiation and balance between one's relationship with collaborators, and an understanding of how one behaves and operates within one's discipline. It has been proposed that closer observation of individuals within collaborative 'value chains' (see Chapters 3 and 7) starts to uncover patterns of communication, stylistic behaviour and tribal territories, all of which play a part in how KT becomes embedded into the day-to-day practices of the arts and humanities community. Added to this is the

need to recognise and support early career academics as a key component in KT development. It has been suggested that these roles in particular might overcome the lack of continuity in KT advocacy, brought about through senior roles rotating too frequently for KT to be championed as a normative and frequent part of faculty life. This would however still be reliant upon the support of senior staff in acknowledging and advocating KT in the same way they support traditional research paths, through continual collegial discussion and colloquium, and recognising that scholarship is become an ever more diverse profession.

This chapter has also presented some collaborative challenges. We have seen that the inclusion of partners greatly affects the design and delivery of research and early relationship building is a critical factor in getting the balance right for all concerned. It has been suggested that that some of the challenges faced are not always solely due to externalities, but as much to do with how academics operate and behave in collaborative scenarios. A greater understanding of one's particular preferences and motivations for pursuing KT may in fact create a shift in perceptions about what benefits KT may offer them and their future research in the long-term.

In knowing more about one's role in the Humanities Value Chain (see Chapter 3) perhaps academics might also begin to define the KT process more coherently and confidently.

> "Engaged scholarship implies a fundamental shift in how scholars define their relationships with the communities in which they are located."
>
> (Van De Ven 2007)

The following chapter begins to situate the individual within a micro-environment where others forces are also at play. Hargadon (2004) describes these communities as 'small worlds' that often struggle to change elements within it, due to the constant activity and the ties that bind those to becoming reliant upon it. In the same way individuals within the academic institution become highly dependent upon 'small worlds' built in disciplinary corners of a larger institution, often doubly resistant to moving both beyond disciplines but also beyond the boundary of the institution. The following chapter focuses in on the relationship between the individual and their institution in one Russell Group University and

attempts to frame some of the context in which KT may be hindered or supported beyond the context of the 'small world' analogy.

CHAPTER 6

THE ORGANISATION: UNIVERSITY AS 'IDEAS FACTORY'?

6.1 INTRODUCTION

As described briefly in Chapters 1 and 2 the university sector has, along with major public services in the UK, undergone significant change in both their ideologies as well as the way they have become organised as a business entity. Although still relatively autonomous from the UK public service sector, during the last twenty years they have developed new systems and processes that reflect the changing nature of their services to their students, public and government. We have described some of these changes in both an historical as well as current context, and also made close associations with theories and ideologies rooted in a social science context such as organisational management and behaviour. New Managerialism (NM) is a distinct field of study concerned with the organisation and management of businesses (in this case the university) in ways that reflect the need for flexibility and adaptation of both the strategic and operational (Clarke, Gewirtz & McLaughlin 2000; Ferlie, Hartley & Martin 2003; Deem & Brehony 2005). It requires the organisation to be highly adaptable, to reflect and learn, and most importantly, consider change as an ongoing reinvigoration of the institution as an organism. This is a rare occurrence both in business as well as the Higher Education sector.

Unfortunately the university is subject to increased and continual review and audit that somewhat hampers its ability to fully embrace and manage large-scale change in culture as well as management infrastructure. As Deem, Hillyard & Reed uncover in *Knowledge, Higher Education and the New Managerialism (2007)* there is a burgeoning need to "identify and assess the endemic contradictions, tensions, and conflicts within and between these discursive strategies and control technologies, as well as their broader implications for longer-term institutional change and organisational innovation." We are at the very early stages in being able to say something meaningful about how KT plays out in our institutions, but what we do perhaps know is that in looking at some of the tensions at a more micro level, we can see that it too is proposing an 'endemic contradiction' to some current scholarly practices. Where academic uptake of KT is generally poor amongst the arts and humanities, we can expose a number of common denominators that suggest this particular institution lacks flexible and adaptable strategies for engaging traditional scholars in KT.

If the institution can be viewed as a similar organism to a business, might we also view the academic as an employee who has particular behaviours that can affect the growth or productivity of the business they are part of? If this social science rooted comparison is possible, perhaps the study of the linkages between behaviour and environment might also resonate with the slow uptake and growth of the KT agenda in the arts and humanities. Wiklund and Shephard (2003) suggest that staff behaviour and the work environment are inextricably linked and therefore have the power to moderate and influence one another. In terms of KT, the capacity to magnify activity might therefore be reliant upon a greater empathy between academic and institution, and in turn their behaviours and aspirations toward external interaction.

Karl Weick (1979-2005) sets the scene on much of the work around organisational behaviour and explores the organisation as an *organism* adapting and adjusting to its environment. Most organisations seek to find a balance between internal and external forces and in doing so act upon the systems and processes to adapt to change. Organisational Behaviour as a distinct area of study offers us insights into the way such organisations set themselves up to respond to these forces, as well as how the dynamics of their history and current practices inhibit or support those interactions. In a climate where research is required to reach beyond academe, institutional behaviour is undergoing a parallel transition. Pettigrew et al (2003) and Zlotkowski (2002) suggest that such knowledge of an organisation can also transform Higher Education practices, transforming current faculty structures and disciplinary boundaries to adapt to future change. As Deem, Hillyard and Reed (2007) suggest, this required internal flexibility and is complex and difficult to achieve. This chapter therefore will not address change, but look to exposing some of the structures and boundaries of KT support as experienced in one Russell Group setting. As in the last chapter much of the evidence draws directly from the responses of 24 academic questioned about KT in the context of their own institution.

Whilst transformation and change has become a twenty-first century mantra in Higher Education, in particular regarding studies around managerialism, there has also been a shift toward a client or market driven economy (Braun 1999), bringing with it disputes around where the balance of power should sit to orchestrate those relationships. Institutional management has become preoccupied by external forces

to drive corporate strategies at multiple levels, centralised management structures and links between administrative departments for quality assurance, finance and HR performance for example. Over time the focus has equally shifted away from individual research activities toward scrutiny of the systems and processes that increasingly govern it.

Universities are different to many organisations in that they rarely function in the same way as a typical business, and certainly do not adopt the same hierarchies of management or governance that often binds them. Rather than focus on the university as a large business entity I intend to look only at the organisational structure and certain behaviour in relation to the support of KT. While this may limit the study to isolated fragments of institutional life, it allows us to hone into key barriers still perceived to dislocate KT from arts and humanities scholarship.

The main arguments will suggest:

> 1. That the history of institutional management undergoes change to adapt to external forces but in doing so institutions rarely question how that change may affect scholarly practices.
> 2. That as institutions become driven more by the demands of a market economy many disciplines find it difficult to negotiate expectations to build, or be part of, large scale teams where funds are richest, and to describe and evidence the value of their KT interactions in terms recognisable to those seeking impacts from investment in research.
> 3. That where KT support services in institutions are decentralised, embedded and supported within faculty structures and steered by academic expertise, they are generally more successful in raising the adoption of KT practices.
> 4. That there are possible mechanisms that can further our understanding and adoption of KT and that the footprint put down by this thesis offers up a new framework to better observe and understand how KT emerges and is supported.

For the purpose of this chapter there are two particular support structures used as examples of centralised and de-centralised provision. The first is the generic research support office, present in most institutions, to manage and co-ordinate pre and post-award activity across the institution. These vary in size and structure, but many in the Russell Group either act as a key point of liaison for support staff

that sit outside of the centre or combine a number of staff together to work jointly with financial, contractual and commercial counterparts centrally. At the University of Nottingham the Research and Innovation Services (RIS) acts as the central office, to which faculty and School based support staff report into.

The second model is where a satellite of the Centre might be created to support a particularly defined set of disciplines and where combined expertise of funding, research and KT development are led by an academic Director. The University of Nottingham's Humanities and Social Science Centre (hereafter HSSRC) is one example used in this chapter that sits geographically in the heart of the disciplines it is focused upon supporting. There are also national variations on the HSSRC that provide different types of support for differing requirements, such as the Centre for Research in the Arts, Social Sciences and Humanities at Cambridge University (CRASSH), which provide scholarly colloquia and collaborative support activities, and the University of Sheffield's Humanities Research Institute (HRI) which predominantly provides support for interdisciplinary research involving digital technologies. These satellite centres are generally autonomous from any central support office, but at Nottingham the HSSRC and its staff are described in this thesis as a model which reports into the Centre, but is allowed a level of autonomy to work at close proximity to Schools within the arts and social sciences. In the following text we will explore the current institution, its relationship with academics and how it responds to the need for impacts and evidence in a climate of increased accountability for public funds. These elements will be framed by internal support structures and external influences, and aims to identify key roles and mechanisms critical to the current uptake of KT in the arts and humanities.

6.2 PATTERNS OF CHANGE OVER TIME

It is clear that there is much written on the shift in Higher Education towards corporatisation and business-facing interactions. It is also clear that with this shift competitive practices force institutions to continually find new ways to raise business orientated funding and manage new ways to interact beyond the institution. As this business-driven culture grows, institutions have also to diversify income streams and management practices, in order to continue to compete with their counterparts. Government cutbacks have precipitated the rise of the entrepreneurial university and over time the challenges they face have impacted differently upon different aspects of scholarship. Here we suggest

that with these corporate and business orientated changes, a number of challenges in how research and knowledge transfer is managed have surfaced.

6.2.1 The Symbiotic relationship

As academia has continually adapted to external forces of funding and the demand for further reaching impacts, the environmental changes in how research is administered within the institution is more often perceived to be as a result of external rather than internal factors. This externalist view is often in direct conflict with the slow pace of change internally, and the chance to develop a symbiotic relationship that moves in unison with external demands is rarely achieved. As institutions learn to adapt to external forces, so the academic is required to adapt to changes internally. In order to better understand how conflict has occurred in relation to change in scholarly and administrative practices, there is a need to understand what occurs at a more intimate level between those supporting KT and those expected to undertake it.

> "When I first started I had a passive respect for those involved in KT (of which my main interest was IPR issues), as my experience has grown I can now describe my view towards the KT system as a proactive scepticism. What I mean by this is I'm still pleasantly surprised when the KT infrastructure brings something of value to the table, but I'm in the driving seat (not the KT support). Maybe it was always supposed to be like this, but I was more reverential at the start, and it just didn't work."
>
> (Academic Respondent No. 3, Learning Sciences, November 2008)

When academics were asked if institutions had changed (with respect to their KT interests and support) from when they first entered into a research career, the majority of respondents said it had significantly changed with respect to the institutional drive for business interaction. The reception of one's subject beyond the traditional confines of academia can be a challenge, particularly where little dialogue and interaction has occurred with the academic community to ensure their buy-in. The changing economic climate and increasing interest in applied research has meant that universities have come under pressure to demonstrate their relevance and impacts upon society beyond the tradition of their civic duties. This has resonated through to those at the grass roots of research where there has been a move

from prioritising of individual research to collaborative work, perceived to offer greater impact. Institutional management has moved to respond to external demands with little direct interaction with academic schools or faculties. This unpreparedness on the part of the academic has often resulted in an inability to mobilise capability to respond swiftly to external demands and calls. This suggests that management of external interests has to work to find a unified approach with academics, without who they would have little capability to be responsive or proactive to externalities.

As well as an ability to mobilise expertise particular disciplines have faired well with the shift to larger-scale collaborative working methods. Those that have had a rich background of partnership working across multiple disciplines, as well as sectors, have often by-past management to respond directly to external calls and tenders. Interdisciplinary institutes and subjects that are consistently diversifying such as English, have found the KT environment a stimulating one. In these instances the arts and humanities subjects are finding new modes of working with those more often conversant with the processes of collaboration and co-production in the social and health sciences in particular. We have begun to see symbiosis between more unusual players in academia, resulting in innovative approaches to often-complex issues. Those such as philosophy and fiscal banking, literature and mental health, genetics and linguistics, archaeology and geospatial science, and classics and 3D modelling are prime examples of a new wave of KT collaborations increasingly brought about without management intervention. In the following chapter some of these symbiotic relationships are the focus of the AHRC Research Exchange Network (See Chapter 7), where those previously considered to be on the peripheries of the KT agenda, are in fact beginning to take a lead.

Many of the respondents thought that KT was particularly difficult to pursue where the goal posts were constantly changing. Increasingly academics are being asked to undertake KT by their institution, whilst the investment in academic research still places emphasis upon non-KT activities and particular thematic fields of interest. Some had also started KT orientated projects only to find that funding had changed direction or that their field of disciplinary interest was no longer in the funding spotlight. Where arts and humanities academics were trying to build early stage dialogue with collaborators and potential businesses, it was disheartening to find that after a quality period of relationship building, money was no longer appropriated in the area they had begun to develop. Many felt that KT often

moved at too swift a pace in comparison to academia, which was evident at the National KTP conference in November 2007, where the speed by which partnerships could be brought together was lauded as a great feature of the KTP schemes. Many of those who had attended, particularly academics and brokers, thought that such speed did not necessarily constitute a quality experience, and certainly would not be recommended for those new to the collaborative experience. With the increase preoccupation with impacts and evaluation many of those respondents questioned thought that the speed by which collaborations were coming together would have a negative effect where the relationship failed to sustain a project through to completion. It was agreed that time and energy had to be put in at an early stage to create a secure foundation based on realistic considerations of likely risk factors, and how these would be overcome.

6.2.2 Scholarly impact v KT impact

One of the most common factors in denoting change in relation to KT practices was the increased pressure upon institutions and academics to measure their outputs in new and diverse ways. Increased academic interest in the impact of scholarly subjects on the non-academic world brings with it some historical as well as contemporary issues, similarly denoted earlier in Chapter 1. In subjects still perceived to be on the peripheries of the KT agenda and falling within a Russell Group context, KT was perceived to align itself to less prestigious scholarship found in less prestigious institutions perhaps also less concerned by RAE rewards. Amongst those questioned impacts were a distinct concern for academics in subjects traditionally predicated on lone scholarship such as theology and to a lesser extent, text-based research in English Studies and particular periods of study in History. Although many had become familiar with and protective of the recognised RAE requirements, there was a distinct concern regarding the potential confluence in the upturn in KT impacts with the downturn in traditional peer review through the Research Excellence Framework (REF). It is fair to say that in the current pre-REF climate, those within Russell Group institutions are generally concerned with retaining prestige over income, although some felt an inevitability that, where KT was concerned, they were "clearly going to have to get to grips with it." (Academic Respondent No.8, Theology, October 2008, Nottingham)

6.2.3 Changing context and reference

Academics engaged with the reception of their disciplines within popular culture, business and policy contexts were also those that had begun to embrace transformations in the potential contextual 'reach' of their discipline. This was particularly evident in Classics and Philosophy where the intersection with new technologies and new business sectors had uncovered diverse opportunities to move beyond the normal parameters of tradition. It was evident that change had occurred over time, but not necessarily in the way they collaborated but in the language and labels they had adopted to contextualise their work to in particular settings. Most respondents who had embarked on new forms of KT collaborations cited a range of insights or 'realisations' about the way they perceived and described themselves and their work. Many academics are particularly concerned about being put under pressure to become more relevant to society and the workplace more generally, although one antithesis was also evident where some were demanding academics resist this. Some felt that there has been little opportunity to discuss and debate the changing KT climate, and as a result little intellectual stimulus to qualify why change is indeed required.

> "KT is writ large and we are all expected to embrace this with very little debate. Fait accompli!"
>
> (Academic Respondent No.15, Education, November 2008, Nottingham)

As change and transition is becoming a reality for academics and their institutions, there is a growing interest in the nature by which KT may be central. In the next chapter the AHRC Research Exchange Network goes some way to stressing the need to develop an ongoing repository of KT knowledge and experience in which academics can debate KT issues, inform themselves of the intellectual challenges to methodological practices, and explore how peers are tackling those challenges in particular ways. In starting what may be considered a broad KT literature review, the KT environment becomes richer, and within another five years may form the basis of a comprehensive archive of current thinking and practice on arts and humanities KT, as yet still unavailable and somewhat illusive.

There has been an upsurge in the last five years of online networks and portals focusing upon KT, mostly stemming from interest in Technology Transfer and commercialisation throughout the 1990s.

The Association of University Research and Industry Links (hereafter AURIL), UNICO set up for university-commercialisation and PRAXIS that is concerned with training, are all actively seeking to support the interactions between academic researchers and business. It is well known that these organisations have also struggled to diversify and adapt to the changing research landscape, but particularly in including the arts and humanities. Although there are pockets of tailored workshops and a dedicated AURIL Cultural and Creative Industries Group, the last five years has seen little change in provision to increase arts and humanities membership and to diversify their core activities to fully embrace harder-to-reach disciplines. This is contextualised in the following chapter where we suggest why an alternative support mechanism such as the AHRC REN might be needed to reach into the centre of academic practices and focus on the intimacy of interaction rather than broader concern and outcomes.

In response to the need to co-ordinate efforts around KT RCUK set up a new Knowledge Transfer Portal in late 2008 offering "a single point of access for those in, e.g., academia, business, public, private and/or third sectors, who want to find out about Research Council knowledge transfer schemes and activities, and how to get involved" (RCUK website 2009). As yet these merely replicate the individual Research Council provision rather than addressing the localised needs of academics within our institutions.

6.2.4 Changing demands require change in support

Many respondents thought that their institution was less able than five years ago to support "radically cross-disciplinary research, due mainly to administrative and budget constraints." Although the KT environment was going for growth in support posts, the funds to support KT in most disciplines was not expanding. The Science Budget Research Council allocations for 2008 denoted less than 5% of funds dedicated to KT for both the AHRC and ESRC research, whilst HEFCE spend on KT through the Higher Education Innovation Fund (HEIF4) rose to a final year allocation of £150 million for 2010 - 2011 (HEFCE/HEIF4 report 2008). As described in Chapter 1, HEFCE's Higher Education Innovation Fund (HEIF) invests in business development roles, training and advocacy for business and KT activities rather than research per se. This is where there seems to be an imbalance in the rate of change between the growth in research support and research-enabling funds for KT, which was also reflected

in many of the responses relating to provision for support in the questionnaire. Many felt that this imbalance was particularly notable within institutions where dedicated Research Support offices were growing to accommodate business and KT investments, whilst the knowledge bases themselves were still struggling to embed even early stage advocacy for KT at grass roots level. KT orientated research still seemed relatively poorly funded against investment in academic support mechanisms and human resource.

Although administrative support for KT had increased significantly one outcome of the questionnaire was that the majority of academics thought that their *institution* was still ill equipped to support KT. This was in stark contrast to more than half the respondents thinking that there were particular individual roles that were well equipped at translating and brokering KT activity at School level, many of which were not being funded through HEIF or similar investments, but through School or Faculty secured monies. These responses clearly denoted those who had worked closely with recognised individuals providing high-level support in the arts and humanities, and those who had not yet accessed that type of dedicated role at faculty or institutional level. In the following chapter these roles are explored in more detail and form the basis of the argument that it is at this level of interaction that the adoption of KT practice will be most evident, and where little or no investment is being procured.

6.2.5 Changing funding traditions

As research funding has started to diversify there has also been a notable shift by academics in the choice of funders for particular types of activity. The starkest shift has been the recent decline in AHRC funds combined with increased applications and therefore decreased success rates. At an AHRC KT meeting in October 2008, the notion that academics may be looking to shift their attention away from the constraints that KT is perceived to be putting on some AHRC schemes was discussed. This has also had implications within Nottingham where academics were beginning to revert to schemes seemingly less unencumbered by collaborative KT, such as the British Academy and Leverhume. In a climate of change and transition, competition intensifies and funders are perhaps not fully aware of themselves as players or competitors in an academic 'market economy'. The competitive advantage of any funder is significantly reliant upon those who seek to access their funds and the key question for

the AHRC and others, is how they continue to be perceived as the best provider of KT funds in an increasingly competitive market?

For the arts and humanities subjects the KT funding climate has seen a diverse range of investors looking to capture their expertise and interests, particularly where these align to government agendas and policy. The creative industries are just one sector that have played a huge part in the development of schemes to address their sustainability, diversification and innovation, and the National Endowment for Science, Technology and Arts (NESTA) has been proactive in attracting academics to tackle some of these issues. NESTA has become part of the research landscape and a leading competitor in the same market as the Research Councils. Academics are often reticent to move away from their traditional funding, particularly where they come with significantly different narratives and requirements driven by non-academic interests and rewards. A number of respondents commented that some of these types of non-academic KT funds seemed to pull researchers out from their academic communities, and on occasion even their institutional positions. This was particularly prevalent with NESTA schemes and thought to be an important concern, particularly where this activity could endanger the academic career progression of those at an early stage in their posts. Many felt that more consideration needed to be taken by institutions to provide adequate support to academics where new schemes like these were beginning to emerge.

