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A critical appraisal of the position of the university within the knowledge-economy

Submitted for the degree of Doctor of Education

September 2006

Acknowledgements

I would like to acknowledge the support and guidance of my supervisory team, in particular, Professor Nick Boreham and Dr Robert Halsall. Both provided me with invaluable advice and support throughout.

I would also like to acknowledge the support of my wife Fiona and my daughter Martha, both of whom contributed greatly to my ability to complete this thesis.

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Abstract

This thesis explores the contemporary position of the university by examining specific elements within the current knowledge discourse. In presenting a view of the Knowledge Management (KM) movement within the discipline of Management Science this thesis supports the claims that the emerging form of knowledge within the contemporary knowledge discourse is one that relates to or is embedded within performative criteria. This draws on the work of Jean-Francois Lyotard and other 'postmodern' thinkers to help explain why we appear to be facing a crucial paradox, i.e. a context where multiplicity and diversity appears to be paramount and yet knowledge itself is conforming to a more stable and less volatile form.

This principal paradox is explained with the use of a model of the current knowledge discourse. The contemporary position is presented as one of 'residual reflection', where the contestation within the discourse results in a multiplicity of knowledge claims. Inevitably the existing structure of legitimacy within the discourse assists in the validation of knowledge claims within this fluid contested environment where there has not emerged a consensus through which legitimacy can be appropriately assigned. The current knowledge discourse appears to lie within this period of residual reflection and the manifestation of this is outlined in relation to the university.

In particular, the university aligns itself with the commodification of knowledge and adopts an uncritical stance in relation to the imposition of market forces within Higher Education. This supports the legitimisation of learning that is external to the university and validates such phenomena as Lifelong Learning, Experiential Learning and other forms of work-based learning. Although not entirely critical of these forms of learning, this thesis presents a cautionary view of these developments. Specifically, the discipline of education in considering the position of the university within the postmodern, often calls for it to adopt or take up the critical position, to critically engage with the trends that appear to be emerging. However, where the university can be seen to be contributing to its own loss of legitimacy there is a danger that the opportunity for the university to undertake this necessary critical engagement is itself being undermined.

The university is potentially losing its opportunity to engage within the knowledge discourse in an effective way. In many respects it is contributing to its own loss of legitimacy and in doing so opens up the discourse to other elements which themselves seek legitimacy. In its open acceptance of the benefits to be gained from the uncritical acceptance of the commodification of knowledge the university is doing more than allowing different views to be aired and considered. The university is, in fact, appearing to commercially succeed at the expense of its own position within the knowledge discourse.

This thesis does not attempt to support the existence of the university as an institution. In presenting the deteriorating position of the university there is accepted only a greater degree of contestation within the knowledge discourse. The need to reconcile this contestation is necessary but the outcome or the means of reconciliation are not considered here. However, the opportunity for the university to play a part in this reconciliation is not fully appreciated currently, specifically within the academic community. The many claims that the university is in crisis and facing ruin are countered by the presentation of a genuine need, essentially the need to critically engage with the dynamism being experienced within the knowledge discourse. There is assumed to be an opportunity here for the university, but this opportunity is itself being lost and the position of the university, at a time when it appears to be at its most successful, is being undermined. Importantly its own actions are contributing to its inevitable loss of legitimacy and in turn its right or opportunity to position itself as the critical arbiter within the knowledge discourse.

1. INTRODUCTION

> *Everything the universities have been doing for the last nine hundred years made sense inside either the time of eternity or the time of progress; if modernity disposed of the first, post-modernity put paid to the second.*
> (Bauman, 1997, p.21)

The emergence of the post-industrial society (Toffler, 1970; Bell, 1974; Soros, 2000) has placed an emphasis upon what might be regarded as the product of the university – knowledge. The 'knowledge-economy' recognises the centrality of knowledge as an economic asset and in doing so has altered the dynamics within what might be referred to as the wider knowledge discourse. This discourse legitimises knowledge claims and in doing so can be regarded as the means by which knowledge is defined and ultimately applied within a social context.

The university has been a key element within the knowledge discourse (Burke, 2000) but its role is not unaffected by the recognition of knowledge as an organizational asset within this post-industrial context. It is the way in which the dynamics within the knowledge discourse are impacting upon the role of the university that is central to this thesis. As a sociological study of knowledge this thesis is asking how the university has responded to the emergence of the knowledge-economy, where knowledge has become a central economic asset that is being considered and defined by agents, from

commercial organizations to individuals, who previously were not as prominent within this discourse.

In particular, the Knowledge Management (KM) movement (Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998; Dixon, 2000; Allee, 2003) has within the discipline of Management Science emerged over the last ten to fifteen years and is presented here as a response from this discipline to the perceived fluidity and dynamism within the knowledge discourse. Similarly, Organizational Learning (OL), emerging from the discipline of Education (Easterby-Smith, Burgoyne & Araujo, 1999; Paechter et al, 2001), is aligned here with the same fluidity within the knowledge discourse. There is presented here, a relationship between OL and emerging elements within KM, primarily second generation KM (McElroy, 2000) and this highlights the breakdown of disciplinary boundaries within the current knowledge context.