A number of academics from other countries in the EU, and those who worked regularly with international counterparts, recognised significant differences in the perception and adoption of KT practices. Whilst we in the UK have been preoccupied with changing practices and shifts in research traditions, our European counterparts have very much embedded forms of KT within their current activities. One German respondent had "grown up in a German system of getting your research out there" and where it was a normative practice to explore how one's discipline might communicate or share its message more broadly with the non-academic communities. Those respondents who have experienced working collaboratively with international counterparts thought that they were much better equipped and supported to undertake KT orientated research than those in the UK. One particular respondent thought that their international counterparts were engendered with a culturally rich attitude toward the co-production of knowledge throughout their childhood and working life, in stark contrast

to the historical focus in the UK on a protective, individualised and solitary culture still highly protected and valued above large-scale collaborative endeavours.

> "Before the existence of the AHRC and its predecessor, the AHRB, collaborative projects in the humanities were simply not an option. The lone scholar model was the default position because people did not have an alternative. With this, we are offering academics the possibility of new modes of working," he says, "and this can only be a good thing."
> (Tony McEnery on *Images of America* project, October 2007)

We can see from this section that the institution acts as an organisation in which individual academics operate. We know that this organism undergoes change in order to meet the expectations of a changing economy, and we can see that tensions arise in how that change filters little down to the academic community. In the next section we explore these changes in relation to how the institution moderates and manages KT practices internally, perhaps with little understanding of how academic behaviour plays a significant part.

6.3 INTERNAL AND EXTERNAL PERCEPTIONS: FROM SCHOLARSHIP TO THE MARKET PLACE

6.3.1 Are academic identities moderated by the institutional culture in which they operate?

The shift to mass higher education has brought with it issues connected with the growing complexity of the university and its ability to be both business-like and scholarly. As KT is now central to both factors, it is important to ascertain how dependent it might be upon the institution to secure its adoption and subsequent success. For the arts and humanities, business and scholarship shares a history in which the institution seems to plays a significant part in its profile. It is fair to say that Knowledge Transfer takes place within a particular context, but how far does that context get bound up and influenced by the characteristics, mannerisms and demands of the institution today?

When questioned the majority of respondents said that their academic identities were more often than not moderated by the institutional culture, afforded through recognition of the Russell Group identity,

and that "Nottingham's standing is a key factor in how seriously you are taken" (Academic respondent No.11. Interdisciplinary Institute. November 2008). This did not come without its tensions, and some were uncomfortable with the notion that the institution could affect how they might be received or perceived as individuals externally, or that one might be defined wrongly by where one resides.

6.3.2 Different strengths denote different levels of moderation

There were a small number of responses from particular disciplines in the arts that suggested that an institution could only be influential by virtue of recognised expertise. Creative industry orientated disciplines such as Design and Creative Arts were cited as examples of areas where the Russell Group identity would not necessarily influence how an academic was perceived externally.

> "Not in the case of design KT. It comes down to you, and what you have to offer. Much of the Russell group doesn't do design very well. If design excellence is needed it's likely to be from a post '92, but again some do this better than others. It often comes down to individuals for me both in terms of research collaboration and KT: who I get on with, who gets on with me."
> (Respondent No.4, November 2009)

All the respondents were unanimous about their expertise and willingness to share knowledge as being qualities that would supersede any institutional bias or recognition. This was particularly true where one was working with organisations or businesses with little knowledge of university practices, as they were "not always well-informed about academic research activity and applicability to their own working practices" (Academic Respondent No.16, Built Environment, December 2008). The relationships built by the individuals concerned, as opposed to the institutional influence, seemed to form the backbone to the majority of projects cited and was more often than not the basis for extending the relationship beyond the lifespan of the project. Therefore it is fair to say that, although the majority of respondents said that academic identities *are* moderated by the institutional culture, this perhaps referred more to life *within* the institution than outside of it. As partnerships become more established, so does the awareness of the non-academic party to any institutional brand or associations that might add value, therefore also suggesting that any knowledge of the institution is, in the early stages, secondary to relationships forged with individual academics.

"Academics are moulded and forged by the institutions they work within – target driven, promotion driven etc. I don't personally believe that being a Russell group university makes a significant impact here as many former polytechnics etc have much better relationships with industry (they needed them to survive – and delivered more industry relevant material in their teaching) than 'elite' universities. However, many industrial companies like the 'rubber stamping' of a university like Nottingham – 'a badge of honour.'"

(Respondent No. 14, November 2008)

As described later in the chapter, the internal moderation of academic activities by centralised research support rarely has the capacity to exercise that moderation where academics work beyond the institution.

Although all institutions differ with respect to research support, it is on the experiences and observations of a devolved research support structure in one Russell Group institution that the narrative with focus. This should however be extended at a later date to address inconsistency and comparisons with pre-1992 institutions, as well as defining any distinctiveness between disciplinary persuasions, without which the following finds remain isolated and indistinct.

In highlighting moderation of academic practices we also need to consider the market in which the institution may also be being moderated. The next section outlines some of the scholarly tensions in viewing the institution in the marketplace, and the perception that the values of the institution are becoming blurred.

6.4 FROM SCHOLARSHIP TO THE MARKETPLACE

"There is a conflict yes, but with a model of research that hasn't changed all that much – this is not to say the shift toward business in the university is perfectly right either – but that such a shift offers the chance to look again at what we do, how we do it and what could be done differently in the future."

(Respondent No. 20, Art History, December 2008, Nottingham)

6.4.1 Shared values?

The dynamics of university-industry interactions has undergone change in respect of where the balance of power is shifting to take advantage of academic knowledge. Here institutions are wishing to shift their interactions from the individual to the institutionally supported, protected and steered. Much of this makes sense where intellectual property, liability and large investment are central, but within this the individual may be playing a less significant part in the setting up and delivery of their research. Whilst this may free up the individual academic to undertake the core research, it can also detach them from the process and experience of building close relationships based upon trust rather than contracts, negotiation of values as well as costs and sometimes the final control or use of the outcomes. It is these elements of business-orientated research that troubles the arts and humanities academic most.

As shown in the previously chapter, the majority of those questioned in the KT questionnaire considered themselves to work as individuals rather than a chain of interconnected individuals within their institution (Gibbons 1994). They also believed that any knowledge or adoption of KT practices has been developed through their own efforts rather than through institutional support. In disciplines more conversant with business interactions the support role of the institution is generally become more accepted and therefore the notion of working as part of an institutional team, more established. We can therefore assume then that, although institution management wishes to protect and support the academic in their business interactions, their actions may either lack mutual understanding due to KT being fairly new, or the process by which they engage may be insufficiently engaging the arts and humanities in particular.

Institutions and individuals do share some common thoughts on business interactions, but not necessarily to mutual effect. Whether used as a tool for innovation, policy or competitive IPR, research capability has been developed within universities, government and industry alike and is increasingly crossing the boundaries of each. Although very much the view of the American institution, Bok's publication Universities in the Marketplace (2003) offers an overview of common dynamics that play out between the institution, the academics and the market in which their knowledge has been commoditised. He suggests that in a university becoming increasingly business savvy comes a kind of

'Faustian bargain' where values, risks and 'souls' are compromised in order to reap the rewards of the marketplace. Although dramatic, Bok weaves a picture of the business-facing institution proliferating secrecy, conflicts of interest, research that is priced out of the market, limitations and poor investment in the right support infrastructure. All of these play not only upon the institution's commercial prospects, but also the reticence of academics to get involved. Bok issues a warning to institutions that "the lure of making money will gradually erode the institution's standards" (Bok 2003), and states that the pressure on senior academic staff to protect academic values comes under pressure where the institution demands greater income targets traditional research might struggle to attain.

"There is no natural constituency or organized interest group to resist the imposition of bottom-line, short-term considerations."
(Rosenzweig 1998)

Many of those questioned thought that the institution's continual drive to secure funding placed pressures on both teaching and research, and that to deliver upon both agendas was difficult. This was particularly acute in disciplines that had not had a clear route to apply their knowledge, which directly correlated to pressures on student numbers as well as research. Some felt that traditional scholarly pursuits were being undermined in favour of income targets.

6.4.2 Conflict beyond KT

The majority of respondents thought that the business-facing interests of the university are in direct conflict with traditional research. Some felt that the institutional preoccupation in becoming business-like was detracting academics from their core mission to teach, nurture and share knowledge. In becoming profit-orientated, tensions arose not only in how KT was supported but also in teaching and publishing. A number of respondents described increased realisation of methodological tensions in Intellectual Property Rights (IPR) and poor quality teaching being used to maintain and increase student numbers over building quality provision. There was a strong correlation across the questionnaire between those disciplines which were relatively new to KT, or finding KT partnerships difficult to build or negotiate, and those disciplines experiencing tensions in publishing KT outcomes.

"If we all end up doing more KT and, as a result, publish less books or teach less students the University and government won't be happy because we won't be doing what we are primarily paid to do."

(Respondent No. 7, History, November 2008, Nottingham)

KT is not an isolated issue for academics and it was clear in the questionnaires and interviews that many felt that pressure on scholarship was being compounded further by a variety of externalities, bringing change to the form and function of academia. Competition for funding is increasing, along with demands for research to become more applicable and offering clear impacts. Those that struggle to find application of their knowledge beyond academia are increasingly those that also struggle to compete for major funds, where the demands reach beyond dissemination into 'real world practices'. This was particularly evident at an AHRC meeting (March 2008) where their current Chief Executive made clear signals regarding the benefits of being KT aware in one's applications. He suggested that where two applications were equally highly rated and only one could be funded, it must be the one that added extra value through 'reaching further' than the disciplinary field to share that knowledge with the non-academic community that would sway the decision. The ensuing discussion amongst those attending centred around the fact that the traditional benchmarks for excellence were shifting and becoming highly reliant on what was thought to be as yet anecdotal evidence on the value and rigour behind KT. Those conversant with KT practices were welcoming the inclusion of KT in the peer review mix in order to address its inclusion, whilst those new to KT were reticent and keen for traditional peer review to prevail. As REF was being devised and discussed at the time, the tension between KT and tradition would be undergoing increased scrutiny between those on opposing sides.

6.4.3 Disciplines moving from dissemination to KT practices

"Academia in the twenty-first century is not a privileged island, one has to be embedded in the real world. I do not see there being too many conflicts here."

(Respondent No. 15, Education, November 2008, Nottingham)

In the KT questionnaire a distinct outcome of the responses to the question regarding conflicts between KT and traditional research, was that respondents from Archaeology in particular were unanimous

about the fact that there should be no conflict between these activities. This group thought that KT related business income often enabled new opportunities to emerge where research could be extended and further debated, particularly through academic publishing of findings. Although this group has a long-standing relationship with both commercial archaeology and material science, they were also the group that registered fewer tensions between KT and publishing, and worked predominantly as co-producers or collaborators in research teams. Much of the KT debate has been about the difficulty to build teams and to publish KT outcomes in academic peer reviewed journals, both of which Archaeology has seemed to overcome. So what can the experience of the discipline of archaeology tell us about finding confluence between KT as business facing as well as academic facing?

It is important to recognise that the archaeology model did not happen overnight and nor was it an outcome of the KT agenda, but it does seem to be successful to the point that they know how academic and non-academic interactions can be mutually beneficial. There is a close association with public engagement in historical and archaeological research that has perhaps laid the ground for collaborative endeavours and blurred the line between research and public appetite for knowledge. This blurring has also been the subject of discussion to denote dissemination as distinct from KT, and has increasingly seen academics from a range of disciplines struggling to define the difference. In subjects such as History and Archaeology, it has often been their strength to disseminate that has earmarked them as suitable candidates for KT. The difficulty here has often been the shift required from engaging others in the outcomes (dissemination) to engaging others in the process of research (KT) to affect the applicability of outcomes. Archaeology in particular has a well noted tradition of dissemination with and amongst a keen public, but is now in need of extending that relationship to see what new insights might be gained from innovative integration of public and commercial interests into the research *value chain*.

What the discipline perhaps lacks in the current KT environment is the ability to begin to diversify that success and seize the opportunity to expand on their dissemination qualities. Here we have a discipline at a different stage to others in the KT landscape, with a well-established network of commercial collaborators and a keen audience, but few tools to support the transition from transference of knowledge to the exchange of knowledge. One particular example of a successful shift toward KT can

be seen in the first Knowledge Transfer Partnership (KTP) between the University of Nottingham Archaeology Department and AOC Archaeology Group (KTP 2005-2008). Nottingham, like many institutions, had a dedicated KTP officer responsible for supporting the development of proposals for KTP funding. Although the institution was well versed in KTP project it had not yet embarked on one in the arts and humanities disciplines. At a time when the AHRC had not yet come on board to sponsor the KTP programme, the likelihood of the arts and humanities engaging fully in the initiative was poor, given their record of supporting high-end technology transfer collaborations.

This particular project was not brought together in the same way as other KTP projects at the time, but devised and co-supported by the Research Development Officers in the Humanities and Social Sciences Research Centre (HSSRC). Their role was critical in brokering the relationship between the KTP Officer and the academic, and ensuring the partnership with AOC Archaeology was driven as much by the academic interests as well as the commercial opportunity. This type of brokerage was just as important internally in the institution as it was externally with the partners. Bridging the expectations of institutional administrative support roles and academics new to the KT territory meant that a level of negotiation and exchange needed to occur to gain any consensus in the mutual value of the project to all parties. Nottingham and AOC had had a long-standing relationship to fulfil commercial contracts for freshwater survey and student field placements, so they were well equipped to build up a level of mutual interest that would sustain new types of engagements. This project was to make a significant leap into the exploitation of archaeological knowledge and all parties needed a high-level of institutional support beyond the usual KTP provision. The role of the HSSRC was critical to the success of the innovative partnership as its brokers were experienced in moving between administrative and academic interests and ensuring the project can meet multiple expectations. In bringing such an unusual partnership together it was hoped to bridge research and technological advancements in order "to develop the application of laser scanning and other high-precision survey techniques in archaeology" (AOC Archaeology 2009). The project was completed in 2008 and both parties have gone on to explore several other KT partnerships and extend the research of both research and commercial capability.

6.4.4 A quick turn-around

The institutional management is overtly attuned to ensuring the university is able to maintain and grow its services. In doing so it tends to focus on the areas where income is a surety and the possibility of success can secure yet bigger and better funding streams. Many of those questioned thought that this ideology also crept into research and KT activities, in that the institutional management invests more support and energy where there is greatest chance of a return. Those disciplines outside of medicine, engineering and business are notably harder to gain larger returns from and in turn harder to support with fewer resources. In the same token interaction between the disciplines was highly competitive and protective of potential expertise and funds, indirectly proliferated by the institution through where they decide to invest their management time and resources.

Where there was increased interest in the building of large-scale interdisciplinary teams, institutional silos which often divided the disciplines often made it doubly hard to mobilise joint activity between them. As calls for funding come with increasingly shorter deadlines, interdisciplinarity within the institution is often compounded by these divisions as well as few incentives to explore 'boundary hopping' into new disciplinary areas. This process is continually reiterated without due consideration of the need to build relationships internally and externally over time, to learn about what works and does not, and to support the coming together of socialised teams where speed might demand a quick response for a business or target sector.

Institutions may be expecting a far too quick a 'turn-around' from research to income targets from those new to KT interactions, when little has been invested in the long-term development of scholarship in a business context. It is not perhaps that the institutional business-like ambitions are in conflict with scholarship, but that it is in fact investing little time and resources at the appropriate stage in the arts and humanities adoption of KT. Expecting academics to deliver ambitious income targets without having first forged quality relationships, often means that academics can find themselves working toward the partner ambitions without having had a change to negotiate or co-design their expectations. As good business is often forged through personal relationships and confidences, perhaps a better strategy might be to invest time and resources at appropriate stages in a disciplines awareness and adoption of KT practices. For the arts and humanities it is at the early stage of KT activities where

there is little or no investment for partnership building, freeing academics to be unencumbered by the demand to produce immediate results, or where the relationship is mature but support to exploit new practices may be required. This is a model that will not only have impact on sustaining external collaborations in the long-term, but also help to transform internal management and administrative practices at a crucial point in the KT life cycle. The CreEM case study (see Chapter 3) was a model for the longer-term rewards of relationship building and one that resonated over time to achieve maturity and the ease to develop and sustain new lines of interest.

In 2008 the AHRC set up a new target working group to review the KT strategy. Central to that review was the notion of early stage funds and how this feature might be developed into new schemes utilised at different stages of their relationships, either to get to know others, or configure new ways of working with existing partners. Although the completion of thesis comes before any new AHRC schemes have been developed, these types of activities have been tested to great effect by the ESRC and EPSRC and have informed the dialogue to set equivalents up for the arts and humanities community.

6.4.5 Summary of findings

In this section we have suggested that the institution is subject to the demands of a market economy in which academics are seen to play a less significant role than that of administrative management. We have seen that the values of the institution in that economy are often quite different to the values and motivations of its inhabitants. These factors often create a conflict of interest between the institution and the individual academic, particularly where scholarship is seen to be pushed to gather pace with the external environment, often compromising rigor and collegial standing.

We have seen that conflict often arises between KT and traditional arts and humanities research activities, particularly where the institutional management or administrative procedures have not put in place early stage investment to underpin early stage partnerships. We have seen that this often engenders a sense of distrust and disenfranchisement between those supporting KT and those academics expected to undertake it without much prior knowledge and experience. We know that academics understand the university must function as a business, but they also feel that little attention is paid to their disciplines because of the small scale of business it might procure in comparison to

others. In exploring KT within one discipline conversant with good dissemination practices, we can see that there is great potential to extend that knowledge to KT. However, we are aware that some disciplines struggle to make the transition from disseminating research to exchanging research ideas. We know that this may be as much about investment as it is about appropriate support measures to guide academics in extending the reach and impact of their work.

In outlining the way research moves at a much slower pace to the external environment, we can see that more support is required to diversify the arts and humanities relationship with, and understanding of, KT with external partners. Through comparisons to the earlier CreEM case study (see Chapter 3) we can see that particular institutional brokerage roles can support both academic and administrative roles to work jointly together to ensure KT expectations are appropriate to the discipline, realistic and deliverable. In the following section we explore how far the institution can realistically manage KT, identifying particular roles and structures that contribute knowledge and experience to this debate.

6.5 INSTITUTIONAL MANAGERIALISM: INHIBITING OR ENHANCING KT?

6.5.1 Introduction

Within all institutions there are systems, structures and roles set up to support the management and delivery of key services. The following section sets the scene on units or offices set up both centrally and at Faculty or School level. It outlines particular roles that help academics to develop research funds and research intelligence, and then goes on to focus upon the support offered at a devolved level by individual roles.

> "In contemporary times, the new organisational imperative is that knowledge must be 'managed'."
>
> (Deem, Hillyard & Reed 2007)

Much has been written on the contemporary management of our academic institutions (Fuller 2002; Deem, Hillyard & Reed 2007) and government agendas and papers such as *Realising our Potential* (1993) and more recently publications such as *Universities in the Marketplace* (Bok 2003) serve to articulate the need to better define the relationship between knowledge and the economy at large. We

are aware of the demands for assessment, impacts and audits of the institutional effectiveness and the 'push / pull' relationship with business and industry. Deem, Hillyard and Reed in their *Knowledge, Higher Education, and New managerialism (2007)* have compiled a rich and comprehensive body of material that for the first time exposes the current complexity of managerial and administrative tensions in academia. The following does not aim to tread the same academic texts but focus on a relatively new role of the academic broker as there is a significant gap in our understanding of the part that role may play in the adoption of KT practices.

The integration of any services within an organisation cannot work effectively without a good level of knowledge integration and an astute understanding of the varied modes of behaviour (Lawrence & Lorsch 1967). As described earlier, the institution in which this study took place has little knowledge of the particular modes of behaviour of their arts and humanities academics, and in describing some of the affects of the institutional ties to the wider marketplace, an understanding of the behaviour of one's knowledge base is critical to the adoption and sustainability of new practices. In the following pages we describe the attempts to manage academic activity towards that goal and the key features that may inhibit or enhance that process.

The previous section touched upon the institution in the marketplace and the tensions between tradition and KT, but there is also a preoccupation in administrative management with focus upon what is perceived to be the 'leading' KT orientated disciplines and their ability to generate hard income in comparison to the arts and humanities. The capacity to generate income, in terms of disciplinary specificity, is entwined deeply within the dynamic relationship between the knowledge economy and the wider economy. Where notable return on investment is apparent to the institution, so the business focus shifts to underpin and bolster income streams in particular disciplinary areas, such as medicine and engineering. In this equation the benefits to the knowledge economy are perhaps seen as secondary and of less intrinsic value. The arts and humanities are often utilised and supported more within the institution to bolster the knowledge economy, predicated by culture and heritage, than they are to bolster the wider economy, predicated by the innovation agenda and the Gross Domestic Product. These distinct interests are tied up with the civic traditions of the academic institution, and building their business acumen to survive in an economic climate on which they are highly reliant.