Essentially, therefore, the fluidity within the knowledge discourse can be identified within two literatures, that of Education and that of Management Science. The same phenomena are being considered by each discipline, but their engagement with it sets up the essentially contested nature of the discourse itself and it is this contestation that is directly impacting upon the role of the university. Management Science is presenting or reflecting a specific view of knowledge and it is seeking to legitimise this view within the wider knowledge discourse. The *Pedagogy of Knowledge Transfer* (PKT) is presented here as the manifestation of this definition of knowledge and of its need for legitimacy. Legitimacy affords credibility and where knowledge is being considered,

and where knowledge itself can be seen to be a subjective and socially derived entity (Berger & Luckmann, 1971) this places a more significant emphasis upon the process of contestation itself. Knowledge and legitimate knowledge claims, therefore, is being considered here within a context of perceived fluidity and where the mechanisms for reconciling the contestation within the discourse appear to be, themselves, more fluid.

a. Knowledge Statement

Knowledge has many definitions (Morton, 1997; Polanyi, 1963) - it is practical and theoretical; personal and social; explicit and tacit; scientific and humanistic; subjective and objective. In attempting to work with a concept such as knowledge it is necessary to make a positional statement regarding ones own view of knowledge. Within this thesis, knowledge will be presented as a social expression, as a product of an ongoing contestation within a wider discourse. The origins of this view can be attributed to a number of important sources, including the **Strong Programme** in philosophy (Barnes & Bloor, 1982; Haddock, 2003), the presentation of **communitarian epistemology** (Kusch, 2002) and the **social construction of reality** (Berger & Luckmann, 1971; Searle, 1995) within Sociology and the Sociology of Knowledge. Knowledge here is fluid and dynamic; epistemic formations here are ever changing and fundamentally based upon the shifting elements within the social itself. The purpose of this social context is to allow for collective action by the participants

within any social group, be this, a small community, a nation state or any wider or narrower collective.

Knowledge, therefore, represents a consensus within the social and is therefore dependent upon the dynamics within this contested social context. This draws on a number of sociological perspectives of knowledge, but in particular a Foucauldian view of power/knowledge (Foucault, 1980; McNay, 1994), where essentially knowledge is perceived as being a crucial element within a wider discourse of power and where knowledge itself appears to be based on rhetorical skills, the main implication is that knowledge becomes defined by the extent to which it is capable of sustaining a given position within the power discourse; it draws on the anti-foundational views of Hans-Georg Gadamer (Gadamer, 2004; Johnson, 2000) which essentially presents the absence of any prior structures or foundations to our cognitive engagement with the world around us, the development of our understanding and the production of our knowledge; it draws on the notion of knowledge as embedded within *performativity,* as Jean-Francois Lyotard (Lyotard, 1984; Malpas, 2003) has suggested. Knowledge itself emerges here as a process of being knowledgeable. This, to an extent, is being presented as a reconciliation of the relativism perceived to be inherent within a postmodern stance. Knowledge, as a social entity, is the product of an ongoing process of contestation (Phillips, 2000; Kusch, 2002) within which different elements compete for legitimacy both in

terms of their right to compete and their own weight in determining the ultimate form that knowledge itself will take.

b. The University

The university cannot be seen as a single entity and there is diversity globally, within Europe, the UK and within Scotland. Indeed the two Universities within the city of Aberdeen are two very distinct institutions with quite different histories and today driven by quite distinct senses of the purpose of the university.

Throughout this thesis the university is referred to but to a large extent no specific university is being considered. The question of whether or not this can be done is to some extent addressed by the identification of all universities as elements within the wider discourse of knowledge. The Robert Gordon University in Aberdeen with its fifteen years of history as a university and the University of Aberdeen with its six hundred years of history are not the same but they both claim the legitimacy that has been conferred on them by social forces (be they political, economic or cultural) to make knowledge statements.

The university has this legitimacy and reference to the university within this thesis is primarily focused on the nature of this legitimacy. The legitimacy of RGU after its status as a university was conferred upon it in 1992, is partly

derived now from the legitimacy established by the University of Aberdeen and Aberdeen University in turn draws its legitimacy from the actions of other universities.

If this does not amount to the ability to present the concept of the university as a single entity, it does allow the opportunity to define universities as dynamic elements within the primary discourse of knowledge. The actions of each institution will impact upon this legitimacy and to a large extent this thesis focuses on the way in which machinations within the discourse impacts upon all universities. The specific impact will certainly be different for each institution but in looking at the emergence of the concept of the knowledge-economy this thesis is primarily looking to comment upon the way in which the basis of the university's legitimacy is affected. It is this legitimacy that is the common characteristic under consideration here.

Where the impetus for the definition of knowledge is increasingly based upon a pragmatic rhetorical power discourse and a proximity to practice then the role of the university as a power broker, or an element within the knowledge discourse is impacted upon. Specifically, the pursuit of objective scientific knowledge is replaced by a subjective form of organizational knowledge (Slaughter & Leslie, 1999). That this scientific and modernist view of knowledge can begin to be marginalised is ironically related to the assaults upon the positivist tradition of scientific knowledge and the emergence of a more postmodern view that places an emphasis upon the socially

constructed nature of knowledge. The legitimacy of any knowledge claim is at once challenged by postmodern views of knowledge as being less stable or definitive but this in turn is itself challenged by the sustaining of a more positivist view of knowledge that is emerging from the dispersed nature of the knowledge discourse itself. The emergence of performative knowledge, here presented as organizational knowledge, is directly related to the emergence of the postmodern view. Organizational knowledge appears to derive its own legitimacy, in terms of knowledge statements, from a context that might be described as being based upon a modernist perspective. In other words organizational knowledge draws on perceptions of legitimacy that ironically are being challenged by the notion of postmodernity. This paradox is a key element within this thesis and is referred to here as a *residual reflection* within the knowledge discourse.

The performative characteristics of organizational knowledge are, therefore, presented here as a residual reflection of scientific knowledge during a point within the ongoing discourse of knowledge where the contested nature of knowledge appears to be more transparent (see Knowledge Discourse Model, p.164). This helps to explain the apparent paradox that presents itself within the current knowledge discourse. This is further supported by the emergence of educational imperatives that can be aligned with performative knowledge. Specifically, Experiential Learning (EL) and Work-Based Learning (Boud & Miller, 1996; Boud & Garrick 1999) essentially can be seen to reflect the same shifting dynamics within the knowledge discourse, as can Lifelong Learning (LL) (Longworth, 1999; Watson & Taylor, 1999; Knapper & Cropley, 2000; Hargreaves, 2004) where there is a recognised contextual shift in relation to knowledge

and there is an emphasis upon the engagement of the individual within a wider social context.

Organizational knowledge, therefore, reflects characteristics of knowledge that can be identified with modernity and does so precisely because the discourse itself has become more contested, which in turn impacts upon legitimacy. Where increased contestation creates a more fluid understanding of legitimacy, this social process inevitably seeks to build claims for legitimacy based upon the primary components within the discourse, namely the individual. As an essentially social process, therefore, there is a need to address the position of the individual and this has largely led to the presentation of individual empowerment within the emerging learning environment. In other words, it is necessary for individuals to recognise legitimate knowledge claims and this is more likely to happen where there is a perceived benefit for them in doing so. This draws on the Adult Learning (Sutherland, 1998; Tight, 2002; Knowles, 2005) characteristics such as autonomy and self-direction in learning to provide a positive impetus in relation to the engagement with learning outwith traditional contexts. Ultimately, empowerment (Inglis, 1997) represents here the incentive necessary for the individual to accept an engagement with the social learning context that is being defined by organizational knowledge.

Where opportunities for acquiring legitimacy within this knowledge discourse are present, where there is greater contestation within the discourse, then a number of different actors or agents seek to assume this legitimacy. Within the current context this

can certainly be seen to be commercial organizations. When these organizations acquire legitimacy within the knowledge discourse they inevitably seek to protect it. They appear to do this based on their understanding of what has made knowledge statements legitimate in the recent past. So, newly acquired legitimacy appears to look to existing or eroding legitimacy for its own initial embedding of its legitimacy. Therefore, organizational knowledge can be presented as this residual reflection of scientific knowledge during a period of contestation within the knowledge discourse.

This can help us to understand the principal paradox currently within the knowledge discourse. The knowledge discourse is embedding itself more fully within a context that can be more closely aligned to modernity, while that context is being undermined by the very notion of postmodernity and the assault on scientific knowledge. The nature of postmodernity itself or emerging forms of postmodern knowledge appear to sustain an agenda that can be associated with modernity! Therefore, knowledge within the post-industrial society very much appears to be, or can be seen to be a contradictory reflection of the shifting dynamics within the knowledge discourse. On the one hand scientific knowledge and the objectivity that it represents is being undermined by a postmodern perspective that fragments legitimacy within the knowledge discourse. In doing this it exposes to scrutiny the legitimacy of existing knowledge statements and has allowed this to become a more fluid context where a prescriptive narrative can no longer be seen to represent the goal and purpose of knowledge production. On the other hand, however, a more prescriptive form of knowledge (performative/organizational knowledge) has emerged that appears to draw much of its legitimacy from a

scientific/rational context that is more associated with modernity and is, therefore, supportive of the type of prescriptive narrative that postmodernity appears to challenge.

Nevertheless, the legitimacy of knowledge statements is challenged within what is referred to as the postmodern, and the university is inevitably reacting and looking to present a role for itself within this shifting, fluid and dynamic context. However, just as previous shifts within the knowledge discourse marginalised existing elements within the discourse for example, the decline of the monasteries and the religious control of knowledge production that they represented (Eisenstein, 2005) so the university is faced with a shifting and dynamic knowledge context and one that is appearing to radically alter the role and purpose of the university. The postmodern university (Smith & Webster, 1997), as it emerges as the Enterprise University (Marginson & Considine, 2000) or the Learning University (Duke, 1992; Martin, 1999), within this context is a site for the promotion of performative or organizational knowledge; the learning university becomes an institution or an organization that is fully engaged with an ethos of prescriptive managerialism, aligned through the promotion of organizational knowledge.

c. The Knowledge-Economy

The notion of the knowledge-economy and its emergence over the last couple of decades is indicative of key shifts in relation to the wider knowledge discourse. Not least it appears to be expressive of a technologically determined point of view. It draws on positivism or scientism and the focus on empirically-based

reason – leading ultimately to the type of instrumental reason identified by Jean-Francois Lyotard.

In considering Knowledge Management this thesis is specifically placing it within this critique of the relationship between technology and culture and aligning it with, for example, Postman's view of Technopoly (Postman, 1993) where technology looks to not only over-power culture but to do so to an extent that it itself becomes invisible.

The consequence of this invisibility is the emergence of the knowledge-economy and the growing inability to form the critical questions around the application of technologies. The functionality of the technology itself becomes the focus and this not only presents PKT as the most appropriate way in which to present knowledge but as the only way to do so. The knowledge-economy can here be equated with Postman's (Postman, 1993) view of Broken Defences where this is defined as the creation of a more fluid knowledge discourse.

The knowledge-economy, therefore, and Knowledge Management can be aligned to a specific theoretical position – that of optimistic technological determinism. It supports the application of the scientific method and reflects this in a technically-based pedagogy.