In terms of support for the adoption of KT practices, the interface between knowledge and the economy is often poorly articulated by the institution to their academic workforce, instead placing emphasis upon the development of a collective mission or institutional strategy.

> "The ways in which knowledge work is managed in universities have begun to change… and there are now active strategies rather than collegial approaches in place to do this."
>
> (Deem, Hillyard & Reed 2007)

As we have seen in the earlier part of this chapter, where administrative management and academics have a low level of interaction, such dynamics are rarely discussed, and rarely a shared topic for reform or change in practices. Drucker (1954) suggests that such activities of complex institutions are far too large to be managed, and that is why they often revert to managing the outputs of the institution rather than tackle managing activity. Therefore research income as an output is often perceived to be far easier to manage than academic activity. This thesis suggests that this is one of the major failings in securing buy-in to KT in the arts and humanities in particular, as the discipline requires a level of interaction in KT *activities*, without which there are few outputs for management to actually manage.

6.5.2 Roles

As artificial divides form within an institution, so do specific roles divide and become positioned on one side of a divide or the other, notably administrative or academic. This is not a new phenomenon, and observations of US institutions by Rouke & Brooks (1964) and more recently by Barnett (2005) in the UK, suggest that these divides are common to growth patterns in most organisations. In the case of Nottingham, and perhaps across the UK in general, roles dedicated to supporting KT have become inextricably caught up in these existing paradigms, to such a point that they may have become a factor in KT not being fully adopted across the administrative-academic divide. Here we briefly discuss the effects of centralism and decentralism in particular on KT support roles, and the thoughts of academics on which is most effective for them in pursuing KT interactions.

In the KT questionnaire the majority of academics when questioned stated that they did not think that their institution was fully equipped to support KT in the arts and humanities in particular, and that the majority of activity was directed predominantly at the sciences and medical subjects. Although those that denoted strong cross-over with these disciplines agreed, this group also felt that more could be done to stimulate interdisciplinary working, as the arts and humanities were often asked to take part in KT activity only where it was a prerequisite of the funder to do so.

> "In my experience, successful brokering of KT has come from able and sympathetic
>
> individuals with influence within an institution, rather than particular institutional roles."
>
> (Respondent No.3, Learning Sciences, November 2008, Nottingham)

Some were also concerned that central support offices were often imposing demands that academics were not always keen, or equipped, to pursue. They stated that as long as the 'push' for KT was from the direction of senior administration, academics would be more reticent to engage than if it were academically driven. There is a long-standing and widely documented body of research about why the administrative-academic divide is perpetuated in this way (Fuller 2002; Deem, Hillyard & Reed 2007). Despite the introduction of KT, and academic related contracts changing in many institutions, this divide is strongly maintained. However with the influx of new types of early career research roles and shifts in the Deans' roles to include more outward facing responsibility, there are perhaps more roles that are beginning to straddle the academic-administrative divide. The research development role, the broker in particular is elaborated upon below, as one decentralised support function that is effective at a grass roots rather than centralised level.

6.5.3 Brokers

Jonathan Lomas (2007) talks about knowledge brokerage as a 'social solution' in healthcare research whereby linkages and exchanges are enabled to better inform others to find solutions to complex issues or ideas. As we have suggested earlier in the CreEM case study (see Chapter 3), Lomas and others in the health sector have for some time been aware of the nature of brokerage as an intrinsic tool in nurturing knowledge exchange in an academic setting. Although brokerage as a term is emerging in the health, technology and increasingly in the cultural sector, little is written beyond the science model

where brokerage through technology transfer and commercialistion is dominant (Fisher and Atkinson-Gros-Jean 2007), particularly in the arts and humanities.

> "Adopting a knowledge brokering role has both philosophical and practical dimensions. The philosophy leads us to build into all our activities and programmes the expectation of ongoing linkage and exchange between the researchers and their decision-making counterparts."
>
> (Lomas 2007)

In the KT questionnaire a number of respondents cited being too busy to explore collaborative relationships as a key problem and welcomed support roles who were able to instigate or facilitate the gathering of a range of potential partners, or scope out the environment for academics to consider how they might convene with others. These types of support roles however, were thought to be most effective where one had a certain level of knowledge and expertise in the desired disciplinary field. It was felt that most central support staff, and KT or business support in particular, rarely had the disciplinary specificity required to impact effectively on the subject many were focused on pragmatic aspects of the bidding process, such as costings and the submission process, as described in more detail within the chapter in which brokerage is elaborated upon (see Chapter 7). This was evident across most subject areas in the arts and humanities, whereas in other disciplines such as chemistry and medicine, these support roles were highly experienced and often research trained in the desired discipline.

In a following chapter where brokerage is elaborated upon, there is a growing concern around disciplinary specificity for what is a large and expansive set of disciplines. A good broker comes in many guises and although they provide an eclectic support function, many have particular skills that allow them to transcend disciplinary boundaries in order to forge linkages. There are two particular types of transcendence, brokering within the discipline and discipline hopping beyond their field of primary focus. Broker roles are perhaps bound in some way by the notion that they should be moulded in the image of disciplinary lineage, in the same way as a PhD student might be shaped by strict disciplinary theories and methodologies, or required to describe themselves and their work by the common and normative parameters set down in each field of recognised research. In terms of the arts, shifts to undertake KT means that rifts have often occurred where subjects have struggled to break free

from their disciplinary boundaries. The nature of support is very much reliant upon either maintaining the specificity of a discipline or exposing it to other influences. It stands between two landscapes, at a sensitive point where there is pressure acceptable within traditional boundaries, and at the same time a need to push beyond these boundaries. At Nottingham, although there is a distinct emergence of research and business development roles, these are being paralleled by new academic roles aware of the benefits of disciplinary specificity to better appropriate and negotiate academic boundaries.

6.5.4 The academic broker

There was a distinct lack of connection in some responses in the KT questionnaire between the knowledge required to support development of KT activities and the knowledge to know how that KT might manifest as valid scholarly outcomes. Those respondents denoted as either early career or experienced in undertaking KT projects, clearly understood this dynamic, whereas those having not yet explored KT tended to proliferate the division.

> "I get the impression that good ideas put to the right people will garner results, *but* this means, as ever, the few doing the majority of the work whilst the many moan and gripe until they see the benefit – then it was a great idea."
>
> (Respondent No. 20, Art History, December 2008, Nottingham)

Although academics have always acted as natural brokers between peers, and increasingly between disciplinary and external partner interests, there has been a slow emergence of the more targeted academic broker in the context of KT. This has begun to be an established facet of most arts and humanities Schools, particularly where postgraduate research students have taken on supportive roles central to their development alongside more established colleagues. These roles have emerged quietly, and in direct response to the needs of those around them. Although not necessarily recognised directly as a new type of KT broker, they have begun to integrate more easily with research and business development roles, gaining insights into the management of research and the bidding for research funds. With this knowledge and an in-depth knowledge of a disciplinary culture, these highly equipped roles are starting to consider research support as a possible career path. Where a research career might

not be appropriate for all post doctorates, the research support role, or brokerage role, is becoming a viable and attractive proposition in which they can maintain close associations with their studies.

> "Those [partnerships] I have made have either been imposed (by management or geographical proximity) or have been accidental (i.e. meeting someone interesting and a research idea growing out of the meeting). More recently the targeted/personal support that has been made available has significantly accelerated the process of meeting researchers from complementary backgrounds and with time will hopefully bear fruit."
> (Respondent No.17, Built Environment, December 2008, Nottingham)

The role of the Dean is also changing in the UK, mirroring to some degree the US in that they are shifting towards becoming outward facing and more connected to the wider world (Tucker & Bryan 1991). Their roles are complex and multi-faceted and often acutely aware of the economic drives of the institution, in parallel to safeguarding the traditions of scholarship. They are at once embedded in tradition, whilst at the same time required to manage and maintain the bottom line. In many ways these roles are perhaps best placed to understand the tensions between KT and traditional research, but as yet not fully realised or articulated as such by the institution. Many of those questioned thought that the endorsement of KT by the Dean and Head of School would be one of the most significant impacts to the promotion and adoption of KT practices at grass-roots level. The challenge, as denoted in Chapter 5, is perhaps more to do with the short period in which these roles are in situ for, than their inability to support KT practices amongst their staff and colleagues. At Nottingham these roles have until recently sat within a two year cycle in which it is perhaps difficult to drive new initiatives or lead change in intrinsic principles. In changing the cycle to four years many of the respondents thought that they would see significant changes in how KT was being managed and supported over time. Alongside a greater awareness, increased funding opportunities and continuity in senior support, KT perhaps has a more significant period in which to become naturalised and more generally acceptable.

> "We are just beginning to get going. There is a general lack of awareness and experience of models and possible benefits."
> (Respondent no.7, History, November 2008, Nottingham)

Although the need for models of practice and awareness building is required for KT interactions to grow, it seems that this is not the most pressing mechanism amongst those questioned. Given that the managerial and academic divide is well documented, there are other elements of the institutional organism that colour our understanding of KT, in particular the scale at which such support is best provided to academics. Although we have concentrated on one large institution there are two particular support structures at play that may have had an impact upon the adoption of KT by the arts and humanities. In the next section we describe a centralised and a decentralised support structure in which KT support is a primary provision.

6.5.5 Central support offices

"Central research support roles are vital in establishing and maintaining these relationships. These need to be specific to groups of related research areas and with experience of engagement with outside organisations."

(Respondent No.16, Built Environment, December 2008, Nottingham)

Although a small number of respondents thought that KT was supported by central services in the institution, continual reference was made to the need for some form of specialist knowledge and parameters by which they might focus their activities on niche disciplinary areas. As such specialist knowledge is essentially rooted within the discipline at School level, it is unlikely that centralised administrative support could provide academics with subject specific knowledge in the way that they perceive to be the most beneficial. In retaining support staff at a distance from both the discipline and the physicality of activities, it is logical that the academic may also remain at a distance from administrative management, even if somewhat self imposed. Whether administrative or academic, it is difficult to embed oneself within a community of practice, learning about their motivations and how they operate and essentially becoming acceptable and part of its social patterns and behaviours. Whilst remaining at a distance and embedded within administration, KT support roles become ineffective on both academic and administrative levels. They can neither help support the effective and sustainable generation of KT outputs and income targets, nor the uptake of KT within the parameters of what

defines academic scholarship (RAE/REF). On this basis we will focus on the decentralised options for KT support, rather than expand further upon an area already well researched.

> "I don't think resources can be totalised in the first place. We should always perceive our position as less than ideal in this regard and pursue further interanimations."
>
> (Respondent No. 10, English Studies/Nursing, December 2008, Nottingham)

6.5.6 Summary of key points

So far we have ascertained that post-bureaucratic managerialism within the institution plays a significant part on how an individual academic perceives support for KT to be delivered. We know that some of that understanding is rooted in how integration occurs or not between the Centre and the peripheral faculties, particularly in gaining early stage income, senior academic advocacy and support staff who recognise the value structures within particular disciplines. We also know a little about the nature of the tensions between centralised administration and de-centralised academia. The following section will focus on the two dynamic centres of support in particular; one at the Centre and one within a particular de-centralised unit called the Humanities and Social Sciences Research Centre (HSSRC). The aim of this is to suggest that KT for the arts and humanities is best served by support that sits between the demands of the institution and the demands of the disciplines, and where a certain level of autonomy is perceived to shift the values around KT more toward academic than managerial.

6.6 THE DEVOLVED RESEARCH CENTRE: SUPPORT AT THE BEST LEVEL?

There has been a significant increase in university provision for dedicated business support units. Enterprise, commercial, technology transfer or innovation units are now synonymous with how a university feeds and enters 'the market' and have grown both in the UK and US as well as in South East Asia. This has been in direct correlation with the move toward 'mode 2': knowledge generation and the systems and processes that are required to manage and administer more complex forms of research support (Gibbons et al 1994). As teaching has increasingly become a form of hard currency for universities, so has research become a commodity for industry and Government. In creating a climate for income generation, the university has had to become more business-like and in turn aware of impacts and the efficiencies in systems to nurture and promote that culture.

At the centre of current management theory is the area of 'new public management' where 'centralism' (Hoggett 1991) attempts to describe the increasing role of centralised services, such as those found in higher education institutions. As a managerialist ideology, power at the centre of any management structure is often only effective where there is a perception of autonomy at the peripheries (Becher & Trowler 2001). At this point in the managerial narrative one might ask where the arts and humanities might sit in such a structure. If they sit at the peripheries, in reality guided by those in the centre who have little understanding of their behaviour and persuasions, one could understand why KT might not reach out particularly far, given the challenges described in previous chapters. However if there is a move to position Deans and other senior staff between the Centre and the peripheries, perhaps the behaviour and persuasions might be better filtered or shared in order to introduce new ways of working? There are two particular problems in this perspective and that is the slow pace at which senior roles are positioning themselves to take on this role, and the changing position of brokers between the Centre and peripheries as described in the next chapter. At Nottingham a new management structure and ethos had begun to emerge to realise such a support environment between the Centre and the peripheries, where senior academics and brokers were positioning themselves at what may be considered a more effective and intimate level.

6.6.1 A new level of KT support: The Humanities & Social Sciences Research Centre (HSSRC)

The HSSRC was originally set up in 1995 as the Humanities Research Centre (HRC) under the directorial control of Professor Christine Fell, with the primary goal of supporting interdisciplinary research in the Humanities. Over the next four years it was to see its role grow to include secretarial support for Centres and Institutes where administrative and conference requirements were becoming increasingly important, and the provision for visiting fellows to interact between disciplinary areas was becoming more common practice. By 2001 the scope of work of the HRC had widened to such an extent that it expanded its support through the instatement of two new roles to help facilitate income generation through heightened interest in interdisciplinary practices and advancements in technology. Peter Elford was seconded from the central Research Support Office, now named Research and Innovation Services (RIS), to support funding applications and John Walsh was taken on to develop and refine the role technology was increasingly playing as a methodology for research rather than just a

tool. The following year (2001) a new role to support the arts and humanities in developing external linkages beyond the institutions was added to the team. This role was the first to be funded under HEFCEs Higher Education Research Out to Business and the Community (HEROBC) in the UK and the first to be devolved immediate to faculty level rather than based within an enterprise or innovation unit.

The HRC had by this time a much broader remit to develop and pump-prime interdisciplinary and collaborative research; to promote and explore the use of technologies in interdisciplinary research; to attract large-scale funding and to host visiting fellows and international events. Although it had grown to take on new services and provision it was conscious that that interdisciplinarity was perhaps limited where our core disciplines were concerned and a decision was made in late 2005 to open discussion around expanding the constituent Schools to include those whom they had been building interdisciplinary links with, namely the social sciences. During the next three years of a new directorship, Professor Ron Carter had expanded the provision to include the arts, humanities, Law, social sciences and education, and shifted support from four to nine core staff. The HRC had now become the Humanities and Social Sciences Research Centre (HSSRC) and one of over ten similar Centres in the UK set up to respond to the new demands for the arts and humanities to be rooted in large-scale interdisciplinary practices.

As the HSSRC grew, so did the demands of the institutional administration to drive support practices in order to drive outputs upward. Although the HSSRC sustained a level of autonomy from central administration in RIS, those roles taken on to support KT, such as the research and business development or broker roles, were increasingly beholden to part funding procured from that same unit. These roles continued to be developed under the direction of the academic Director, but had to become astute at moving between the administrative and academic environments in order to be credible within each. In the next chapter the dynamics of these roles are expanded further to reveal the effectiveness and variation in their relationship to central support offices and decentralised units.

As the demand for growing income targets and benchmarks for performance, so did the demand for continual evidence for investment in the HSSRC as a Faculty unit. By 2008 the Centre had developed a

number of systems to support this accountability, allowing it to compare the services being provided by a centralised service (RIS) and develop a case for further expansion between the two core Faculties. It was the fine-tuning of academic interests and administrative burdens that allowed the Centre successfully to bridge this divide, and a blend of activities which made intrinsic links between prestige (academic) and income (administrative). The staff worked on the development and submission of between fifteen and twenty million pounds worth of bids each year, with an average success rate well above that of counterparts in centralised support services, and also came top of the ESRC CASE league table nationally in 2006 and 2007, with eight successful applications for CASE doctoral studentships, securing grants in excess of half a million pounds. These are only two examples of the success of one devolved unit, but suggest that closer scrutiny of similar support units may uncover corroborative and quantifiable data about their reception and resultant impacts. Although this thesis has not set out to undertake such a comparative study, it has hopefully laid out some initial narratives that suggest further scrutiny is both warranted and welcomed by the academic community seeking to gain support closer to their Faculty structures.

6.6.2 Full devolution: A push too far?

In experiencing a devolved service like the HSSRC academics often think that further devolvement could provide an even better and more tailored service. In reality a fully devolved support structure is most likely to revert back to traditional behaviours resulting in often-isolated conditions set up to serve those within close proximity.

> "Once services are broken down to the School level there is the temptation for the resource to be used to fulfil the agenda of individual researchers or groups at the expense of the wider body of researchers both within and out with the unit."
>
> (Respondent No. 17, Built Environment, December 2008, Nottingham)

When respondents in the KT questionnaire were asked if even smaller units, perhaps dedicated to a single school, might operate more effectively than the HSSRC a distinct division emerged between younger and more established academics. Those at a relatively early stage in their academic careers wanted support roles at a more intimate level within their communities of practice, perhaps with more

specific experience of their subject than was currently the case. Academics at a more senior level, particularly those having served as Head of School or Dean, thought that further decentralisation would not be effective. Scale in relation to sustainability and competitiveness was cited as a key consideration, as if there were to be a proliferation of smaller support units they might end up vying for limited funds and resources.

This group were perhaps more experienced in the challenges between administrative and academic management and the limits to ensure cost effectiveness prevails. Both groups wished to have a closer disciplinary support structure, but were in agreement that KT involving interdisciplinarity required effective support to secure movement beyond disciplinary boundaries.

> "I think School-based units might follow established pathways for partnerships and be heavily influenced by local academic culture rather than bring fresh ideas."
> (Respondent No. 10, English Studies, December 2008, Nottingham)

It was also thought that working at a 'supra-school' level would help to drive KT ambitions at a more senior decision making level within the institution, ensuring buy in and an effective push to move a culture forward. As senior roles begin to come to the fore in support of KT, one finds an emergence of strategic thinking and planning at the peripheries of the management structures. KT starts to appear in School plans, performance review processes and even begins to shape new groupings tasked to drive KT at ground level. Although the most reticent generally to KT, such senior role models are perhaps beginning to stimulate a culture shift that could not have possibly come from the Centre given their remoteness to the disciplines, and perhaps the rate at which adoption was occurring might begin to speed up through those well-respected and recognised as decision makers at a level high enough to affect change.

Where research support remains centralised in an institution at a similar scale to Nottingham, large-scale and swift attempts at convening knowledge and bringing together expertise, rarely delivered successful outcomes. A number of large-scale, national schemes such as Rural Economy and Land Use (RELU) call and Beacons for Public Engagement have been noted for bringing together large-scale

collaborative teams, but at Nottingham there were particular challenges to overcome the early identification of academic leadership or disciplinary Chairs; to bring together effective cooperation of experienced brokers with cross-disciplinary expertise; and to develop a long-term commitment to nurture and develop relationships that can raise capacity for future partnership where mobilisation requires a swift response. These elements were evident in the CreEM case study in Chapter 3, which demonstrated the effect of building relations between a chain of individuals over a set time in order to prepare a culture ready for larger scale ventures. Preparedness and familiarity between interdisciplinary players are often cited as key components to delivering large-scale research groupings that go on to deliver successful outcomes.

As central support offices also come under scrutiny about their own effectiveness and their ability to impact on ever-larger funding targets, the looseness of that peripheral autonomy on smaller support units also comes under closer scrutiny and strain. This effect is highly influential where a Centre retains a majority share in core funding of administrative or research staff salaries and resources. The level of control afforded by the Centre seems to play a significant role in the smaller support unit's ability to become adopted at School or Faculty level. Where they are seen to be a mirror image of the centre, adoption of their services is often poorer than when they are supported financially by academic investment. Although smaller research support units, such as the HSSRC, is highly effective and welcomed by academics, the more the investment shifts toward administrative control, the less likely they are to be seen to be autonomous from them. At Nottingham the HSSRC was at a turning point in the balance of power between Centre and Faculty, and this was evident throughout the questionnaire where respondents were asked to comment on effective support for research in their institution. Many felt that the service was losing its ability to be effective at grass roots level, the more it adopted the administrative culture and associated behaviour of Central administration and management.