This thesis aims to present a view of the position of the university within the knowledge-economy. It will consider how the dissipation of knowledge creation has ironically supported the sustaining of a largely modernist agenda and pushed the university away from its more traditional liberal and humanistic role of knowledge creation and into a context where it appears to be functioning as a mechanism of uncritical knowledge transfer. Where, essentially, it is adopting PKT.

Critics have identified a 'crisis' for the university (Davie, 1986; Barnett, 1994, 1997, 2003; Schuller, 1995; Delanty, 2001; Graham; 2002). It appears to be losing its social position; where previously it was able to independently comment and for these comments to have a significant social impact, now it appears that this voice is being lost, it is becoming more distant. Why this is happening has been widely debated and to a large extent this thesis engages with this debate.

This thesis argues that there should be more significance placed upon the notion of legitimacy within the knowledge discourse, because it is legitimacy that determines the impact of or the authority of knowledge statements within the knowledge discourse. The ability to contest this discourse is central and a primary characteristic of the knowledge discourse and the phenomena associated with the postmodern can be identified with the idea of there being a 'residual reflection' occurring within the knowledge discourse. This essentially identifies a period where consensus is shifting and critically not at a point where the parameters of the previous consensus can be fully put aside in favour of the emerging consensus.

KM, OL, EL and LL are all manifestations of this critical position, they all align themselves with PKT, where this is associated with a context of fluidity, which inevitably appears to favour the individual (primarily because the lack of social consensus breaks down and this disunity can only draw on the individual), where ICT is regarded as a crucial tool within this context, but which ultimately serves the purpose of reconciling the conflict between the individual and the social within this period of contestation by essentially ensuring more control through transparency.

The university in aligning itself with PKT will lose legitimacy. Ironically, this self-inflicted loss of legitimacy will make the university voice within the knowledge discourse less prominent, to the point where it is unable to reclaim the social position that would allow it to be the critical voice within the emerging knowledge discourse. The 'end of the university' is, therefore, more embedded in its own actions and its critical alignment at this period within the knowledge discourse than in the postmodern condition, the breakdown of social consensus and the growing contestation within the discourse. The attempt by the university to change, to appear to be responsive and to reflect a shifting, more fluid, dynamic and competitive environment has taken its 'eye off the ball' and led it to abandon its traditional position, to hand over its legitimacy on the assumption that the new emerging forces will allow it to reclaim them.

The emerging consensus, whatever this might be, will require critical institutions (social configuration beyond the individual) but this is less likely to be the university

where it is associated with elements that failed to facilitate the emergence of this consensus and indeed can be aligned to reactionary forces that sought to sustain a consensus that was clearly breaking down during the period of residual reflection.

The university is, therefore, becoming less able to critically engage with the knowledge discourse and is aligning itself with an emerging form of knowledge which can be presented as a prescriptive managerial tool, the main purpose of which is to support a dominant socio-economic position. At the same time the role and position of the university within the emerging knowledge discourse is not an insignificant one and there appears to be much to be gained from an active association with organizational knowledge.

KM and OL represent not only this emerging form of knowledge, but also the shifting legitimacy within the discourse itself. The call for the university to play the role of the autonomous and critical agent within a period of contestation within the knowledge discourse, is undermined by the re-positioning of the university in relation to organizational knowledge, which itself is a residual reflection of knowledge within a previous period of less contested knowledge. Who, therefore, fulfils the necessary role in relation to communicative action called for by Jürgen Habermas, Gerard Delanty and others is called into question. This crucial re-allocation of legitimacy and the impact of this on the university, and its subsequent emergence within a broader socio-economic context is essentially what are being considered here.

This thesis presents a view of KM and OL from a sociological point of view and in particular, from the point of view of the Sociology of Knowledge. Drawing on critical social theory, KM is presented as a response to a shifting and fluid discourse and OL, EL and LL, largely a similar response but from the point of view of distinct disciplines, namely Management Science and Education. There is set up here a potential conflict and one where the university appears to be aligning itself with the type of knowledge that is emerging from KM. KM, therefore has a direct impact on the role of the university and it is largely concerned with embedding its own legitimacy within the knowledge discourse. This appears to be emerging, despite its rather contradictory characteristics or basis, and by impacting directly upon the mechanisms associated with legitimacy, the opportunity for the university to respond in a more critical way is being undermined. The university is increasingly undermining itself.

d. Knowledge Discourse Model

Throughout the thesis each chapter will help to build the Knowledge Discourse Model, p.164. This model seeks to encapsulate the ideas being presented. As with any model it is a generalisation and seeks to present not a linear/Hegelian process of thesis-antithesis-synthesis but a richer and more dynamic context of contestation. It focuses solely on this process of contestation without attempting to embed any specific ideological statements.

It does not, therefore, represent the shift associated with modernity and postmodenity. Postmodernity does not have a linear relationship with

modernity. Modernity itself is nothing other than an expression of the degree of contestation at any one time within the knowledge discourse. So, postmodernity simply highlights the fact that there is a greater degree of contestation and that this, at the point at which we now appear to be, has ironically seen an emphasis upon a technologically determined position - referred to in the model as a residual reflection.

The social forces required to contest the knowledge environment are dominated by this perspective of technical rationality. These social forces are constantly re-configuring themselves but how and in what way, is somewhat beyond this thesis. Nevertheless, this thesis does attempt to understand the position of the university more clearly from the perspective being built. For example, the need to quantify academic actions to a degree and to a level previously never experienced or the drive towards virtual universities, based on the technological platforms that are becoming increasingly available, but do not address the question – what is the purpose of education? Instead they address the question of efficiency and performance, how, rather than why.

By focusing on contestation and legitimacy as the key features of the knowledge discourse the paradox that is being considered here is to an extent explained. It exists only where postmodernity is perceived as a physical context, but it is not! Postmodernity is simply greater contestation and within this a multiplicity of views can or might prevail. Those drawing on established sources of legitimacy

> appear to be driving the agenda, but the paradox only exists if the context exists and it does not! Modernity too is not breaking down there is simply a decrease in the degree of consensus within the discourse.

This thesis, therefore, presents a unique view of the wider knowledge discourse and a unique interpretation of KM, OL and other educational phenomena based on this view of the knowledge discourse. It presents and considers the position of the university in relation to the loss of consensus within the knowledge discourse and in so doing presents a unique view of the postmodern condition. This is aligned more fully with the notion of contestation and bases it firmly on the need for legitimacy.

2. SOCIOLOGY OF KNOWLEDGE

The aim of this chapter is to explore and explain the following elements of the Knowledge Discourse Model. First, the period of stability, characterised by the position of scientific knowledge, where modernity is associated with a period on consensus within the knowledge discourse. Second, this period of consensus breaks down as the challenge to the positivist position as a primary characteristic of modernity and the ascendancy of scientific knowledge is led by socially constructed views of knowledge and the emerging notion of postmodernity. Last, the residual reflection, characterised by the emergence of organizational knowledge, embedded within the notions of performativity, technical rationality and Mode 2 forms of knowledge is presented.

The Sociology of Knowledge has concerned itself with attempting to identify the relationship between knowledge and social reality. The re-positioning of scientific knowledge in relation to the emergence of socially constructed forms of knowledge is indicative of wider concerns within the epistemological debate. Primarily, the position of scientific knowledge appears to be more effectively challengeable where there is this acceptance of socially embedded forms of knowledge. To a large extent the postmodern debate has provided the impetus for this challenge to the position of scientific knowledge and helped to open up the debate that has ultimately positioned the social construction of knowledge more centrally in relation to the wider knowledge discourse.

This chapter follows this shift without addressing the implications. It essentially provides, or supports, the view that the knowledge discourse is at a more fluid or dynamic point. In ultimately accepting that knowledge itself can, almost in its entirety, be seen as a product of social engagement - largely an anti-foundational stance - the issue that emerges does relate to the consequences of such an epistemological position. Essentially, if we accept the shift from the dominance of scientific knowledge to socially constructed knowledge, then there is an inevitable acceptance of the primacy of social factors in relation to the creation and production of knowledge. These social factors have indeed allowed for the emergence of organizational knowledge, which in turn draws on the view of Lyotard and the emergence of the principles of performativity.

Organizational knowledge, therefore, represents the consequences of a more fluid and dynamic knowledge discourse that has arisen from the challenge to scientific knowledge and the growing acceptance and awareness of socially constructed forms of knowledge. It also presents the principle paradox being considered as part of this thesis. In looking at the nature of organizational knowledge it is clear that it draws much of its own understanding of itself and its legitimacy from a rooted-ness within the principles associated with modernity.

So, on the one hand there appears to be a move away from or a challenge to modernity inherent within the postmodern condition, but as a consequence of this and in particular the increasing fluidity within the discourse of knowledge, there remains a significant

attachment to the principles, mechanisms and institutions that have been perceived to have legitimacy in relation to knowledge statement within the context of modernity. This paradox is illustrated here by a consideration of the emergence of organizational knowledge, drawing, as it does, for its own legitimacy from what can be identified as forms of legitimacy associated with modernity.

a. The position of scientific knowledge

Scientific knowledge largely rests upon a sense of knowledge as contributing to a process that ultimately, through continual progress, leads to the fulfilment of a social purpose.

> *The idea that knowledge progressed was readily extended to the claim that the entire course of human history represented a more or less continuous forward movement.* (Callinicos, 1999, p.13)

This to a large extent mirrored the evolutionary movements that sought to apply Darwinian theories of constant change and refinement to human social interaction. The consequences of this social proximity to the biological science, of course, led to or manifested themselves in many of the most appalling racial policies associated with the early twentieth century.

> *The list of crimes that this structure of beliefs has legitimised during the twentieth century is a long one, ranging from the compulsory sterilization of the*

> *'unfit' (twelve American states passed sterilization laws between 1907 and 1915) to the Nazis attempts to sterilize the Jews.* (Callinicos, 1999, p.108)

Nevertheless, knowledge, emerging from the Enlightenment, from the steady development of the scientific methodology, from the embedding of a rational approach to human understanding and progress ultimately presented the comprehensive and relatively stable knowledge context associated with modernity. Modernity, therefore, rested initially upon a utopian view of social fulfilment and purpose and has been characterised by:

> *A deep confidence in the ability of human thought to comprehend the essential structure and meaning of human existence and reality itself.* (Gill, 2000, p.2)

Scientific knowledge represented modernity's belief in the directional sense of the Enlightenment agenda of human progress through scientific discovery and the rational methodology that this presents. This is the grand narrative (Lyotard, 1984) associated with the emergence of modernity and its goal of attaining a state of human fulfilment through the application of the scientific method. The epistemological position of scientific knowledge rests upon this method of deductive rationality and it is a position that has proven to be both enduring and robust.