In order to address these tensions between the HSSRC and RIS both the Dean of law and social sciences and the dean for the arts and humanities began discussions to underpin their role through closer liaison with the HSSRC Management Team. It was becoming evident that the HSSRC would be more effective through their dual efforts and better enabled to 'play' the administrative management and academic environment, with endorsement from senior staff with a knowledge of this duality.

It is clear that academics think that decentralised roles and units are more effective, but we can see that a number of additional factors beyond where they sit within the institution influences how they are received by those they are wishing to support. If we return to knowledge built up in the social sciences, we can perhaps relate particular factors back to Organisational Learning and behaviour as touched upon earlier (see Chapter 5). If Yanow (2004) is correct, organisational learning gained in the context of the arts and humanities is key to affecting the adoption of new or challenging practices. If as she suggests "learning is situated in the historical, social, and cultural contexts in which it takes place" then the closer one is to the arts and humanities the more effective adoption of KT as a learning experience might become. Jeff Gold's work around Yanow's institutional hierarchies (Gold 2008) exposes the intricacies of the management-academic 'culture clash' and how counter intuitive responses are required on both sides in order for each culture to recognise the role they play within the complex organisation. If we therefore embed support in the arts and humanities context without also understanding the context in which the Centre has to operate, KT may continue to be at odds with administration. Gaining sufficient understanding of the 'opposition' can often act as an effective tool to come closer to them and overcome conflicts, although some cited gaining funding or increasing student numbers as serving the same purpose.

> "I have found colleagues and management sympathetic to cross-boundary research. The difficulties have come from gaining research funding for projects that span human and technological sciences, and also working within procrustean administration systems. I have used a variety of strategies to overcome these problems, but the main one is to gain external income – so long as you are generating income for the university, your eccentricities are tolerated, even welcomed."
>
> (Respondent No.3, Learning Sciences, November 2008, Nottingham)

When questioned whether they had been enabled generally by their institution to build a sufficient repertoire of knowledge to undertake KT based research, the majority of respondents in the KT questionnaire said that they had not. All agreed that they had made individual efforts to develop their knowledge of KT and had not had insufficient input, training or support of an academic nature. It was

rare to have dialogue within one's own disciplinary area about KT, and certainly even less at an institutional-wide level. Many found that what learning did go on was either in complete isolation or occurred occasionally between small groups of individuals, particularly those at an early stage in their careers. Many felt that much was invested in administrative and management training rather than tailored approaches that addressed KT from an academic standpoint. The Humanities and Social Sciences Research Centre (HSSRC) was cited as one such support mechanism, but only by those who were currently engaged in working with the Centre. Those having not yet tapped into the services or support of the Centre did not refer to the HSSRC as a place to gain academically driven KT support, other than in the bidding process. Some described support of a different nature as being the most crucial to academics, and that was the time and/or space to develop proposals or partnerships. Whilst they did not feel their institution supported their knowledge and understanding of KT, many felt that sabbatical support had been the most beneficial in taking dedicated time to explore and make contact with others.

"I had a sabbatical to explore the IPR issues for my research work. I applied for this myself, and it came out of my own interests and efforts in this area, but the institution supported me with the sabbatical. This gave me time to get into the issues in a way I wouldn't have being able to without the sabbatical support."

(Respondent No.4, Art & Design, November 2008, Nottingham)

We have looked briefly at how KT is supported within one institution at a devolved level and how that level of interaction with academics brings certain benefits to the adoption of KT practices. We have suggested that a centralist mentality within a large institution encourages disconnectedness between the demands of the institution and those of the academic community. In exploring these two features we conclude that there is a fine balance to be drawn between central and decentralised structures of support, where is it often paramount to ensure a high level of understanding and counterintuitive practices between differing cultures, as well as their systems and processes. In the following section we address some of the key barriers exposed throughout the KT questionnaire that most centralised and decentralised units experience when supporting KT in the arts and humanities. These were generally

found to be symptomatic of the institutional rather than individual practices, and therefore serve to highlight the need for the institution to consider how their systems and processes may be improved.

6.7 A LEARNING ORGANISATION: ADAPTING AND OVERCOMING BARRIERS

Throughout the development of the thesis a number of barriers and factors that hinder KT have been explored, both through the CreEM case study, but also through a continual gathering of factors and evidence exposed by an ongoing literature review and the historical context in which the work has been rooted. Some of those used were drawn from existing research such as Younglove-Webb et al (1999) and Amabile et al (2000), both of which explored elements that hinder collaboration, particularly within the institutional context. In using such tools to corroborate findings, the KT and broker questionnaires enabled a systematic checking of the emergent barriers against existing bodies of research, soliciting an individual perspective on their relevance and current appropriation. Those gaining significant attention are listed below, and are briefly animated through the direct responses of academics involved in the questionnaires.

6.7.1 Summary of key observations

1. **Younger staff are often under pressure to publish, rather than pursue KT in order to gain tenure**

Nearly all respondents cited staff being under pressure to publish rather than pursue KT as the most significant barrier out of all of those listed. Although they were questioned in relation to younger staff, they felt that this affected all academics and was particularly heightened where an institution was in the run up to the Research Assessment exercise. At the time of the questionnaire little had been articulated about the Research Excellence Framework, although one respondent did suggest that this barrier might become less acute where broader impacts were under consideration.

> "There is a very much a scientific view of KT which is used with external criteria for funding which have to be adhered to and which read like something from a business and science manual."
>
> (Respondent No. 15, Education, October 2008, Nottingham)

2. KT is not recognised in the performance or professional development process

At Nottingham the issues around the introduction of KT into the performance or professional development process has somewhat been diluted in recent years, with the introduction of KT into the School planning process and personal academic review. Although this was not perceived to be a key barrier it was cited on occasion throughout the questionnaire responses as something at an early stage in its adoption by the institution, and highly reliant upon senior roles understanding and accepting the place of KT in the overall activities which constitute rounded scholarship. Some were not convinced that KT activities were adding any value to the rewards systems in the current climate and certainly dubious that the institution was recognising KT where promotion was concerned.

3. There are few personal incentives to pursue KT

Respondents demonstrated a general consensus about personal incentives and felt that it was still too early in the KT lifecycle to have gained sufficient attention to stimulate incentivisation practices or practices in the institution or beyond. In exploring the behaviour associated with collaborative working (see Chapter 5) we have exposed two particular types of motivations which may also be associated with personal incentives to become involved in KT activities; those who value a level of altruism and enjoyment from the act of collaboration and those that set out to exploit the collaborative process as a tool to further their career or capability. These are both reliant upon a high level of personal buy-in to KT practices, but as yet are still immature where wider recognition is sought from the institution or peers. Some thought that if recognition was to be gained, rewards similar to personal research accounts, internal research leave schemes or research development investment might also follow over time.

4. Central administration of KT is overly bureaucratic

The majority of those questioned agreed with this statement and many felt that this was perhaps compounded by the high level of roles often engaged in outward facing activities in the institution. Those who had previously explored KT projects through the KTP scheme felt that the control of the

project in the early stages was sometimes overly complex, due to the sheer amount of people involved in the process and that direct contact between them and their collaborators was far more meaningful and productive. Some respondent, however, felt that they often had little time to fully engage in all the facets of the KT process and welcomed a level of pragmatic support, particularly where the matching of criteria, finance, contracts and applications could be supported more targetedly.

5. KT staff do not understand academic research traditions

Those respondents who had worked closely with the HSSRC staff thought that they understood the nature of academic traditions and demonstrated a high degree of empathy in ensuring that was maintained when considering KT. Many felt that this increased as one gained a better level of understanding of the discipline, as well as developing a longer-term working relationship. Most stated that they had not received the same level of understanding with centralised support staff in RIS. Those respondents who had not worked with the HSSRC staff felt that support staff were generally not well equipped to understand the nature of those traditions, due to their background in administration rather than academia. Of those questioned, some were keen to see roles developed at School or Faculty level in order that research traditions can be upheld at a more localised level.

6. There is little investment in early stage KT ideas

Just under half those questioned thought that there were not enough early stage funds made available to the arts and humanities research community in particular. Some were aware of developmental monies for interdisciplinary activities, made available through other Research Councils awards, but these were not always suitable for an academic lead in their disciplines to apply. Many thought that more could be done to incentivise the KT environment to grow more swiftly, if consideration of the disciplines early involvement in KT was to be fully understood. Those respondents who had applied for competitive funding to develop early stage ideas, felt that many of these funds were in reality created for those who had already reached a certain point of maturity in their projects and partnerships. These particular academics felt that their ideas were often perceived to be too under developed, and certainly at too early a stage even for what was considered 'seed corn' funding.

7. **The institution seeks prestige over KT income**

Many of the respondents understood the interplay between an institution's drive to garner both prestige and income. On the one side the rewards for research excellence and the other the recognition of ever-greater funds as a sign of economic success. Key systems and processes were touched upon by a few respondents who were aware of tensions that played out in the institution where the two seemed incompatible. With the introduction of Full Economic Costing (FEC) some felt that research was always judged as a 'loss-leader' by administrative management, that it was consistently unable to be seen to generate profit in such a system. This affected moral where academic researchers felt that they were unequal to those who were generating profits through high-end applied commercialisation, which research in the humanities could not compete with. Whilst academics sought prestige to secure QR funding it was felt that much greater value was beginning to be placed upon outward facing research, particularly as the sector sought diversification in income due to the ensuing economic climate.

8. **Competition for KT funds is highly biased toward science**

The second most cited barrier was around the bias in their institution to valuing science based KT efforts over arts and humanities. This was also closely linked to the emphasis on science and business language, where the terms of common reference and understanding were significantly more mature. Many felt that building a sufficient repertoire of language and practice would come in the future, but it made it doubly difficult to respond to something like the Technology Strategy Board calls, where descriptives and contexts were dominated by different cultural markers and much harder to find inroads into. It was also felt that more early stage funds were being made available to those science based subjects that could potentially offer greater returns, than to those in the humanities which may bring prestige but little in the way of income. Some respondents were also aware of the increased interest by the sciences in the humanities subjects, particularly as the Research Councils were beginning to demand that the sciences engage the humanities in collaborative ways or working to incorporate interdisciplinary viewpoints and methodologies. Some felt that whilst the humanities were often brought into science projects in a tokenistic way, this increased interest in collaborative research may

help break some of the barriers down between these disciplines, and funds would be released as a result.

9. **The Research Support Office is often challenging to work with**

Most respondents did not cite difficulties in working with their Research Support Office and this is perhaps due in part to the fact that the HSSRC acted as a 'buffer' between the academic community and the administrative centres. Only when interviewees were prompted to consider the HSSRC in their dealings with the Centre, did they consider they were in any way linked to the Centre. Many felt that staff in the HSSRC to have a good understanding of the research traditions associated with the arts and humanities, but related this back to the question about disciplinary specificity and there still being a need for support staff to have a background that allowed them intimate knowledge that could affect KT activity more targetedly. They did not consider Centre based staff in the same way they considered HSSRC staff, as they considered their direct interactions with the Centre minimal or non-existent.

10. **Teaching and administration duties leave little time for diverse research involving KT activities**

Some of the respondent at an earlier stage in their careers were concerned that they their workload model was such that there was little time to devote to KT amongst administrative, teaching and traditional research activities. In buildings one's career as an academic the emphasis for most was on gaining a rounded academic portfolio that would lead to progression and hopefully promotion. Whilst it was evident that KT was recognised at Nottingham, many said that it was at the discretion of senior line management as to whether KT was considered an acceptable and progressive indicator. Those that were considered to be in their mid to late careers did not share the same tensions as they had already well-established roles which often allowed more freedom to manipulate and change their workload patterns. Few suggested that they were beginning to make links between KT and their teaching practices, other than where the discipline had already been traditionally engaged with external organisations and agencies, such as Archaeology and to some degree History. This element of teaching was rarely considered as a new practice and so rarely denoted as KT.

11. KT language is too business-orientated

More than half of the respondents felt KT language to be too far removed from their disciplinary lexicon, and associated with unfamiliar business concepts. Many of those new to KT activities often felt that the language was so closely associated with business and commercial activities that they found it difficult to translate to their own work that often deterred them from exploring KT opportunities. Equally it was suggested that those often supporting KT also had a limited ability to translate or make sense of the language in the context of their discipline, and therefore made the process much more complex and time consuming than was perhaps necessary. A number of respondents however, suggested that the more time they spent with KT collaborators, the easier the language was to understand on both sides. There was a sense that as KT partnerships developed over time the language barrier would be overcome and both sides would be more equipped to repeat the experience with fewer problems and the practices would adopt normative and shared languages as well as behaviours.

12. The institution places more emphasis upon KT work with certain industry sectors

Many felt that little was known about the potential breadth of KT interests outside those closely associated with commercialisation so the usual sectors were predominant features of the institutional activity around KT. It was felt that the Creative Industries were too often offered up to the arts and humanities as the sectors where most opportunities for KT sat. In fact many of those responding did not associate themselves with the CI sector at all and some wished to explore more challenging areas were they could be seen to innovate traditional perceptions or practices such as taking classical art into 3D mapping techniques, or questioning the role of faith in Diaspora etc.

13. There are few opportunities for KT training

The majority of those questioned agreed that they had little or no opportunity to undertake any training of any kind in support of KT practices. However, most felt that formal training was not the best way to learn about the nature and practice of KT in an academic setting, and that this was something that could

not be taught but learnt through 'doing'. Some agreed that there were basic elements of KT that would be useful to learn more about, such as the practicalities of sharing supervision for KT orientated studentships or supporting translation of their research for non-academic consumption or dissemination. Other than these, most felt that peer-to-peer observation and interaction and just getting on and 'trying it out' benefited most academics, and that this type of learning experience embedded more effectively into one's day to day practices than formal training ever could.

14. There is little symposia and debate around current KT practices

Whilst some respondents thought that there were plenty of chances to discuss and debate most research focused KT, some struggled to find a forum in which to present and publish KT within their disciplinary areas. For example, those exploring acoustic heritage as a concept were often defined by technological rather than cultural forums, and those seeking to publish work on the creative industries from a business history perspective could rarely publish in their own respected five star journals. Although some disciplines had begun to find routes to symposia for their individual KT projects, it was noted that there were few opportunities to discuss KT as a concept and as an intellectual as well as practical challenge. When the AHRC Research Exchange Network Conference took place in January 2007 (see chapter 7) a number of delegates had said that the event had been the first time they had discussed KT from an intellectual stance and that the community was 'hungry' to know more about , as well as contribute, to this perspective. In the following chapter we outline the role of the Research Exchange Network as a vehicle for the development of both colloquia and new repositories housing the growth of the KT landscape.

15. There are few senior staff that are 'KT savvy'

Whilst many agreed that there were few roles at a senior level engaged in KT, the majority felt that this was changing as KT became a more normative part of their School's activities. Some thought that senior roles were in fact empathetic with colleagues in most cases, and offered support and experience in overcoming challenges.

16. There is poor peer support for KT practices

Few respondents cited poor peer support as a problem in relation to KT and many thought that most of their colleagues would understand and often share similar problems where KT might present particular problems for their discipline. Those academics that did cite poor peer support in relation to their own KT activities were either new to academia, and had not perhaps established a network of colleagues in their specific field of interest, or were overtly challenging the normal field of disciplinary interest to introduce new ideas or concepts. Some felt that it could be a risk to pursue new areas if it meant that one might find oneself isolated from one's peers, and although few experienced this directly, there were three respondents who had found this to be the case.

The question of barriers to KT links directly to the question about one's institution enabling individuals to gain sufficient opportunities to build a repertoire of KT knowledge and experience. As the majority considered their own efforts more significant, barriers relating to the institution were in hindsight perhaps best directed to individual practices. Any further study would greatly benefit from the inclusion of barriers at a more micro level, allowing individual practices to relate directly to organisational behaviour, rather than the reverse. In undertaking a study 'bottom-up' the perception of barriers might uncover less about the institution and more about how the individual moves within it.

6.8 CONCLUSION

In gaining first hand accounts of some of the key challenges and barriers to KT faced by arts and humanities academics today, we can clearly see that there is often a certain amount of discord evident in the relationship between individuals and their organisation. Often the values and perceptions of KT as a central facet of modern scholarship, are poorly articulated between these two elements, and therefore often remain at odds with each other. In exploring the scale of support for KT within the institution, we can observe some success in the creation of administrative roles or teams that are decentralised and sat within a faculty or school structure. In creating a more intimate environment in which the disciplinary make-up is better understood, academics and administrative support posts are seemingly overcoming some of the barriers proliferated by centralised administration.

Although many of the respondents thought that KT was as an early stage of development we can witness the significant changes in scholarly activity in the last five years in particular, and see how

those entering a career in academia are adapting to that environment. Many respondents thought that early career academics were likely to be the catalyst to overcoming many of the barriers explored, particularly where they were moving beyond both disciplinary and administrative boundaries to bring new elements into their work. However this was often hampered by the lack of training provision offered at a more intrinsic level, where mentoring or peer support might encourage new staff to embark upon KT opportunities.

As the more traditional subjects struggle to maintain their autonomy, we can see that much of the reticence around KT practices stems from having little opportunity to debate and challenge the place of KT within their respective disciplines. It is evident that many academics are keen to know more about KT in the context of their subject, but as yet feel there are few places where pertinent bodies of literature are available, or colloquia mature enough to be meaningful and useable in an everyday context.

In the final chapter of this thesis a number of the key strands coalesce to suggest that KT may be realised through the development of frameworks highly responsive to both the individual and the organisation in which the reside. We will introduce the Research Exchange Network as a possible tool to support the co-production of research, and suggest that there are particular roles emerging in UK Higher Education institutions equipped to curate and broker the KT landscape in a more targeted way than is currently the case. The thesis concludes by offering up a KT framework for consideration where the behaviour and motivations of those partners engaged in KT may be better understood, and the potential impact of their endeavours observed and collected during the life-span of their project.

CHAPTER 7

KT ENABLERS: SUPPORTING AND IDENTIFYING IMPACTS

7.1. INTRODUCTION

Throughout this thesis we have laid out a footprint for both the historical and current context in which KT is emerging within the arts and humanities disciplines. The following chapter aims to focus on three particular elements of KT practice that continually surfaced throughout the thesis;

1. The need for intelligent resources to build KT capacity, methodologies and practices
2. The need for brokers to be acknowledged as key agents to support KT value chains
3. A need to develop and test a variety of observational frameworks to understand KT as a particular conceptual framework for new research practices.

Firstly we will explore the set up of a new resource supported by the Arts and Humanities Research Council (AHRC) called the Research Exchange Network (REN), which came to completion in 2008, after a period of three years development. We will focus on why the resource was necessary in a climate where KT was first being introduced into AHRC schemes, and then outline its activities and reception by the academic community. We will then introduce the AHRC Broker Network alongside REN, which was a growing body of professionals in prime positions across the UK to support arts and humanities academics to build a repertoire of KT practices. Finally we will explore how these two entities might work closer together within an observational framework as described in the CreEM case study in chapter 3, where impacts might be made more visible and KT in the modern university clarified and strengthened.

REN and the Broker Network shared an ambition to uncover the rich nature of arts and humanities interactions with non-academic communities through the closer observation, and ultimate exposure, of individual academic practices. As the thesis ran in parallel to the development of REN and the Broker Network, each was instrumental in providing rich sources of primary data, as well as a live interactive environment in which some of our assumptions about KT could be tested and further explored. To this

end the thesis offers up a snapshot of the 'living KT history' we described in earlier chapters, and suggests investors look to gathering live sources of evidence during, rather than after completion of their funded projects. In an environment where KT was newly emerging and under scrutiny as to its impact from investment, this chapter will conclude by offering up a proposal of how these elements might unite central to the value chain analogy and be tested and further refined within the academic environment.

7.2 CREATING AN ENABLING ENVIRONMENT: REN FOUNDATIONS

7.2.1 REN: A proposal to support the building of value chains

The AHRC's 2003 paper titled *Arts and Humanities: Understanding the Research Landscape* offered a valuable appraisal of a fast changing environment in which academics were challenged to respond to new and increased demands. Curiosity driven research, engagement beyond the arts and humanities, the continued role of the individual scholar amidst collaborative research, and knowledge transfer are amongst some of the major challenges facing our academic community. It is with these in mind that the initial concept of a tool or resource to aid academics through this new evolving landscape came about.