> *It would be absurd to deny the validity of a theoretical system such as quantum mechanics, to which we owe our stock of nuclear weapons. Who would doubt*

> *the credibility of Mendelian genetics, now completely confirmed at the molecular level by the deciphering of the genetic code? At least* some *of the knowledge that has been acquired 'scientifically' is as reliable as it could possibly be.* (Ziman, 1978, p.9)

Enlightenment principles represented an axis shift in relation to knowledge by attempting to base a true belief upon experiment and observation. Knowledge, previously, had been regarded as being founded upon mythological principles, the legitimacy of which was inevitably open to doubt. This doubt emerged during the period of the scientific revolution and replaced a mythological grand narrative with a scientific grand narrative. The knowledge to understand the world around us would now emerge from the application of the scientific method.

> *The conviction of the progress of human knowledge, rationality, wealth, civilisation and control over nature with which the eighteenth century was deeply imbued, the 'Enlightenment', drew its strength primarily from the evident progress of production, trade, and the economic and scientific rationality believed to be associated inevitably with both.* (Hobsbawm, 1973, p.34)

This technologically led and biologically based assault upon the knowledge discourse ultimately shifted the legitimacy of mythologically based knowledge to scientifically based knowledge. This manifested itself in a physical struggle and is reflected in the

mediaeval inquisition and the persecution of the early scientific endeavours of such figures as Copernicus and Galileo. The Church did not fear scientific endeavour itself, and was indeed at the forefront of scientific discovery and inquiry; they were not 'flat-earthers' and their perception as such was imposed upon them at a much later date. It was, however, the separation of scientific activity from the Church that precipitated a reactionary and oppressive response from the Church. The Enlightenment could therefore, be seen as a radical shift in relation to the power/knowledge discourse – it did represent a revolutionary ideology.

> *It is more accurate to call the 'enlightenment' a revolutionary ideology, in spite of the political caution and moderation of many of its continental champions, most of whom – until the 1780's – put their faith in enlightened absolute monarchy. For illuminism implied the abolition of the prevailing society and political order in most of Europe.* (Hobsbawm, 1973, p.35)

The 'illuminism' that Hobsbawm refers to can very much be seen as a process that creates the fluidity within the knowledge discourse by challenging and undermining the 'mortar' that holds the existing discourse in place. Fuelled by a humanistic belief in the power of reason to unfetter and set free the individual and the talent and potential that they hold was a powerful shift in the knowledge discourse. The object importantly, is not to destroy the edifice but to replace the way in which it is held together. Thus the apparent contradictory nature of conservative continental champions of Enlightenment principles and the radical impact of these principles can be reconciled.

The triumph of this rational and scientifically based shift in the knowledge discourse saw the decline of knowledge based on religious faith and belief and its replacement with knowledge based upon *objective* scientific observation. This view of legitimate knowledge has been sustained by its adoption of and association with the emergence of the modernist principle of sustained human progress within the wider knowledge discourse. Science was presented as the means by which human progress would be achieved and the products and achievements of the industrial age have come to embody this sense of progress.

> *For the first time in human history, the shackles were taken off the productive power of human societies, which henceforth became capable of the constant, rapid and up until the present limitless multiplication of men, goods and services. This is now technically known to the economists as the 'take-off into self sustained growth'.* (Hobsbawm, 1973, p.43)

b. Challenging scientific knowledge

Attempts to deny or challenge the legitimacy of scientific knowledge, based upon human progress can be identified in the work of Friedrich Nietzsche (1961). Nietzsche was critical of the objectivity of scientific knowledge and placed a strong emphasis upon the creativity of the individual and ultimately the emergence of an individual personality that was capable of transcending the limitation inherent within the modernist concept of humanity. These early challenges to the emerging modernist

position were further enhanced with the disillusionment that following the Second World War and the excesses of Nazi Germany and the Soviet Union. The Frankfurt School (Adorno & Horkheimer, 1979) at once sought to present limitations in relation to this view of legitimate knowledge and to an extent precipitated a crucial split within the wider knowledge discourse. Jürgen Habermas (1986a, 1986b, 1992) has attempted to sustain a view of modernism that represents this Enlightenment view of human progress, while poststructuralists/postmodernists have presented a challenge to the legitimacy of modernity and the knowledge that emerges from it.

> *Even as Nietzsche and Dostoyevsky said that if God is dead, everything is permitted, so these thinkers [deconstructive postmodernists] are saying that since knowledge is a human invention, humans are free to redefine it continuously.* (Gill, 2000, p.5)

The limitations of scientific knowledge and in particular the extent to which it began to draw on a general theory of biological evolution was most forcefully presented by Nietzsche. Important in the development of his position is his opposition to 'naturalism' where human action is seen as having a direct relationship with nature. For Nietzsche, nature is subjectivised.

> *The human subject is naturalized, reduced to an incoherent cluster of biological drives, while nature is subjectivized, since all aspects of the physical as well as the social world are expressions of the will to power.* (Callinicos, 1999, p.115)

This 'will to power' is central to Nietzsche's view of human action, and importantly it is deeply embedded within a sense not of individual empowerment but of an individual's full participation within social domains that exert their own power on individual action.

> *The human world as well as the interactions of physical bodies and the development of living organisms – is thus the continuous process of transformation arising from the endless struggle among a multiplicity of rival centres of power.* (Callinicos, 1999, p.119)

These centres of power can be seen to represent the social context within which the knowledge discourse is conducted. Knowledge in this sense is relative to and reflective of the interests of those within the discourse. This, to an extent, helps to explain the apparently opposing interpretations or applications of Nietzsche's views. On the one hand the Nazis could see this as a context whereby the strongest will, will prevail, while on the other hand post-structuralists and individuals such as Michel Foucault (1980) could see this as a more subtle interplay of power dynamics.