REN was devised in 2006 and set out to support the AHRC Knowledge Transfer strategy, with a particular focus on how these schemes may better engage with researchers and their potential collaborators. The Network acknowledged that, for the AHRC, the KT agenda had the potential to become much richer than it currently was recognised to be. This chapter aims to set the scene on REN's development and delivery, and discuss its relevance in the early introduction of KT in AHRC schemes

> "The AHRC is committed to exploiting fully the new knowledge and learning that is generated in the UK's Higher Education Institutions," explains Yvonne Hawkins, AHRC Director of Knowledge and Evaluation. "Lisa's appointment, and the development of the Research Exchange Network will form a key part of this strategy, which we hope will complement existing support structures in this area."
> (AHRC Press Release, 16th January 2006)

It was the AHRC's intention that REN would become part of their wider plans for supporting their new KT agenda, one that needed recognisable tools, examples and methods, in order that the new introduction of KT could be better navigated and adopted by the arts and humanities community. It was evident that a number of bodies were also seeking ways in which to capture activities in order to promote and increase its adoption. The AHRC was conscious of work developing with the ESRC to stimulate and support the introduction of KT practices, but did not want to put in place something that their community had not been party to shaping and influencing from the outset. REN offered up an opportunity for their community to both engage and inform the AHRC's approach at a time when there were few avenues academics could interact with the agenda.

A proposal was put to the AHRC suggesting that there were common patterns of experience in the way the arts and humanities were responding to KT and that some elements may enhance the AHRC's ability to better interact with their community of scholars. The focus of the proposal was around developing better modes of communication, and uncovering insights into individual actors and their models of KT practice. It was agreed that any project at this potential scale would need to clearly define its audience and purpose in order to define what would be unique about the Network. Those involved were aware that the development of REN would be very much organic and may evolve in other directions as it emerged, and therefore an early articulation of the mission was devised.

> "A targeted and specific Network for the arts and humanities research community embarking upon, or interested in the exchange of research knowledge. It will offer insights into the changing landscape in which Knowledge Transfer (KT) is becoming central, and open up ways in which researchers can be supported to engage, communicate and collaborate within and outside of academia. It will also act as an exemplary repository of peers, institutional support mechanisms, methods and case studies, as well as a sign-post to a wealth of tools and information."

(REN Mission 2006. Accessible at www.ren.ac.uk)

It was evident that this early enthusiasm would need testing with those REN intended to focus upon, and therefore a period of discussion and consultation was proposed across a number of UK based

institutions. It was vital that those consulted represented a cross-section of the AHRC academic community and to this end a typology was drawn up to include a variation between institutional types, scale, disciplines and level of existing KT interactions. This typology is expanded upon in Chapter 4 where some of the methodologies pursued are described in more detail. A website and a range of online discussion groups were also set up to support the engagement of academics beyond the core group and a range of brief synopsis are accessible at http://www.ren.ac.uk/discussion_board/. These early stage activities were followed by a series of institutional visits across the first year, the outcomes of which are elaborated upon further into the chapter.

7.2.2 The AHRC context at the time

During 2005-6 the AHRC was developing their new KT plan, like that of other Research Councils, and was trying to articulate ways to introduce KT into the day-to-day environment of traditional scholarship. Alongside the AHRC's KT Division, REN was to become part of that overall plan, but it was recognised that if their ambitions for KT were to be fully workable, they needed to put in place certain support mechanisms before the plan could be fully embraced by their constituency.

The Council had found they had a particular ongoing problem in generating quality information about whom they supported, which had been traditionally hard to access directly from within an institutional setting. It had been a long-standing issue that the only real access into institutions was at the senior level offices of the Vice Chancellors, where KT was rarely considered in the early stages of its inception, and often highly unlikely to reach academics at a grass-roots level. It was also evident that a range of new roles were emerging that were set up to support the development of research and business interests, but particularly around KT, but little observation or interaction with this group was evident. It was the intention of REN to identify where these roles were based within institutions, their variation and how they each interacted to best effect within the AHRC KT interests.

It was hoped that REN might create some form of online tool where a three-way dialogue between AHRC staff, academics and institutional brokers might be promulgated. This would help to ensure the KT experience could begin to be gathered in one place and continually informed, refined and captured for the future. It was evident very early on that the REN approach was of increased interest to the

academic community as the membership base and engagement in forums and associated events grew swiftly. Within five months REN registrations for membership increased from twenty to over two hundred and fifty, and was seeing regular daily hits on the KT news, literature review pages and calendar in particular.

There was also a pressing need to know more about the methods being pursued when developing research interactions, the nature by which one behaves, embeds and shares knowledge was becoming of increased interest. The AHRC had not yet explored the micro-level interactions of collaborative partnership and it was not until the end of the final year of REN in 2008 that the notion of complexity theory entered their discussions. Although not formally acknowledged by the AHRC at the time, the research aligned to REN had begun to influence discussions around their approach to KT practices, but had possibly been much too early in the wider KT evolution to be recognised as of benefit at that particular time. This was also evident in the AHRC attempts to uncover indicators of the impact their funded research was to have upon the wider economy. During the first two years of REN the AHRC were attempting to make inroads into the complex and much under-researched arena of the impacts of arts and humanities outputs and activities; unlike other Research Councils, they were somewhat new to this and seen as early pioneers for the disciplines. In gaining Council status in 2005, the AHRC was under pressure to sit equally amongst their Research Council counterparts and both REN and the newly devised call for Impact Assessment Fellows (2004), were early attempts to respond to those new Council demands.

7.2.3 Early indications of focus for REN

Throughout the first twelve months a range of institutions and academics were consulted on what they thought they needed to engage more effectively with the current AHRC KT schemes. There were four particular outcomes were consensus across those consulted were evident: an AHRC peer membership and interaction facility; a space for interaction with an external network of organisations and businesses; a repository of tools and resources on KT; and finally the development of a network of brokers with which the AHRC and academic community could rely on to support the building of KT collaborations and programmes.

Those consulted stated that a better and more direct relationship with the AHRC should be a crucial feature of any new resource and that some form of peer membership might bring about a greater sense of affiliation with AHRC interests. Many felt that any membership would need to be select, in that it should be an affiliation built on scholarly principles, highly representative of a well respected and rigorous research community. Many were keen to be able to easily identify potential peer partners through such a membership base, and search for particular areas of collaborative research and KT expertise.

Most academics stated they would also like to have the option to extend that membership to interact outside of a peer network, to solicit interest from those beyond the academy in agencies, organisations and businesses. This was cited as one of the most inhibiting elements of AHRC KT schemes, where good ideas were being developed, but few tools and opportunities to promote interaction with those with a vested interest in the use of that research. Many stated they would like to have access to an online space where KT collaborations may be solicited, built and exposed across a broad range of users and foci. It was agreed that these types of support features more often than not relied upon the 'human curator' or broker to animate and manage the knowledge process. It was agreed that technology alone was a poor substitute for real engagement and investment should be considered to align technology solutions with an active human presence.

Many academics felt that there was little in the way of intellectual stimulus for them to interact with the KT agenda, and suggested that it was important to start building a literature review on new and emergent text, practices and methodologies, in order to find that future researchers have a recognised body of reference from which to draw from. As yet there were few places where any coherent body of literature or dialogue could be tapped into, and even fewer sources of good quality case studies or exemplars

Throughout the consultations and institutional visits it was evident that expert brokerage was a primary concern for most academics and essential to ensuring linkages between people and complex information are continually managed and maintained. Although most academics considered themselves academic brokers, equipped to locate and interact with their peers and some external organisations,

many felt that the role of a good institutional broker could often be the lynchpin in making collaborations happen, and in ensuring collaboration is nurtured, maintained and well informed.

The outcomes of REN consultations suggested that there was a need to formalise the support for knowledge transfer in a more targeted way. The key features of that support is a need for some form of membership with the research funders by which they can develop a closer 'working relationship' to affect the development and uptake of KT. It was agreed that any web based technology solution is limited by nature and therefore should be underpinned by 'real' co-ordinated activities and support mechanisms that work at a more intimate level of engagement. These activities were thought to be best brought about by the emergent role of the Broker, which was thought to be the key component to the early success and drive of KT partnerships and therefore should play a significant role in AHRC plans. In the next section we outline how some of these elements were put in place and how REN began to articulate and utilise these to support real KT activity.

7.2.4 REN Online

A web-based network often acts as a practical, and somewhat predictable, structure in which certain forms of networking can be facilitated. It also serves a distinct purpose in bringing large and often disparate communities to one place, but the real challenge was to provide a resource that was both timely and useful to its users, as well as one that they would be willing to contribute to and return to. An environment with connectivity as its primary objective could be created fairly easily, but it was in creating the pre-conditions in which a network can thrive that would ensure its value and continuity. These pre-conditions relate to how the movement of pertinent and timely intelligence can be achieved between peers, how quality methods and case studies are sourced and made accessible, and how we develop a high quality repository of resources that support increased debate, as well as awareness, concerning what the exchange of research knowledge actually entails.

Social or peer networks are often a good example of how, through a shared and distinct repertoire, users can shape and tailor a resource to their specific needs. As the quality of information, tools and tactics in a network improves, so does the size and capability of the community. It is to this end that REN consulted at the outset with the AHRC research community, to ensure a resource, fit for its users,

was shaped with them in mind. In the first months of developing REN a small networked site was piloted where online discussion forums and information about REN and its ambitions could develop (see www.ren.ac.uk).

7.2.5 Building the Knowledge Base

Consultations with the twenty-two UK institutions revealed that little was known about KT generally in the traditional arts and humanities disciplines, or of the methods by which research might begin to interact beyond its traditional boundaries. Those questioned thought it was important to bring together the known research papers that support the development of KT and link to existing literature banks. The creation of a systemised literature review and making available a central repository from which this information may be accessed, was cited as an imperative to moving understanding on and allowing academics and brokers the chance to contribute. Although research papers and online resources were thought to be vital, the majority of those consulted also wanted knowledge generated at a more intimate rather than global level. To understand how peers were approaching KT, and how the co-production of knowledge could be brought about, it was suggested that REN should utilise and further develop existing AHRC projects to expose first hand accounts and case studies that could guide others through similar usable methodologies. Some of these tools and tactics are described through the CreEM case study (see Chapter 3) which utilised models of practice to create policy matrices, marketing profiles, project management tools, as well as a possible framework to understand the role individuals play in bringing about a successful KT orientated project. In the final section of this chapter we propose the CreEM case study is expanded into a fuller observational framework to manage and collect vital evidence in situ within KT projects.

7.2.6 Academic brokerage

In early consultations across the twenty-two UK institutions the effective brokerage of KT research was the most cited element thought to enhance the adoption of KT practices at grass-rots level. To this end it was decided that further work should be done to find out more about the emergence of these roles and the varying ways in which they were positioned in the institution within different specialist contexts. All the universities taking part in the REN project were contacted to request information and contact details of those roles focused specifically on support the arts and humanities disciplines. REN

received a range of standard information pertaining to existing and anticipated roles that support research development in all its guises (KTP, enterprise, business development and so on). A questionnaire was then devised to attain target information from each of these roles which had not been previously available, and therefore formed the first sample on the nature by which these roles were established and utilised. In the next part of the chapter the questionnaire is presented in more detail, the outcomes of which go some way to suggest how REN, as a support vehicle for KT, might also support and enhance the broker role as a central feature.

7.2.7 Early career engagement

Many of those consulted were keen to find ways to meet with external organisations as potential research partners. Those at an early stage in their careers, whilst keen to network and make new contacts, had not yet developed them to any level of maturity and were therefore looking for ways to build their networks of collaborators and knowledge. Those at a more senior level were less concerned with establishing partnerships and perhaps at a better stage in their careers to undertake KT unencumbered by early stage career challenges. It was therefore suggested that REN might focus its attention on postgraduate researchers and those academics at an early stage in their career.

It was suggested to the AHRC that this might be best brought about through their target thematic programmes which they were already developing with particular sectors, such as creative industry technologies with the BBC and the interdisciplinary measures being devised to bring the Science and Heritage Programme together in collaboration with the EPSRC. In aligning REN to a new AHRC programme academics and brokers might be better supported throughout the various stages of the development and delivery of funding for a call. In tracing a project from early inception to final delivery it would be possible also to trace the specific individuals and interactions in order that indicators of impact might also be uncovered and further studied.

7.2.8 External cultural brokers

It was evident that a number of new roles were emerging alongside institutional brokers, outside the academic community. The AHRC had begun to work closely with a number of cultural venues that were already becoming instrumental in partnering academic research, particularly around the creative and heritage industries. These external brokers were beginning to ignite interest in the role they might

play as broker between cultural venues, businesses and academic researchers, where they had gained a high level of understanding of how research knowledge might impact more effectively in the public realm. One venue in particular was singled out as a model, and Watershed in Bristol hosted the first brokerage event between AHRC, academics and those working in the digital economies (2005). The event enabled academics to place themselves in a diverse and challenging environment where their research ideas could be tested in an applied and business orientated way. Equally those businesses that were looking to find innovative ways to remain at the cutting edge of their field could have access to knowledge not yet tested and formulated in the real world. This model of interaction is growing for those engaged in the digital economies, but little as yet has being explored to extend this model beyond Bristol and the digital sector, particularly in the harder to reach areas of the disciplines.

In the intervening years the AHRC have encouraged the role of cultural brokers outside academia and as venues and individuals have learnt more about each other the lexicon, as well as the spaces available to come together, are increasingly being shaped in a co-productive manner. In late 2008 the AHRC also announced that the Peer Review College would also begin to seek reviewers from non-academic sectors in order to encourage a broader scrutiny of research expertise in the development of non-traditional outputs.

We have seen how REN emerged at a time when KT was newly introduced into the AHRC make-up. At a time when shifts and changes were also occurring in the research landscape, with the AHRC's newly found Centre status, the onset of the 2007 RAE and a restructuring of the AHRC as an organisation, REN was at the same time becoming bound by uncertainty in a KT environment which was as yet immature. The following section therefore attempts to address why REN was a timely resource for KT to be supported, but was not able to develop in a climate where KT as a concept needed more substance and a stronger evidence base to become an acceptable and long-term practice.

7.3 REN: AS AN ACTIVE PARTICIPANT IN KT

The REN proposal was initially embraced by the AHRC, thanks to the foresight and early support of the outgoing Director Geoffrey Crossick and the Yvonne Hawkins, the then Director of Knowledge and Evaluation. It was enabled to develop a web presence at its inception that gave it visibility and profile

and helped to consolidate and share consultations and a range of up to the minute information on KT activity. It developed an online forum for discussion and debate, and with over two hundred members in its first six months, proved to be of keen interest to the academic and broker community.

The REN website gained regular hits on a daily basis and contributions to discussions gained momentum when the REN site developed the vBulletin tool in 2006 (still accessible at http://www.ren.ac.uk/discussion_board/). Several forums were set up over the two years ranging from how to develop REN as an academic resource, to the challenge of metrics and the innovation agenda. The site also played host to a range of guest speakers, such as Geoffrey Brown from EUCLID, who chaired a discussion titled *Exchange and Opportunity Beyond the UK*, focusing on how KT might move to collaborative ventures with European counterparts.

REN also hosted an online workshop between AHRC and HERA over a four-week period to generate dialogue amongst twenty academics across the EU. The focus was on the development of the new Joint Research Partnerships schemes. The participant academics required tools to prepare the foundations for a workshop and to tackle issues that might help clarify and refine the topics on the agenda. REN administered the forums and helped individuals to solicit feedback and enquiry from others. Breakout groups were formed to tackle spin off ideas and papers and journal articles were gathered and made accessible to the participants throughout the online process. All those involved thought the process was highly constructive and successful, particularly in allowing an open space for academics to convene in a virtual environment where physical meetings were not possible.

The HERA experience was testament to REN as a possible tool in supporting emergent collaborative processes, but was highly dependent upon an experienced 'curator' to ensure that complex ideas were generated and kept in motion throughout the process and that connections were encouraged between participants. The notion of the curator or broker role in REN is one that was discussed as a key feature of any future provision, without which links and connections might not be maintained or generated. It was hoped that the role of individual institutionally based brokers might act as these curatorial roles to manage and stimulate projects with a complexity of partnerships and activities.

In January 2006 REN also hosted a major national conference titled *Realising the Exchange of Knowledge without Widgets and Guise,* attended by over one hundred academics, brokers and external agencies interested in building KT collaborations (Accessible at http://www.ren.ac.uk/conference.html). The aim of the conference was to showcase examples of where the exchange of research knowledge was occurring in less obvious areas of the arts and humanities, demonstrating that a rich undercurrent was indeed at work and utilising some interesting tools and tactics for success. It was a chance for academics, brokers and external organisations to hear more about how the arts and humanities were beginning to embrace KT. Guest speakers presented on how a background in the music industry has offered a unique perspective to bioscience, how language played an intrinsic part in effective exchange and what new networking knowledge has done to bridge scientific and artistic communities. The event offered the chance for delegates to meet academics, their industry partners and brokers, who attempted to share some of the joys and pitfalls of the collaboration experience. In a climate where the demands for KT was growing, it was important to share more about how strategic knowledge exchange was occurring at multiple levels and how people and ideas can be brought together to work collectively.

One particular feature of the conference was a practical exercise to encourage linkages between those attending. All delegates were profiled according to their research or brokerage interests prior to the event and then either matched up with potentially interested parties, or grouped to explore linkages and possible collaborative ideas at the conference. Brokers attending were added into the mix and asked to support the teams to develop beyond the conference and maintain some level of dialogue. 'Exchange Boards' were developed as a tool to allow delegates to post-up their research and KT interests in order to solicit possible partners. These were also made available electronically on the REN website where academics were free to extend the information, discuss ideas or propose the bringing together of collaborative ventures. Brokers attached to the institutions where academics were sited, were also encouraged to manage Exchange Cards where collaborations had emerged out of their academic base, and curate the online process as well as physical gatherings of those coming together.

Exchange Board Online was created through the REN website site (available at http://www.ren.ac.uk/discussion_board/) and supported by discussion forums for a wider community of

interests to contribute to the development of potential networks of knowledge. Over thirty-nine

postings came out of the event, with twenty-nine supported for a further four months online. This

element of REN proved to offer a stimulating and productive mechanism to link up disparate interests

across a number of UK institutions, but was highly reliant upon some form of curatorial management

or input, and this would have to be considered if were to act as a full participant and enabler in the KT

process.

Out of twenty-nine networked groups more than half went on to explore AHRC funding, including

those interested in acoustic heritage, the 3D Museum, soundscapes and digital curation in preservation,

some of which subsequently went on to grow and gain funding to realise their research and KT

ambitions.

7.3.1 REN: A resource too early in the KT lifecycle?

In spite of the positive reception and early enthusiasm, REN had not achieved the anticipated

integration into AHRC services and divisional activity which would ensure its survival and which

would become crucial in its wider adoption by the academic community. In the period between January

and September 2008 the AHRC were to see a shift in both senior roles, as well as a major review

resulting in a move of the core services from Bristol to Swindon. In this migration of posts there

opened up a renewed interest in REN's previous activity as the AHRC were at a point where they were

consolidating their KT activities, whilst also reviewing how they may further integrate KT into the

normative provision of the AHRC in the future. REN and the newly formed Broker Network were at a

point in January 2009 where this was still under discussion within the AHRC senior team.

Throughout the REN project it was evident that the KT landscape was relatively new and emergent,

particularly regarding dedicated funding from the Research Councils, and the integration with existing

schemes such at the Knowledge Transfer Programme (KTP) or the Technology Strategy Board (TSB)

for example. REN had attempted to prime a community as yet new to the concept, as well as the

practice, and as a result had perhaps moved too quickly to secure buy in and develop its ideas. The first

indication of this did not surface until approximately half way through the project when the AHRC

were spending dedicated time in articulating their position alongside government agendas in

preparation of the Comprehensive Spending Review (2008-2011) and notification of the Department for Innovation, University and Skills (DIUS) Science Budget allocations (2007). During this time energies were rightly diverted to ensuring an equal footing alongside Research Council counterparts and confidently supporting the increased government interest in the impact from research and KT investment.

The AHRC was also learning about the nature of their changed provision and how KT might sit within their traditional programmes. It was evident that with this also came the challenge of being articulate in a new policy arena, where the arts and humanities had rarely intervened. As described earlier in the thesis, this presented challenges both in language and reference, as well as the nature by which their community might impact upon the knowledge economy, and the economy as a whole. Although we go some way to describe this, it is on the intricacies of their changing perspective on their community of scholars that we focus. There was an increased feeling that the AHRC were placing demands upon those they traditionally funded to describe themselves in ways that many were ill equipped to convey, particularly with reference to how they might *impact* upon the partners they worked with, rather than who they *disseminated* to. KT was as yet still blurred and academics unsure of how to respond.

To recap, REN was up and running with a good online presence and a healthily populated website and discussion forum. Consultations had uncovered key recommendations to further develop and embed KT support mechanisms at the heart of the institution, and the Broker Network had begun to emerge to support the academic to adopt KT practices in situ. In spite of all this activity REN had moved on little and by the end of 2007 was functioning, but not adapting and developing any further.

REN was at a point where it needed to be finalised or reinvigorated. Although there were many positive and productive outcomes for REN, the project to date had struggled to find a way to test some of its ideas and assumptions in a 'real' setting. We knew that the pragmatic elements of REN could easily be incorporated into AHRC plans for their new website; some form of membership base for arts and humanities academics and those who support them could be incorporated in the Communication Strategy; repositories and tools could be compiled and made accessible. These had always been the easiest and most pragmatic elements to deliver on, but the real effectiveness of REN would be in how

that membership would interact with each other and non-academic organisations via the AHRC KT schemes.

In the following section we outline the potential opportunities REN might capitalise upon if it were to align itself with an investor such as AHRC and a network of brokers, in order to develop and test a range of observational frameworks to evidence how KT originates, is delivered and its outputs captured. In describing these opportunities we will then go on to present a proposal where these observational frameworks might be supplanted at an early stage in KT schemes to provide the investor with a richer source of evidence as to the impact of KT interactions both within and without the institution.

7.3.2 Aligning REN to a strategic programme

In the initial proposal, and throughout discussions with the AHRC, it was hoped that REN might run alongside a new scheme or thematic priority in order to test out some of its mechanisms and KT practices. The aim was to stimulate links between individuals, gather observations via discussions and network building etc, in order to animate, expose and share the KT process. Aligning itself to such a programme would also have allowed the AHRC to evaluate the impact of REN on furthering and supporting programmes in general. Some programmes, such as the recently completed Landscape and Environment, had certainly found it difficult at times to gain wider input from academics and particularly in engaging those beyond academic in the programme make-up and delivery.

It was vital to have AHRC steer on this as to whether it was possible, or indeed the right route to take for REN. It would, for instance, have been ideal to take up May Cassar's interest in REN to explore how it might provide an environment for networking interest and participation in the Science and Heritage programme which she was to direct. As the programme was conceived in parallel to the development of REN, it could have been utilised as a resource to build its membership, engage academics in wider thematic debate and build a number of frameworks where new projects might be closely observed. In underpinning the programme in this way, REN might also have had a mechanism to reflect and test the role of the broker in this scheme, and utilise their expertise to gather the evidence of activities at the heart of each funded project. We bring some of these elements together in the final

proposal at the end of the chapter.

Due to a range of internal shifts, and the continued delays in dialogue with TSB, DIUS and the British Film Council, REN was to be continually in stasis, awaiting the outcomes of the next discussion or strategic move before energies or resources might be put in place to support it. It was not picked up to work in unison with the AHRC schemes and therefore had little chance to become embedded within AHRC's own practices.

7.3.3 Aligning REN to Impacts Assessment

Although the 2004 Impact Assessment Fellowships had been completed by 2007 an opportunity was evident for REN to integrate with the studies. Although the call would undoubtedly uncover new theories and methods, the connection between REN, brokerage and impact had still not been recognised. The AHRC had a potential mechanism in REN to mobilise brokers on the inside of the institution, which may have offered a much better long-term, consistent and sustainable approach to evidence gathering at the heart of research activities. The AHRC would have perhaps benefited from joining up the research on impacts undertaken by informed and experienced staff, with the expertise and experience generated through the REN programme. The brokerage model and the footprint of the value chain in this thesis had begun to lay the foundations, and it may be timely that this proposition will prove increasingly viable. The following and final element of the chapter is concerned with such a proposal as a means to consolidating those resources, participants and evidence methodologies.

7.3.4 Timely calls for REN to engage

During year two and three of REN a number of AHRC calls were issued which the resource would have been ideally placed to support, thereby also underpinning mutual investments within the same organisation.

> "The AHRC is setting up a new project to produce a series of case studies to assess the knowledge transfer processes and impact of the research we fund. As part of this project the AHRC wishes to consider the knowledge transfer processes and impact of a number of awards from the AHRC Pilot Supplementary Dissemination Scheme. To assist the AHRC in this

project, we are inviting bids to conduct studies on up to five Dissemination Awards in

Summer-Autumn 2006."

(AHRC Bulletin, May 2006)

These types of calls, of which there were several during the term of REN, focused upon evidence and

impacts, were dealt with by several different divisions within the AHRC and as REN had not been fully

integrated into the day to day life of the organisation, it was rare that opportunities were joined up to

best effect. REN already had a network of KT savvy academics to hand; they were conversant with

virtual discussions and had already interacted successfully via REN forums, the Exchange Cards

system and the various interactive workshops. It also had the broker support roles mapped onto those

academics willing to participate, and they were primed and ready to discuss KT, as well as equipped to

offer insights into best practice and the development of live case study material. The CreEM case study

and the Impact Fellowship methodologies had been piloted and refined, and the potential for REN to

work in unison with the AHRC's other strategic activities seemed both logical and highly plausible.

7.3.5 Conclusion: A renewed interest in an in-depth perspective

In the lead up to the 2008 Comprehensive Spending Review and the changes occurring within the

AHRC it was clear that REN would be unlikely to find investment to function at a higher level in the

current climate of consolidation and cuts, and such joined-up opportunities did not come to fruition.

Shortly after a meeting of the AHRC Knowledge and Evaluation Committee in February 2008, the two

individuals in roles key to developing REN were to leave the AHRC. The impact of their departure in

the last six months of the REN project made it highly unlikely that the project would be picked up in

the same vein. However, as the organisation had taken on new roles and were about to rewrite the KT

strategy, renewed interest in REN emerged. The AHRC had become particularly interested in the

utilisation of the broker roles as key to bridging between academia and potential non-academic

partners. At the time of completing this thesis these discussions had begun more concertedly.

In the next section of this chapter the role of the broker is developed to reveal the potential they may

play as advocates in the adoption of KT practices within UK Higher Education Institutions. We outline

how the roles have come about and the variety of support they offer the academic community. In

describing the role as 'active agents' in KT we explore not only their current practices, but also how these may be further enhanced and diversified. We uncover how these roles are perceived within their institutions and how they may be under valued and poorly integrated within the academic community. In revealing particular styles of working we underline the need for them to have an astute ability to span the administrative and academic divides in order to become highly desirable and affective within the institution.

In setting the scene on REN and expanding the role of the broker within it, we attempt to populate REN with multiple value chains that might be observed and supported by the broker in the delivery of KT projects. The following suggests how the three components of the value chain, a KT resource and the broker might transform both the KT experience, as well as their resultant impacts.

7.4 THE ROLE OF THE 'HUMAN CURATOR': KT BROKERAGE AS A KEY FACTOR IN THE UNISON BETWEEN INDIVIDUAL AND INSTITUTIONAL PRACTICES

> "In undertaking increasingly complex functions… administrative managers play a critical role in linking the academic and executive arms of governance in the university."
> (Whitchurch 2004)

Exceptional brokers are those roles that are knowledgeable about the wide terrain between academia and the outside landscape. They often support institutional involvement in strategic interests and investment, and have an ability to translate and facilitate the nature by which research may be meaningful to multiple partners. Whether business, policy, artistic, educational or intellectual, the broker has to be confident in traversing multiple domains defined by normative languages and disciplinary or sectoral specificity.

Brokers in the broadest sense are not a new concept, they have always acted as individual academics, those newly out of postgraduate research, the research and business development officer, the Dean promoting outside interaction. Increasingly they are also Research Associates or junior staff managing

people and projects within their field of expertise, a museum curator or CEO of a business working closely to bridge research and how it may be received in public and private settings.

Five years ago dedicated roles focused upon generating interests beyond the academy were a new breed for the arts and humanities disciplines in particular, and certainly not part of the traditional research make-up. As in the sciences, such roles would soon become intrinsic to helping academics move beyond current boundaries and rise to meet the increased demands of KT, but not quite in the way the institutional systems and process set up to support particular brokers intended.

Recognising the need to supplant such brokers as 'active agents of KT', the Higher Education Research Out to Business and the Community (hereafter HEROBC) and the Higher Education Innovation Fund (hereafter HEIF) began to provide funding beyond the science base for research and business development roles in most disciplinary areas and increasingly in the arts and humanities subject domain. In 2001 there were only three dedicated roles for providing tailored support to the arts and humanities through these funds, and by 2008 there were approximately forty embedded within UK institutions, albeit each adopting differing roles, titles and purposes. The longstanding KTP scheme (formally the Teaching Company Scheme) now has dedicated roles for the arts and humanities interests, and since the AHRC became a sponsor in 2005, has significantly raised the numbers of regional officers and institutionally supported roles.

7.4.1 The Broker Questionnaire

As there was relatively little known about how these new and emergent roles were being set up and how they operated and curated the knowledge transfer environment, the REN project set out to find out more about where these roles resided within the institutions it was already consulting. A questionnaire was devised and circulated electronically to all the known Brokers across the twenty-two institutions involved during 2006 to 2007. A brief synopsis of the profiling of the institutions can be found in Chapter 4, along with the methodology behind gathering the evidence and data required to inform this section of the chapter. The ultimate aim of the questionnaire was to find out if these roles could act as a network for the AHRC, and if so, could they share practices and methodologies to support the adoption of KT in a more targeted way. It was vital to find out more about where these roles were sited and how

they were institutionally supported, their funding make-up and the particular methods they were pursuing in supporting their academics and external collaborators.

When the broker questionnaires were collated the findings were brought together and presented for discussion at a 'Broker Day' set up with the brokers already involved in the questionnaire activities. In sharing a range of insights and tasks REN hoped to find out more about brokerage focused on the arts and humanities, and what role these posts may ultimately play in the development and delivery of REN as a tool to support AHRC KT schemes.

> "I feel that the REN approach of people centred interaction and networking is essential to build a community who believes in and gets on with KT. When there are enough demonstrable benefits and progress, others will start to come on board, but we need some committed individuals to start off with."
>
> Broker No. 6. Broker Day March 2007 (See appendix 3)

7.4.2 Outcomes of the questionnaire and Broker Day

The following is a brief account of some of the key themes and issues of concern to university based brokerage roles, and was constructed from questionnaires and outcomes deriving from a one-day workshop attended by twenty-two brokers from twenty-two UK Higher Education Institutions. Although the questionnaires are not a primary focus for the thesis, the evidence gathered is highly pertinent in describing the nature by which these roles support the research environment. The methods and framework for the questionnaires are outlined in Chapter 4 and all the related evidence on coded outcomes and the typology of those who participated are available for reference in Appendix 3a.

7.4.3 Where brokers reside

In analysing the questionnaire responses it was evident that role profiles are rarely reflective of the breadth and depth of KT work brokers undertake on a day-to-day basis. They are often employed within an administrative setting and therefore the profiles were reflective of a highly management orientated structure, either within centralised supported services of dedicated innovation centres or similar. Those outside the confines of units, either in smaller scale faculty or School centres, described

greater autonomy from the Centre than those based within them. Out of those questioned the positioning of these roles fell into two distinct environments, denoting those sited in highly devolved settings within the Russell Group and those centralised in the pre-1992 institutions. The majority of those questioned said that they report directly to directors of central research support offices or an enterprise and innovation centre equivalents, and only three out of the twenty were reporting directly to senior academic positions. The situation of the broker seemed to play an intrinsic part in the kind of support services they were delivering, for example, those in the Russell Group tended to work more closely with academics in the design and development of their research activities than those in the pre-1992 institutions. However the pre-1992 institutions were generally far more active with regards to KT orientated research activities than the Russell Group.

The small number of brokers that were based in decentralised centres within the arts and humanities communities, similar to the HSSRC (see Chapter 6), seemed to be more aware of the role particular academics were playing in research support at a more intimate level. They cited a rise in research associates and early career academics as a way the disciplines were beginning to tackle the need for more support roles at grass-roots level. In smaller institutions, that were functioning at a much smaller scale in their research operations, they were also more conversant with academics acting as brokers, rather than these broker roles more commonly associated with their larger counterparts. At the Royal Scottish Academy of Music and Drama (RSAMD), where they had no central support unit or individual responsible for research support, their Director, Celia Duffy played an essential brokerage role for all her staff. When visiting RSAMD Celia Duffy was particularly interested in how these roles might develop within organisations at a much similar scale, and that REN should be mindful of scales of practices when exploring KT support in the UK.

Many universities have set these brokerage roles up as a result of gaining ideas on how other institutions have done the same, particularly through HEIF funding rounds and international mechanisms for co-supporting roles in partnership with Schools. It was thought that REN could possibly provide models of support for institutions that as yet had not developed either the infrastructure or resources to support KT effectively. In the period between 2005 and 2007 a great

many institutions were getting in touch with REN to explore models of KT practice as well as models to instate new roles in their arts and humanities disciplines.

7.4.4 Primary roles and responsibilities

The majority of roles cite support for funding applications and developing collaborative partnerships as their primary activity. Most had been recruited to either act as funding administrators or business facing managers, and only three roles that had been in situ for over five years had been enabled to diversify their roles.

More than half of the brokers had access to other roles and expertise such as Intellectual Property management or the negotiation of commercial contracts and so on, and therefore were rarely equipped or required to undertake these types of roles themselves. Only brokers with an industry background were being required to undertake these types of functions and were generally more focused upon business development rather than the development and support of research activities. These roles were also predominantly focused upon the creative industries, and in only one case were they engaged with corporate business interactions.

The majority of brokers had the biggest portfolios of schools and disciplines to cover in any given institution than equivalent roles in other disciplinary fields, such as engineering or medicine. Many covered between eleven and twenty different departments across the arts, humanities and social sciences, in stark contrast to counterparts who generally cover one to two disciplinary fields. It was generally felt that this breath often singled them out as non-specialists and therefore perhaps not as able to offer the specialist knowledge often associated with other roles attached to distinct disciplinary portfolios. It was felt that more roles across the arts and humanities would help dispel this perception and encourage more cross-disciplinary momentum within and well as beyond the disciplines.

Those questioned thought that brokers often shielded their academics from much of the administrative burdens associated with working with centralised support units. They were able to enable a project to be brought to smooth fruition and often tended to rectify or find solutions to pragmatic administrative issued without the intervention of the academics they were working with. For example, brokers often

have a wide and astute knowledge of the academic and administrative tensions that arise in research development, and often shield unwieldy administrative bureaucracy or academic distrust from administrative systems and processes. It was evident that brokers are evolving confidently to span the academic and administrative boundaries, which requires particular skill and knowledge of how environments and behaviours might interact to best effect.

7.4.5 Autonomy to work strategically

As these posts were relatively new, few posts nationally have been in position for more than five years. Those posts that have, tended also to be more involved in supporting a wider remit within their institutions and seen to contribute to wider institutional activity such as internal strategy development, intellectual programmes for debate and in depth support for developing research ideas and proposals. In the sample questioned only three posts out of the twenty-two had been in post for more than five years and these were all in the Russell Group institutions. Given that the Russell Group generally seemed slower in the uptake of KT, one might assume that they would also have fewer well-established roles. In fact these longer-standing roles had grown more effective due to the highly developed relationship with research prior to the business agenda coming to the fore, so were perhaps in a much stronger position to understand scholarship and the tensions that would be faced in adding KT into the research mix.

The level of autonomy afforded to brokers varied greatly, particularly where one was part of wider strategic efforts, such autonomy is highly dependent upon where one sits within the institution, in an academic, academic related or administrative role. Many of the brokers cited PVCs, Deans or dedicated academic groups as highly proactive in shaping KT strategy in their institutions; however the majority of academic-led KT was based within the Russell Group, whilst pre-1992 KT leads tended to be based in senior administrative positions. All universities taking part in the questionnaire, with the exception of one, had academics involved in KT discussions at some point in the process, either through a dedicated KT team or a strategy board where KT was discussed. This was generally thought to be more ad hoc, than an organised regime.

The majority of brokers felt that they had adequate opportunity to feed into strategic KT activity, although a third felt they did not have the capacity to speak directly to senior decision makers within their institution. Again this corresponded more to those sat within centralised, pre-1992 institutions. Brokers, intermediaries and facilitator focused roles were thought to be the key elements missing in the development of most KT agendas, both institutionally and in the wider national strategies. The majority of those questioned across the twenty-two institutions thought that this needed to change if KT was to grow and become embedded as a normative scholarly practice.

7.4.6 Shaping funding and training

When asked which funders brokers worked with on a regular basis (beyond the AHRC), more than half of the respondents cited foundations and trusts as the most common. All agreed that in the last three years the funding environment has had to diversify as competition has grown for traditional awards, taking success rates down and forcing academics to explore alternative routes. More than half the brokers agreed that they were increasingly working on DTI, ESRC and EPSRC awards. It was a challenge for the arts and humanities to change their patterns of language and expectations, so success was still relatively low for single disciplinary applications.

Although many roles had originally been conceived from the earlier technology transfer type roles, few brokers questioned worked on any type of venture capital, corporate industry funds, or IPR related activity. As all roles were focused upon the arts and humanities in particular, it was perhaps surprising that few had experience of these three areas, although some did say that this was mainly due to the provision of centralised expertise within research support or innovation centres. Few also received training in these areas and thought there was little chance to develop new skills as much of the training they had experienced had not been tailored or developed with the arts and humanities subjects in mind.

Many also cited an increase in working on EU, Regional Development Agency and Department of Technology and Innovation applications (as was called in 2007). In diversifying the funding environment for the arts and humanities, the brokers have had to expand their repertoire of funder knowledge in order to provide an effective service. However, those that worked more on affecting and supporting the content of applications found that it was their knowledge of methodology and

contextualisation that affected the quality of the proposals, rather than knowledge of funding criteria or costings. There were two distinct types of brokers with respect to working styles, the broker at an earlier stage in their career, who had been predominantly bound by supporting costings and bid preparation, and those with more experience who focused on the content, methodology and context of academic endeavours.

7.4.6 Relationship with the individual academic and wider institution

Most brokers cited empathy, creative thinking and knowledge of the discipline as the qualities necessary to undertake the broker role effectively. All agreed that these types of qualities were learnt over time and not through target training. Many felt isolated and cited difficulties in becoming part of the academic community, particularly in the early stages of their roles. All brokers questioned wanted some form of network in which they might share, learn and develop their understanding of these diverse roles. Many of those new to the roles were particularly keen to learn new ways of working, tools and tactics and, most significantly, ways to promote the visibility and value of their role within their institutions.

There is no doubt that broker and facilitator roles are thought to be important to the make-up of contemporary academic life, but these roles are still not openly embraced within many of the institutions we had dialogue with. It was thought that REN might serve to enhance the awareness and credibility of these roles and help them to gain closer academic associations. This was particularly pertinent if funders like the AHRC were to endorse the role as valuable to scholarly activity. It was thought that as long as these roles were attached to centralised administrative services, they would remain disenfranchised from academic interests, and therefore less likely to be effective in gaining their full attention and respect.

Brokers are often working at different stages in a project's lifespan and many of the respondents thought that this knowledge of the full 'pipeline' of investment to completion is highly under utilised in most institutions. Many felt that understanding what occurs at multiple levels, increases one's ability to help inform the design and delivery of research by offering realistic and tried mechanisms learnt throughout their career. The support for unsuccessful applications was also thought to be under valued

and may serve as a learning experience, particularly where early career academics were gathering experience of attaining their first funding success. This was closely tied into consideration of alternative calls and funding programmes, so diversifying the potential transferability of proposals and hopefully their chance of alternative success routes.

Many brokers worked closely with academics and collaborative teams and therefore they were perhaps more able to prime and capture how those research interactions come about. As KT activity in particular has been under close scrutiny over the last three years, capturing the way it develops, transfers or exchanges has become of prime concern to both investor and institution. Many brokers thought that in engaging in the capture of KT interactions, they would also be best placed to observe the effect of their own role in the process, and begin to partake in a form of meta-research that might begin to professionalise the role. Brokers might also be instrumental in the capture of data that may be of interest to other parties, particularly where the information may support the evidence on the impact of investment in the arts and humanities in particular. The broker would be well placed to act as participant observer as well as data gatherer, and in developing and using case studies, they may be able to describe the multiple 'mechanics' of bringing projects together, whilst participating and supporting the process. This type of role, as describe earlier in the CreEM case study (see Chapter 3) would greatly aid the increased burden upon investors such as the AHRC for evidence of impacts they are increasingly pressured to deliver upon.