However, the importance of Nietzsche is in his challenge to modernity as it was presenting itself in the late nineteenth and early twentieth centuries. This challenge focused upon modernity and its grand narrative, based upon the belief that scientific knowledge will ultimately present a single truth, once we are capable of understanding

the world around us sufficiently. Our ability to understand is the faith upon which this grand narrative is based and the mechanism through which it will be achieved is through the waves of technologically based progress that we have witnessed over the last few centuries.

It is Nietzsche who presents knowledge as an expression that emerges from a contested context and 'will to power' can very much be seen as a precursor to Foucault's views on power/knowledge and the wider emergence of the socially constructed nature of knowledge. In this way Nietzsche challenges the hegemonic position of scientific knowledge; presents the ideological foundation of scientific knowledge that would be taken up by Jürgen Habermas (1986, 1992) and others and ultimately can be seen to be the catalyst for much of what is now regarded as a postmodern perspective.

Criticism of 'truth' in this form is often presented as a counter to these characteristics founded upon a scientific rationality and are associated with arguments based upon social constructionism, where there is perceived to be no definitive truths other than those agreed amongst ourselves within a social context.

> *'true' is merely a compliment we pay to statements we find good to believe.*
> (Goldman, 1999, p.10)

The debate that emerges here concerns the nature of truth and is an unwieldy, complex and ongoing debate. Primarily this centres upon the Aristotelian notion of 'justified true

belief' and both foundationalists and anti-foundationalists have argued over the extent to which a claim to legitimate truth can be made. Rationality has been presented as the basis for claiming this legitimacy in truth statements but Wittgenstein can be seen to challenge elements of this when he presents his notion of 'language games' where the acceptance of a truth claim as a form of legitimate knowledge is dependent upon social interaction and complex nuances within the language that is used.

> *The under statement that language is a set of convenient symbols used according to the conventional rules of a 'language game' originates in the tradition of nominalism, which teaches that general terms are merely names designating certain collections of objects – a doctrine which...is accepted today by most writers in England and America, in abhorrence of its metaphysical alternatives.* (Polanyi, 1963, p.113)

Inevitably this argument for the socially constructed nature of knowledge elevates the process by which a truth claim can be legitimately made to centre stage. It focuses on the process of contestation and how, within a social context, we reach an agreement.

> *Where there is no agreement, and no basis for settling disagreements, justification or rationality are thought to be impossible. Without neutral, transcultural principles for settling disagreements, prospects for an 'objectivist' epistemology founder. But this view elevates agreement to an exaggerated epistemic position.* (Goldman, 1999, p.29)

c. The social position of knowledge

The Sociology of Knowledge is deeply embedded within this debate and essentially concerns itself with attempting to reveal the nature of knowledge within the social. It has challenged, to varying extents, the relationship that can exist between objective and subjective forms of knowledge and the very existence of these forms of knowledge.

> *The task of the sociologist of knowledge was to define the nature and functioning of the subjective beliefs of social life so as to facilitate the acquisition of objective knowledge in the social sciences.* (Hekman, 1986, p.15)

The emergence of objective forms of knowledge as a result of Enlightenment forms of thinking is challenged by a growing awareness of the position of subjective forms of knowledge. The relationship between the two is re-aligned and to a large extent this can be seen as part of the mechanism that creates fluidity within the knowledge discourse. Criticising, challenging and contesting the dominant form of knowledge within the wider discourse opens up the opportunities to acquire legitimacy within the discourse.

> *The sociology of knowledge in the nineteenth and twentieth centuries is characterised by practitioners who define a larger and larger role for subjective knowledge.* (Hekman, 1986, p.16)

However, in re-positioning subjective knowledge in relation to objective knowledge there is an inevitable acceptance of this as a valid distinction. More significantly there is an acceptance of objective forms of knowledge. To a large extent the debate associated with the *Methodenstreit* at the end of the nineteenth and beginning of the twentieth centuries can be seen as a continuation of this attempt to re-present a view of knowledge within the social. On the one hand positivists maintained the Enlightenment tradition of the natural sciences and objective knowledge and that this could and should be extended to the emerging social sciences. On the other hand humanists attempted, initially, to argue for a quite distinct form of knowledge within the social. In doing so they were again not rejecting scientific or 'pure' knowledge, but what they were doing was inevitably undermining the legitimacy of scientific knowledge within the wider discourse. Max Scheler can perhaps be identified as the first to begin to seriously challenge this hegemony.

> *Unlike the positivists, Scheler argues that the scientific world view is not the only true and absolute representation of 'absolute things'...Rather, it is only one of a number of different types of knowledge.* (Hekman, 1986, p.25)

In attempting to develop the implications of Scheler's early work there was a need to address the relativism inherent within his position. Here Husserlian phenomenology played a significant part by presenting a methodology based on a 'common-sense' view of reality where meaning or knowledge emerges from intentional acts of the individual ego. By placing knowledge production in close proximity to the individual there is a

denial of the socially constructed nature of knowledge. Social phenomenologists of this type therefore rely very much on psychological explanation.

Jürgen Habermas (1986a, 1986b, 1992) attempted to reconcile the positivist tendencies inherent within the sociology of knowledge and the difficulty that it was having in establishing the relationship between objective forms of knowledge. He presented an 'objective framework' within which social action was constituted.