Brokers also have access to a range of institutional approaches to KT, as well as various measurements and evidence based data on research at a localised level. This information could also be brought together into a highly useful bank of data, traditionally hard for investors like the AHRC to access directly. In seeking evidence at multiple levels, perhaps the illusive impacts of the arts and humanities might become richer and more visible.

7.4.8 Working beyond the institution

Most brokers worked with a wide variety of external organisations, but the creative industries and the Museum, Libraries and Archives sectors the most predominant in the arts and humanities. A noted

increase in links to health and government bodies was also being witnessed in the last few years, with increased interest in cross-disciplinary team building.

Most brokers found that being highly responsive to academic interests was by far the most productive way to secure early stage partnerships. Where the impetus for collaborative research was being directed from administrative centres, uptake in KT and business interactions was seen to be far poorer. In spite of this most brokers relatively new to their posts, thought that both scenarios were difficult for them to work in. On the one hand they had not yet had time to build a rapport with their academics in order to gain close knowledge of their interests, and on the other hand they were ill equipped to go into the academic community they advise to follow the KT directions administration was decreeing of value. All brokers agreed that the building of meaningful relationships within and beyond the institution came about through time-served experience and was unlikely to come about through central institutional directives, often thought to be disconnected from academic interests.

Nearly all brokers cite academics' own contacts as the predominant way to find suitable collaborators. Many institutions were investing a lot of time and energy in creating portals and business gateways to act as 'doorways' to soliciting partnerships. These were generally considered of poor quality, uniformed by the academic community and managed by staff completely remote from Schools and departmental level interactions. Smaller institutions however, did have a better uptake of these types of tools, but again they were only as good as those using and building them. All institutions had some form of expertise database that served to bring disciplinary specificity into a searchable forum. Most thought these were highly useful in the early stages of their posts, where they needed to locate key individuals, but were less useful as they developed a working body of intimate knowledge on those academics they supported.

Many brokers adopted multiple ways to attract external interest at a local or regional level and rarely, if at all, used the gateway models set up in the institution. It was mainly those brokers with more autonomy, or those with a more clearly defined role to go and seek business partners with their academic lead, that were more effective in supporting the building of partnerships. Those with more

traditional funding support based roles did not tend to engage beyond the institution, but thought they would gain much from the experience.

The brokers who did use business gateways or equivalents successfully were those with the responsibility for building or maintaining them. In general, these were considered to be the more proactive and successful gateways, embedded into the day to day practices of the brokers' role, for example those at Nottingham Trent University and Glasgow University, who had devised innovative frameworks for soliciting external interest in their academic expertise.

Few of the brokers found that potential partners came directly to the university to seek collaborators and instead relied on contacts and links with individuals such as academics, students or brokers, as their first way in to an institution. Most felt that developing a strong presence beyond their institution, with organisations and agencies, was one of the most proactive ways to engage in the current interests of sectors aligned to the arts and humanities subjects. Many felt that the personal links to individuals in those organisations also better enabled them to talk swiftly where opportunities for collaborative activity might be dependent upon bringing people and ideas together in a short space of time. Where there were few links and relationships, brokers felt ill equipped to bring externals quickly into projects in a meaningful and realistic way where calls often demanded a swift response.

7.4.9 Continued Professional Development

Most brokers questioned were not aware of their institutional policy on promotions and few brokers claimed that KT appeared in their institution's promotions policy. Some suggested that these policies might in fact exist, but they were unaware of them and how they worked in reality. Only those brokers in post more than five years were aware of the implication KT might put upon the academic systems of reward and promotion, suggesting few brokers were party to the professional development agenda generally, but particularly for academic staff. Lack of knowledge of academic drives and reward systems was thought to deny brokers a rounded understanding of how scholarship develops over time. This often made the KT agenda more difficult to embed in academic practices where it was perceived to be working 'against' recognised systems of rewards such as the RAE.

The majority of KT orientated training was seen to be provided internally in those institutions we questioned, but more than half of the respondent said that they had not undertaken any internal training relevant to KT practices in the arts and humanities. Half of all the brokers questioned had at some point used the Association for University Research in Industry Links (AURIL) or Praxis for example for training, although most had not found them useful for their disciplinary areas and many did not go on to use them repeatedly.

More than half of the brokers felt there was little or no chance of career progression in their current institution and would consider moving out of the university sector into the arts or industry sectors, in order to progress their careers. Those who felt there was suitable provision for career progression, cite taking on the management of others or changing institutions as the only viable solution to progression for these types of roles. Many noted the latter often resulted in the loss of localised knowledge of the research players, which greatly hindered progression and often hindered the institution's progress where tacit knowledge migrated with the role.

The three brokers who had been in post more than five years, cite the potential for a culture shift to open up opportunities to move into directing research centres or similar, where the skills to generate income and build complex research teams may be key. This was thought to be possible only where brokers had gained doctorates and had significant long-term experience of academic management.

It was thought that something like REN could help provide a much needed support network for the practice of research development in the arts and humanities in particular, rather than what was currently available through AURIL or Praxis which provided CPD and training provision, little of which was tailored to the needs of the arts and humanities community. Towards the completion of this thesis a number of research focused agencies, such as AURIL and RCUK, had introduced new KT forums and associations that were attempting to engage the arts and humanities, as well as the wider academic community. To date none have recognised the part these roles could play in supporting KT at the heart of academic practices.

Many of the brokers questioned said that some form of meta-research publication could be an important tool in bringing a credible research profile to roles still perceived as highly administrative, and that in articulating and capturing their methods and processes effectively, the academic community might also gain insight into the high level of expertise these posts bring to supporting their research efforts.

7.5 A COMMON COLLECTIVE?

More than half of the brokers questioned were not aware of other brokerage type roles existing outside their institution, for example in sector organisations or non-HEI research agencies. Those who were had engaged sufficiently within particular sectors to recognise counterparts also tasked to build partnerships. These external roles were slowly becoming more evident and in the time spent bringing together the thesis, the AHRC and NESTA in particular were becoming interested in what role these posts might play in supporting their KT activities. As yet the university broker and those emerging within particular sectors such as Bristol's Watershed for example, were still not finding ways to engage around research interests. The following proposal aims to clarify this potential partnership, and suggest that internal and external brokers have an increased role to play in the adoption of KT practices in the arts and humanities value chain.

There are as yet few tools or resources brokers could identify as significant in supporting KT activity and collaborative partnership building. Many were too generic and often struggled to transfer between disciplines outside the sciences. Although brokers cited that they had too few tools to hand, some were starting to adopt or adapt tools more commonly associated with the ESRC or EPSRC, such as interdisciplinary showcasing, 'speed dating' workshops and ideas factories. In late 2008 these elements had begun to be discussed in the AHRC KT Working Group, with a view to designing and adopting similar mechanisms for future funding streams. Where brokers said they had started to find basic tools and resources it was evident that there was no identifiable way to share or test these with others. If the AHRC were to design new ways to support partnership building, brokers felt it vital they also enabled ways to share and debate new practices, and that REN might offer up that 'shared space' in a similar way to its online discussion boards and exchange card system as described earlier.

7.5.1 Some general observations

Building knowledge of any institution takes time and is often the biggest asset for brokers in gaining a breadth of understanding of the academic environment, the characters, their behaviour and the culture in which they operate. Those who had been in posts beyond three years denoted difficulty in progressing one's career by moving between institutions, as the nature of the job relied heavily upon gaining knowledge and insights of those they worked with, which in reality often took one to two years to re-establish and become effective in a new setting.

Taking on work that enables one to build a picture of the institution and players can often be instrumental to a Brokers expertise, such as creating or maintaining expertise directories or gateways. These can also act as a way to locate those internally that are willing and able to undertake KT and then illustrate and match up this expertise with external interests, both of which raise one's capacity to build informed consortiums and collaborative teams.

As denoted in the questionnaire, the percentage of proactivity and reactivity in these posts varies. Those at the start of their careers were predominantly reactive, while the more established were proactive and working more strategically with senior decision makers. This was also closely aligned to the level of autonomy afforded to the posts, suggesting that those who were more proactive were also more likely to have a high level of autonomy with academics within their institution, particularly in the Russell Group institutions.

Intra-university activity is crucial to KT and often acts as a softer introduction to team building and the sharing of new ways of working. If an institution struggles to build internal interdisciplinarity, then the external ones are a much bigger challenge. It was generally thought that building internal consortiums aided the development of the skills and knowledge required to translate that process beyond the academy, and this was key to a Brokers professional development.

Translating languages and traversing multiple boundaries were considered to be in the top five requisite skills for these posts (see questionnaire in Appendix 3), skills that were not always reliant upon having

a specialist disciplinary background. Empathy, creative thinking and a knowledge of the disciplines also rated highly in building capacity for these roles.

7.5.2 Brokerage as a critical role in the Humanities Value Chain

We know that brokers are a growing and valuable role in the changing research environment. They support academics at multiple levels and extend the reach of knowledge to include those beyond academia in the research process. In bringing their roles together, we can see that little is known about the broker and few if any support networks are in place to underpin and fully exploit their expertise. The Broker Day in 2007 was the first time any of these roles had come together as counterparts and the first time they were aware of others working in similar positions across the UK. The outcome of both the questionnaire and the Broker Day enabled that group to express to the AHRC the potential of their offer to underpin and strengthen the AHRC KT environment. The following list of recommendations were outlined as indicative ways in which brokers wished to engage with others, particularly UK counterparts, academics, institutions and potential investors in arts and humanities research. These recommendations were presented to the AHRC KT team in February 2007 for consideration in the hope that a broker network might be established to sit within the REN framework and support future KT endeavours. These recommendations were to both prepare and develop a new community of practice in UK HEIs, as well as professionalise and make more visible these roles in the UK.

1. To share best practice across a UK network that currently is disparate and somewhat dislocated

2. To locate and curate links between potential KT collaborators

3. To become an active agent within UK institutions for the AHRC

4. To become recognised by those beyond their institution as a key point of contact for KT

5. To help to shape the development and uptake of KT schemes through greater interaction with AHRC staff

6. To actively contribute to the building of knowledge and resources not currently available

7. To share and expose particular issues and barriers around the adoption of KT with others

8. Develop active participation in intellectual debate around KT

9. To develop and share multiple methods of engagement and co-production

10. To utilise online tools to build, gather evidence and evaluate KT interactions

11. To expose and develop indicative processes and procedures relevant to other brokers new to their roles

12. To have higher level recognition and endorsement from key arts and humanities agencies (e.g. AHRC) in order to attract academic and institutional recognition and credibility

13. To swap facts, tips and tactics with a growing network of potential brokers

14. To gain greater access to model applications, agreements and legal contracts to better navigate IPR and corporate ventures

15. To contribute to the creation of a positive, engaging and relevant resource such as REN

Further details regarding the broker questionnaire and the Broker Day activities are available in Appendix 3 and online at www.ren.ac.uk.

7.5.3 Conclusion

Brokers are an intrinsic part of the 'Humanities Value Chain', as denoted in Chapter 3, and they are a growing and diversifying group. When the questionnaire was first put in place in 2007 Brokers had not yet been uncovered outside the traditional roles associated with administrative support, such as technology transfer, business development and research support officers. In 2009 we find that the role of the broker is growing and changing shape. Some have adopted practices at a localised level, such as the Research Associate supporting others in their School to design and construct new types of funding proposals. It was also evident that those at an early stage in their research careers were being increasingly relied upon to provide disciplinary specific support, often thought to be lacking in traditional administrative roles. Senior academics were getting involved in research and KT mentoring programmes and the scrutiny of quality in the bidding experience. Some Deans were starting to take on outward facing activities, trying to embed KT into the normative practices of their scholarly activity. Through the change in all these types of roles the flavour of scholarship is also changing and the broker is attempting to support that transition.

Institutions are reverting to the setting up of smaller support units, often institutes of recognised scholarly pursuits and more often driven by academic champions. All these activities are evidence of

the way that the arts and humanities are striving to diversify roles in an attempt to make sense of KT at the heart of their academic communities. Brokers are no longer merely administrators, but valued players in scholarly activities and central to our value chain framework.

The following proposal concludes the thesis and aims to embed the broker solidly within the humanities value chain, where their expertise and role might be both better articulated, but also better valued. As we have seen in this chapter REN, alongside support from the Brokers network, could have potentially acted as the vehicle by which the players in the lifecycle of a research project (as described in Chapter 3) could be better observed. Brokers and academics engaged with REN have the potential to be tasked and guided to capture evidence at the heart of the research community, gathering snapshots of their interactions from different perspectives throughout the lifespan of a KT project. This type of participant observation would allow the AHRC to have qualitative and quantitative data for analysis to support the burgeoning demand for uncovering KT practices and its potential impacts. In concluding this chapter participant observation is expanded upon as a model for an extensive study of the arts and humanities KT activities, utilising some of the frameworks, methodologies and observations outlined so far.

7.6 THE HUMANITIES VALUE CHAIN: A MODEL FOR AN INTIMATE STUDY OF KT PRACTICES

7.6.1 Introduction

This section attempts to outline a concluding proposal to unify key elements in previous chapters relating to the adoption of KT in the arts and humanities. It proposes an extended in-depth study is undertaken to expose how KT works within a range of arts and humanities projects, and explore how the intimate knowledge and behaviour of the players is central to its development. We suggest that we might also uncover new micro-sociological knowledge of KT interactions, the environments in which they are supported and their resultant impacts on investment and partners. In presenting a new conceptual framework for KT in the arts and humanities, we will suggest that a range of methods, when combined, could shed light on the depth of those interactions, that may in turn inform how KT practices might develop in the future.

As we have seen in the Research Council's interest in the impact and evaluation of research in general, a study of this nature could serve to provide an ongoing methodology, driven by those challenged to evidence it. It is timely in that many of the current investors in arts and humanities research are also wishing to find better ways to make the outcomes and resonance of their investments more visible in an environment that is becoming increasingly competitive, and one which is directly affected by economic shifts in funding regimes. To this end we will outline the role of the Humanities Value Chain (hereafter HVC), as described in Chapter 3, as a tool both to observe and to capture the living day-to-day interactions of its players. We will present the context and methodologies available to researchers and suggest that an observational framework is devised that enables this thesis to act as a catalyst from which those investing in the arts and humanities might test, develop, replicate and tailor over time.

7.6.2 Context

Previous studies utilising value chain models have mostly been specific to the workings and performance of industry based firms (Porter & Millar 1999; Carlucci, Marr & Schiuma 2004) where a greater understanding of a company's interdependencies on individual roles and operations have offered invaluable insights into its development and ultimate performance and success. These chains are more often tied to issues of value creation in a supply chain, either within one company or across multiple companies, and specifically through a systematic enhancement of operational resources, staff competencies or communications. These features are to some degree shared by the HVC, but lack the focus upon the intimacy of individuals that share and co-construct knowledge.
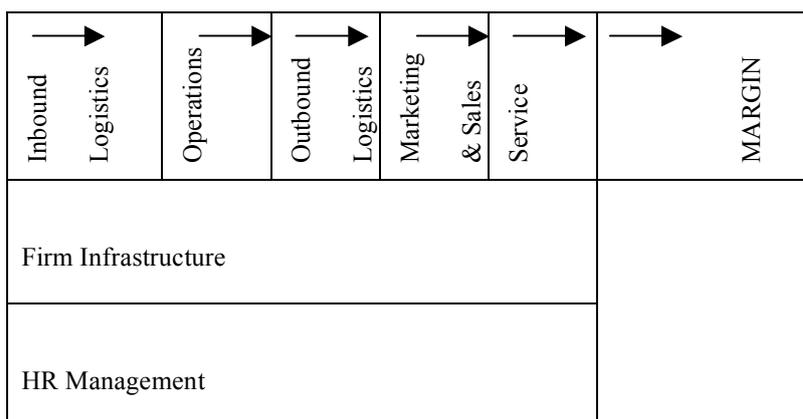

Figure 7.1 Porter's Generic Value Chain

Porter's use of the value chain in particular is much more pragmatic and operational than that of the

HVC and later work by Kaplinsky (2001) (see Figure 7.1), in that it acts somewhat in a rigid and linear way, with a distinct start and end point. These types of chains are orchestrated by a sequence of players 'passing' a project or activity uniformly through distinct stages in which they perform a particular function toward a common outcome. Although we can agree that the sum of the parts are greater than the whole in both value chains, the HVC, as described within this chapter (see Figure 7.2), is concerned with moving beyond Porter's boundaries to identify activities at a much more intimate level, exposing particular characteristics, personalities and persuasions of the players linked within the chain. The HVC is also concerned with how insights, investment and interventions might affect both the function and outcome of the chain activities during, rather than post completion, rarely focused upon in most value chain research on firms. To this end the generation of evidence within the chain of players, during the lifespan of any collaborative project, is central to understanding the impact the value chain approach might have upon the success of the outcomes.
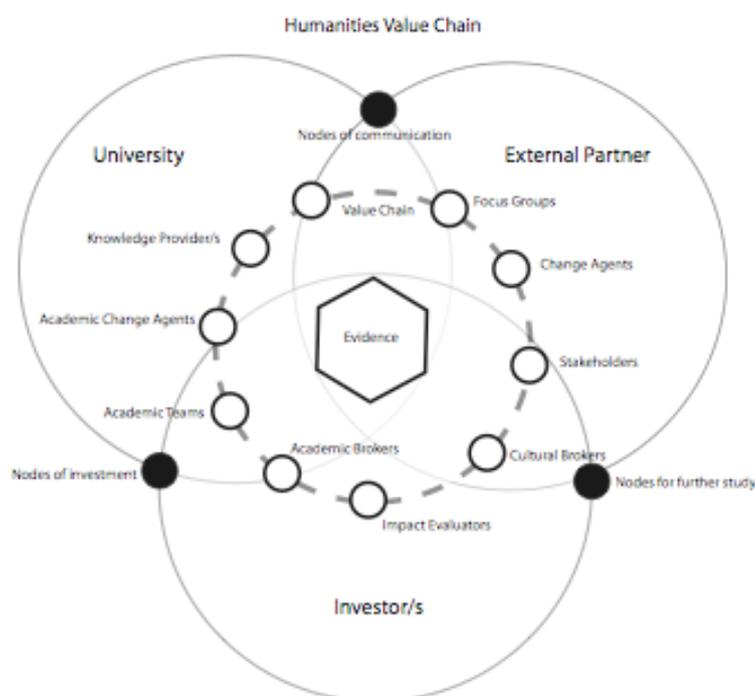

Figure 7.2 The Humanities Value Chain (HVC)

Although intrinsically different, Porter's model does share some common features with the HVC in that the players in both value chains are interdependent and reliant upon effective coordination of information, expertise and competencies. However the HVC by nature has to act in a more organic way, enabling it to diversify or change course to affect the outcome of any given project. It also has the

flexibility to instigate a project from different points in the chain and at different times, enabling the catalyst for a projects inception to emerge as a result of interactions, rather than from a need to evidence a predetermined output or product. To this end the following chapter will concentrate upon the specific role of individual players in any given HVC, and refrain from making parallels with existing value chains rooted in supply chains and knowledge management activities.

In 2004 the AHRC embarked upon a series of activities to explore how it might make more visible the impact of research it was investing in. Three Impact Fellowships were put in place to explore social and economic indicators, with a further two in 2006 and 2007, tasked to contextualise and extend the AHRC's knowledge within the creative industries and cultural policy environments.

> "We have commissioned five impact fellowships aimed at providing medium-term reflective thinking. Three of these are co-funded with Arts Council England, and focus on: private-public sector support for the arts; the social impacts of cultural arts on individuals and communities; and economic methods and valuation."
>
> (AHRC website 2009)

There has been a common tendency in the area of impact assessment (hereafter IA) to privilege the evaluation of activity post-delivery. For this reason, much of the combined work on KT and IA has often been focused upon 'dead history', information confined and limited by what has been gathered and or assumed after completion, rather than throughout the development of research practices and experiences. Whilst this type of information can provide valuable insights, it is towards the 'living' interactions where we can best look to engineer methodology and processes that may be embedded in future KT practices. Current interfaces between Higher Education and the wider non-academic environment demand more than pragmatic tools, methods and econometrics to evidence their impact. They often take place in a vibrant and 'living' space in which there is a constant flow of ideas and creativity; a place where knowledge exchange is reliant upon creative methodologies, stemming from the need to *evolve* throughout interactions, often to an undetermined end. Often throughout a research project the momentum, the partnerships and ambitions, and the objectives or directions can change, but little of this 'learning' is captured or reflected upon.

The AHRC in particular has attempted to capture some of the activities and experiences of KT projects through their new 'Self Evaluation' guide (AHRC 2009) that offers academics a basic outline for considering their project from a range of perspectives. The guidance describes 'ongoing feedback' as a crucial element in recording activities before, during and after a project, but in utilising a basic summative evaluation technique and programme logic model, fails to uncover deeper characteristics inherent in individual practices or organisational behaviour. In taking this approach it remains very much at a distance from the value chain we describe in chapter 3, and instead focuses more upon outcomes, objectives and cost-benefit analysis rather than the people and processes co-producing them. Throughout the thesis we insist that knowledge about how KT might be enhanced must seek to move beyond the preoccupation with outcomes and outputs, to a deeper exploration of the nature of how people interact and are supported to collaborate.

In order that we might better construct a series of 'people and process' driven HVCs for observation we must first address a number of additional factors which we have ascertained may be important in understanding how KT operates in the organisational environment. The following outlines a range of six preliminary studies that would underpin the development of a larger observational framework, and whilst similar to that constructed for CreEM, the additional factors will serve to animate the design and capacity of the HVC to generate more in-depth data.

7.6.3 New factors in the HVC

As highlighted at the start of the chapter, we are concerned with amalgamating three core aspects of the thesis that will form the basis of an enhanced HVC study: intelligent resources, brokerage and observation. In bringing these elements together we must be concerned with constructing a viable framework in which the right players are identified, brokers are mobilised to gather evidence and resources are in place to capture and inform the collaborative process. In our previous study of the CreEM research project we did not intend for the case study to be exemplary or indicative of all KT practices, but merely reflective of an emergent observational tool, and indeed we suggested that variations in the value chain players and the scale of the collaborative partnership would also open up additional considerations. In order that the HVC can be utilised as an observational framework or

instrument, we would need to reiterate the main components of the CreEM case study, but also extend its parameters to incorporate the role of the investor, the individual academic and the environmental conditions in which the collaborative work is taking place. These additional components will be vital in comparing variation in the 'situations' in which KT takes place, as a potential factor in their success or failure.

Increasingly in peer review, at the earliest stage of an investor's intervention in awarding funds to a KT project, these three factors have frequently been touched upon in applications from Nottingham scholars. The question of an academic's experience or capacity for undertaking KT projects, and also the institutional environment and infrastructure for support, can often come under scrutiny. Whether it be the use of new technological challenges requiring knowledge of technical appendices, or the design and methodologies for extending the research outcomes to the public, academics and their institutions are differently equipped and motivated to deliver on these. In including the investor in the HVC we would hope that they too would gain further knowledge of their role within the chain, and their capacity to influence or shape the course of KT collaborations and environments. The additional factors are highlighted below, with a structure for a study of each to inform the next stage where observational frameworks may be developed, and activity and players studied in more detail.

7.6.4 Preliminary study 1: The institutional environment in the HVC

This is concerned with the extent to which an institution is suitably implementing or adopting KT practices in the arts and humanities disciplines in particular. As denoted in chapter 6, it is important to understand how KT functions in an organisational setting in order that we can identify its role or impact upon KT practices. Can we, for instance, suggest that a particular KT collaboration failed or succeeded due to the environment in which it was being pursued or developed? Currently we would have little evidence or understanding of the role the institution plays in such interactions, and therefore we would neither be able to corroborate nor verify that assumption. Through our questionnaires and observational tools, utilised in chapters 5 and 6, we can see that there are indeed opinions and assumptions about the role of the institution that should perhaps be explored further. There were distinct areas of concern about the institution being ill equipped to support the arts and humanities, particularly the notion and value of early institutional investment to underpin ideas at a much earlier

stage of development than perhaps those from the sciences, and the capitalisation on performance as a tool to enhance the perceived value of KT in scholarly life. In introducing the role of the institution in the observational framework we might test the effect of some of those assumptions through reference to organisational behaviour, particularly the ability of the organisation to adapt its practices and behaviour to improve the KT environment for the arts and humanities, and resultant impacts. This would obviously require a more in-depth analysis of any given institution, but it is important to signal the influential role an institution might have upon the adoption of KT practices, where it may indeed be instrumental to success.

In the early stages of the observational framework, gathering a base line assessment of the environment in which a KT project was sited should be uniform and might include quantitative analysis of factors such as the extent and type of provision for training and mentoring, the impact of the KT activity in professional development practices, and the type and extent of dedicated support roles for the arts and humanities.

7.6.5 Preliminary study 2: Ascertaining individual behaviour and motivations upon the HVC

In chapter 5 we affirmed that "researchers collaborate under different circumstances; they inhabit and cultivate knowledge in variegated and complex ways", therefore to understand the collaborative process we must also understand the motivation of the academics in the value chain to participate in that process. We also outlined a number of social science methodologies to uncover academic behaviour associated with modes of collaborative scholarship (Gibbons et al, 1994), and suggested that most academics generally fell into one of three categories which would greatly shape their approach to collaboration. In identifying the mode of collaboration that drives and motivates academics to undertake KT, perhaps we can construct the value chain accordingly, rather than expect one's mode of practice to fit into a framework one assumes will 'fit all'.

In the early stages of designing the observational tool, a more in-depth study of the characteristics of the individual academic might provide the partners with a clearer understanding of how the academic wishes to engage at the outset. In uncovering the way in which the academic might operate within the HVC a number of factors for successful co-production, currently embedded within the KT process,

might begin to emerge. It would be highly useful to analyse further if there is any correlation between understanding the motivations and behaviour of one's collaborators and factors for successful co-production and ultimately, knowledge transfer.

7.6.6 Preliminary study 3: The impact of the investor upon the HVC

It would be important to ascertain what the investors' role is in the process in relation to the possible constraints and opportunities they might place upon KT collaborations, and include them in the value chain. Before a collaborative endeavour is designed, those participating are highly responsive to the needs of the funder, and therefore a certain level of influence occurs which the researchers and partners seek jointly to resolve in order to fulfil the criteria of the specific call. It would be important therefore to question how the investor embeds and articulates a culture for effective KT at the outset of any collaborative call, and clarify how they might help to overcome constraints and barriers, to create opportunities for successful KT to come about in the early stages. Many investors may not have explored KT from the point of early influence, and closer observation of them as key elements in the value chain might help uncover more effective ways to equip the investors with new, innovative and effective methods for guiding collaborative projects and reviewing complex collaborative proposals. In the CreEM case study we did not include the investor in the value chain and therefore had not considered the role the investor might play in shaping, guiding or supporting the project. In any future study we would wish to extend the value chain to include the investor, and challenge them to participate in both the observation process and in evaluating the role they might play in the success or otherwise of new KT schemes, at both peer review and impact assessment levels.

In the early stages of designing the observational tool, a more in-depth study of the investor would need to be undertaken to ascertain the parameters of the key elements most instrumental to enhancing their role in the adoption of KT practices. We would conduct interviews and questionnaires with key staff involved in funding research applications at multiple levels within the investor organisation.

7.6.7 Preliminary Study 4: Partnerships and collaborators

As we have seen in previous chapters, the non-academic collaborator is often highly reliant upon ad-hoc routes to identifying potential academic partners, and often dependent upon individual

relationships shaped outside the institutional environment. If one is new to the university sector, websites and internal systems are often impenetrable and difficult to navigate through from the outside, making early inroads to expertise difficult and cumbersome. In undertaking an observational study it would be vital to address how these potential collaborators can be better enabled to access academic expertise, and be part of early stage partnership building. In developing the study it will be important to see what evidence might be drawn together pertaining to the way partners approach and undertake collaborative research at the earliest stage. There may in fact be particular markers or gaps in partnership building activities that may inhibit some from participating. There may also be methods that can be identified from this evidence, particularly with reference to a partner's understanding of the role they are expected to play and the benefits and outcomes they might expect to gain.

The study may also need to return to the role of the investor in partnership building and question if alternative methods of practice may be more appropriate for particular types of collaborations, which might impact upon the way the investor supports the key partners to participate when designing their schemes.

7.6.8 Preliminary study 5: New advancements and models of evidence capture

KT collaborations can create unique and flexible models for engagement, but few of these have been observed or captured. In order that we might develop a range of HVCs to observe, we need to explore the requisite tools and skills required to gather evidence from within the collaborative process. To this end we wish firstly to study new evidence capturing tools, the skills required by the HVC participants (particularly the broker) and go on to outline the role that REN might play in developing and making these tools available to the arts and humanities community.

As we have seen in the thesis it is clear that any future study should consider supplements to conventional tools such as surveys, focus groups and so on, particularly new technological advancements in video, audio and electronic data which could be collected from users at varied points in their interaction within a project's lifespan.

This could be a mechanism to open discourse on what new knowledge spaces for these interactions might look like, and what skills knowledge brokers, practitioners and researchers will need to adapt to

this kind of highly interactive and observational experience. Some newer methods offer the potential benefit of collecting 'assessment' data in more naturalistic contexts and forms, thereby overcoming some of the limitations of retrospective analysis currently dominating reporting and 'self evaluation' measures in the AHRC and other investors. To this end we would need to explore a range of new tools under development, and online tools utilised in the health and community sector, to ascertain their appropriateness for the HVC.

Such process-based approaches are dynamic and can help to monitor when impacts are starting to fall out of alignment with partners' aspirations and goals, allowing for either a reassessment of goals in light of unintended impacts, or some form of remedial action to get activities back on track. This kind of approach places greater responsibility upon individuals and their collaborators to consider and account for issues of impact at the design stage of the project, rather than leaving it to third parties to make those assessments, post-delivery of the project. In turn, this can be a more rewarding strategy for all concerned, as the benefits of their contribution are made explicit and mutually acknowledged throughout.

7.6.9 Preliminary study 6: The broker as HVC curator and evidence gatherer

The role of the broker who facilitates a stable transfer of knowledge and acts as negotiator or delivery agent in the success or failure of KT activities plays a significant role in the modern university, and it would be valuable to observe that interplay in a more targeted way within the value chain. We would need to ascertain who the brokers in a project's formation and delivery are, and what skills they would require to contribute effectively to collaborative KT activities. We have already ascertained that a number of barriers currently exist that may hamper effective research collaboration, and perhaps in making this role more visible the HVC might have a more intrinsic role to play in identifying and supporting the broker in overcoming these. We know that there are a wide range of tools and methodologies being developed and utilised by the broker, and any observational research would need to consider these to learn more about how they could become part of living case studies, that could further animate and translate the KT experience to a range of players new to the experience.

Before we embark on any observation of an HVC we would first need to discuss the evidence-gathering role we wish the intermediary to take throughout the project. This would also form part of monitoring and evaluation of the role of the broker, through conducting subsequent interviews and questionnaires to ascertain the nature and success of their individual role as intermediary and evidence gatherer in any given HVC.

7.7 REN AS A RESOURCE FOR HVCs

In setting up REN as an online feature to support academic and brokerage roles in the KT process, it was evident that there was indeed a growing body of people wishing to engage with each other. Although REN set out to be a small pilot study, with a limited online presence, it did start to capture a number of narratives and scenarios from those interacting with it. This encouraged feedback and the avid interaction of others seeking ways of collaborative working, and a number of elements such as Exchange Cards and forums were tested, as described earlier in chapter 7. In exploring a number of mechanisms to aid partnership building it was evident that a 'curatorial presence' was crucial to ensuring participants were making links between each other, and also that discussions or feedback was invigorated or stimulated throughout the building of a team or a project's development. To this end any HVC resource would perhaps need to work in a variety of ways, dependent upon the scale and requirements of each project. Deciding to develop an online presence for HVCs to develop and interact might not be sufficient as a 'catch all' for a growing and increasingly variegated KT environment. It might, however, act as a catalyst by which others begin to build, adopt or tailor new resources at a more intimate level, within a team building exercise or project, or in an organisation or business setting.

During the last year of the REN project, the AHRC embarked upon a relationship with the BBC in order to explore how KT might develop within one larger scale organisation. What resulted was a highly managed and orchestrated framework for collaboration, where participants could congregate, discuss and explore ideas with BBC staff. Although this would be highly difficult for a partnership within a much smaller organisation to achieve, the REN model perhaps would not be. As the BBC project progressed, it was also evident that it began to adopt a number of REN tools, such as a version of the Exchange Card as well as beebac (BBC Knowledge Exchange 2009), an online forum for

thematic dialogue and interaction across collaborative teams. The challenge for any online partnership building and project supporting tool would be to ascertain at what scale such a resource might best be developed and introduced to the HVC members.

In creating any HVC resource we should therefore be mindful to explore how it might be used at varying levels and scales, and particularly how elements might operate at a local level within a project, institution or business setting. To this end a study of REN as a central resource from which others may be built, should also be considered.

7.7.1 Designing the action framework for new HVCs

The focus of any method looking to extend the CreEM case study as a tool for further observational research would require closer interrogation of collaborative interactions within what we have described earlier as 'value chains', which consist of a number of key players in the delivery and success of projects. This takes into account the study of complexity theory (Weick 1976), which attempts to unpick the nature of engagement, and the role key individuals play in the organisational process. The objectives in exploring the particular links in a value chain are to uncover evidence for patterns of individual or institutional change, and to influence a culture shift in methodology, practice and forms of delivery. Along these chains there are certain roles that are of particular relevance and often overlooked in the more common models of collaboration, as outlined in chapter 3.

It will be the intention of any further study to encourage case studies to become familiar with the HVC as a tool to describe the participants and the location of their particular roles and responsibilities. It will be the broker in particular that we hope would become the HVC 'curator' supporting the design of a distinct framework and the observational responsibilities of those within it. Although feedback and narratives would be encouraged and captured across participants throughout the project, the role of the curator ensures consistency is maintained, to make the narratives useable in the context of building case studies and denoting emergent impacts, etc.

7.7.2 Laying the foundations with key case studies

In order that we might compare between and across HVCs, our methodology will be case-orientated and provide the basis for establishing comparative models of behaviour and practice to be deployed during the course of HVC projects, as well as test the validity and utility of certain practices in complex settings. This work will comprise distinct phases in which a mix of extant and emerging case studies will be analysed with one or more investor. As described earlier in the REN section of this chapter, we believe an ideal 'ecosystem' for an observational study of HVCs would be one particular thematic programme, where we could provide dedicated resources and mobilise brokers in order to establish the action framework within each. We would decide upon the typology of each case study to ensure the viability of comparative data analysis, for example discipline specificity, scale, external sector, institutional support environment, and so on. We would identify the case studies in consultation with one or two investors in arts and humanities research, and utilise these as the first control group for the onset of any study. As described in the section above, we would address the scale at which support resources might be required for each project, and either situate them within REN or create a tailored version which could be managed and curated by the participants at a more local level.

7.7.3 Designing the framework for observation and evidence gathering

In attempting to explore the impact of funded KT interactions within the HVC framework, any further study should also attempt better to understand the relationship between Impact Assessment and the collaborative process. If we are to agree that the gathering of live data during the project might be more successful than post-project, as denoted throughout the latter part of the thesis, we therefore suggest that we explore models of data capture that could rely upon the gathering of observations in situ within the HVCs. We are aware of a range of existing observational and self-evaluation practices being developed within a wide range of sectors, such as those collated by Learning Light (2009) for e-learning environments, and the OERL (2009), which has worked with the National Science Foundation to support academic and non-academic project monitoring and evaluation.

A brief evaluation of a range of exemplary online observation tools should be undertaken with a view to adopting one or more within the HVCs case studies. Whilst it is imperative we are able to compare between case studies, it should also be noted that differing observational tools might affect the HVC

evidence in different ways, and therefore the observational tools themselves should be open to scrutiny as to their effectiveness and appropriation within particular HVC structures.

7.7.4 Designing value chains to act as case studies and exemplars

In the intervening years between the start and completion of this thesis, the interest in case studies as a tool for supporting KT adoption and interaction has been of major concern to most investors in arts and humanities research. Many of those used to reflect how KT has come about are rarely, if ever, useable in either a practical or reflective sense, although some do offer up a flavour of the overall experience. This is in part due to how they have been captured, as well as how they have been designed. Most act as documented accounts of the experience of one particular protagonist within the project, which can often limit the reader and deny them the chance to see the project from multiple perspectives. Case studies currently being created within the arts and humanities environment, for example by the AHRC (AHRC 2009), and National Endowment for Science Technology and the Arts (NESTA 2009), are similar in that they merely present a brief account of the theme and the positive outputs of the project. A highly usable case study attempts to present the major challenges and problems that may have arisen, as well as the positive aspects of the collaboration. Equally, it is important that the process by which solutions are found is animated, and outcomes highly reflective of the viewpoints of all involved. To this end we would propose HVCs set out to take snapshots of activity and reflections throughout the lifespan of the project, situating activities within an evolving and changing context.

When setting out to utilise HVCs as useable case studies for others, in-situ gathering of ongoing experiences and evidence of activities should be evaluated and re-presented to the HVC partnership as a living account of the collaborative experience. To maintain the currency of the case study material and capture impacts beyond the lifespan of the project, HVC members should also be encouraged to return to the case studies gathered in the REN repository, in order that they might add subsequent outcomes of the project and new reflections.

7.7.5 Testing and evaluating the Humanities Value Chain as a framework for capturing and developing KT practices

This aspect of the HVC is about how the participants 'gain' something from the observational framework and how the learning process might include implementation of changes in the way an individual or organisation supports or inhibits the adoption of KT practices. To this end we propose that the outcome of any further study would create a set of transferable and scaleable guidelines in consultation with those studied, in the form of an applied HVC toolkit, with the specific aim of translating and enhancing effective knowledge exchange in collaborative research scenarios.

7.7.6 Summary

As we can see in chapters 3 and 7, the HVC might offer a tailored framework for designing, observing and evaluating KT collaborations in the arts and humanities disciplines. Through closer participant observation, we suggest that HVCs may have a significant role to play in enabling academics and their institutions to understand their influence on the success or otherwise of KT collaborations, and how they might be adopted and embedded as a new and emergent practice. Before this is possible, we must work closely with the academic community to find out more about how new HVCs might be better constructed and utilised.

We recognise that existing tools and mechanisms are not available specifically for understanding how new collaborative teams come about, and those available are often under-developed and limited to a post-project perspective, where outcomes are often poorly animated and of little use in understanding how a project may have evolved, or been shaped by its participants. Therefore we suggest that any further study should focus on designing HVC frameworks and explores the addition of new micro-sociological features for participant observation and evaluation.

In recapitulating this final section of the chapter we have noted that there has been little attention paid to the role of particular individuals in the collaborative process, and that their motivations and styles of practice have gone mostly ignored. We have also introduced the organisation and funder into the HVC, suggesting that without their inclusion HVC players are unlikely to be enabled to demonstrate the emergent value of their contribution, and as a result perpetuate the myth of ineptitude and low impact.

7.8 CONCLUSION: A 'FOOTPRINT' AS THE BASIS OF FURTHER STUDY

It was not the intention to reiterate and replicate evidence well established in prior work on organisational behaviour, or the co-production of knowledge, nor to present new empirical data on knowledge transfer. However, out of this thesis come some potential interrelations and signals that suggest we need to take a closer and more refined look at the ways in which arts and humanities academics are interacting (or not) with the emergence of KT practices. Myths and stories have been perpetuated and punctured by speculation and anecdotal narratives, which often serve to promulgate the myth of the arts and humanities academic as disinterested, and disengaged with the real world.

As we can see from the accounts of historical challenges and opportunities, political and economic shifts, the emergence of commercialisation and technology interest, impacts and benchmarks, and the dictates and fragility of fads and fashions, the arts and humanities remains a 'work in progress'. It is evident throughout discussions and interviews that it has continued to raise the prestige and resultant income of its institutions, and is ready to discover and explore new environments. Whilst witnessing great changes in scholarly activity, it also continues to maintain its strong connection with the profound historical and ideological nature of a changing world. It is required more than ever to become part of the debate and dialogue long dominated by science, but is as yet uncertain how that relationship might play out. This thesis attempts to present the journey by which we have arrived at these KT challenges. The intention therein is to dispel some of the myths and stories inhibiting its uptake. Whilst these might not be entirely new concepts, the combined exploration between sociological theory and discursive narrative has perhaps emerged for further critical and explorative analysis. Ronald Barnett's *Reshaping the University (2005)* similarly describes the challenges to reshaping institutional behaviour, and suggests that if we have the will to assist change, it will be "our own imaginations, our energies and our courage to try things out and to keep going" that achieve it.

As reiterated throughout the thesis, KT is an emergent practice for the arts and humanities, and one that can only benefit from being captured, debated and made more visible. The key flaw in the drive for KT in the UK is the persistent failure to add depth to what is often perceived to be a shallow and under-developed regime. The arts and humanities has a unique and timely opportunity to take charge of the

way it is perceived and received within that regime, and particularly to add a vibrant living narrative,

that might serve to animate its contribution and make more visible the value of its offer.

PART II

PART II

APPENDICES

All appendices are included in the accompanying CD inserted at the back of the thesis

BIBLIOGRAPHY

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