> *It is his [Habermas'] assertion of an objective framework of social action that commits Habermas to an approach to the social sciences that, although clearly not positivist, is yet consistent with the Enlightenment distinction between pure and impure knowledge. To put it simply, for Habermas there is a position outside socially constructed reality by which that reality can be assessed.* (Hekman, 1986, p.37)

The nature of knowledge in this sense is dependent upon the framework within which it sits. This forms a significant school of thought within the sociology of knowledge but the social nature of knowledge itself and the implication of this are taken further by those who sought to dispense with the notion that knowledge was based on any foundational theory. Habermas, in this sense can be aligned with the Enlightenment tradition as he presents an objective view of knowledge within the social sciences, although clearly there is some distance between Habermas and the positivists.

This position reflects that of the 'realists' within the sociology of knowledge who attempted to present an ontological position where society is seen to exist before social action.

> *Social actors' concepts do not produce society, but, rather, it exists independently of their conceptualisations. And, although all beliefs are socially determined and thus epistemological relativism is correct, ontological relativism does not follow because society predates socially determined beliefs.* (Hekman, 1986, p.44)

One important consequence of the realist position was the re-engagement of what had been objective and subjective forms of knowledge. All knowledge sits within the realm of interpretation and it is this that defines all knowledge as hermeneutic. In relation to the discourse of knowledge realists were re-asserting the scientific character of all knowledge, rather than its hermeneutic characteristics. This provides some insight into the nature of the discourse where residual reflections of, in this case, foundational principles can re-emerge to support what appears to be a form of knowledge that is being fundamentally undermined.

Knowledge is, therefore, what we know, rather than what I know.

> *You may have personal knowledge that you value, but in order to make knowledge socially useful and socially accepted, it must be recognized as legitimate by social actors and institutions.* (Styre, 2003, p.36)

Goldman (1999) has presented a critique of this socially constructed nature of knowledge and presents six defining characteristic that support this view:

- *There is no such thing as transcendent truth.*
- *Knowledge, reality, and truth are the products of language*
- *If there were any transcendent or objective truths, they would be inaccessible and unknowable by human beings, hence unavailable for any epistemological purposes.*
- *There are no privileged epistemic positions, and no certain foundations for beliefs.*
- *Appeals to truth are merely instruments of domination or repression, which should be replaced by practices with progressive social value.*
- *Truth cannot be attained because all putatively truth-oriented practices are corrupted and biased by politics or self-serving interests.*

In challenging each of these characteristics Goldman is seeking to support a form of truth that draws upon correspondence theory where:

> *An item X (a proposition, a sentence, a belief etc.) is true if and only if X is descriptively successful, that is, X purports to describe reality and its content fits reality.* (Goldman, 1999, p.59)

Essentially, there is an emphasis upon the justifiable and verifiable nature of a truth. As with Mendelian genetics there are bases upon which a truth can be claimed that do not depend upon any social context. It draws on the success of a statement that in turn has drawn on its establishment as true through repeated experience. In other words, it is justified upon this basis. However, rather than there being two opposing epistemological camps, on the one hand social constructionists and on the other those who align themselves with an empirical or scientific view of knowledge it is possible to be accepting of scientific knowledge and that the social context will have an impact upon this knowledge. This impact will not necessarily undermine the claim to truth, it may remain valid. However, the imposition of the social may alter the significance of any piece of knowledge by determining its positional location in relation to the social itself.

Human action is determined by and within this social context. It is an ongoing and cyclical process through which our individual actions are normally reconciled to and embedded within the existing social structures. This is a 'task' for individuals within the social and it relates to the knowledge that we acquire, use and apply within our everyday existence. In other words, there are no inherent orders or laws that govern our social conduct. We must decide these for ourselves. Recognising the necessity of doing

so very much defines the context of knowledge creation that is social interaction and existence.

> *Social order is not part of the 'nature of things', and it cannot be derived from the 'laws of nature'. Social order exists only as a product of human activity. No other ontological status may be ascribed to it without hopelessly obfuscating its empirical manifestations.* (Berger & Luckmann, 1971, p.70)

Knowledge is, therefore, a social statement and as such it is contested, it never ceases to be contested and similarly the agents that can claim some legitimacy within this contested environment are fluid and dynamic. These agents, or what Mannheim referred to as 'living forces', within this contested environment are the institutions that represent and make up our social world. This might be any two individuals who come together and create a shared understanding, or it might be a global institution that can claim historically significant legitimacy in terms of its own knowledge statements.

> *The living forces and actual attitudes which underlie the theoretical ones are by no means merely of an individual nature, i.e. they do not have their origin in the first place in the individual's becoming aware of his own interest in the course of his thinking. Rather, they arise out of the collective purpose of a group which underlie the thought of the individual, and in the prescribed outlook of which he merely participates.* (Mannheim, 1936, pp.240-241)

For Berger and Luckmann this legitimacy is based upon the *typification of habitualised action*. This is the embedding of accepted social knowledge and its creation of institutional forms of social behaviour and action. Being based on the recurring 'facticity' of this knowledge provides it with legitimacy but does not render it exempt from contestation. However, to contest it requires an assault to be made on something that has becomes accepted, through social practice, and has, through an iterative process, become embedded in accepted patterns and norms. It is difficult to challenge knowledge with such legitimacy:

> *The institutions, as historical and objective facticities, confront the individual as undeniable facts. The institutions are there, external to him, persistent in their reality, whether he likes it or not. He cannot wish them away. They resist his attempts to change or evade them. They have coercive power over him, both in themselves, by the sheer force of their facticity, and through the control mechanisms that are usually attached to the most important of them.* (Berger & Luckmann, 1971, p.78)

One of the main implications for knowledge of this process of institutionalisation via the typification of habitualised action is that they become self-justifying and create a legitimacy through this institutionalising process. Knowledge of the institution is derived primarily from its own habitualised nature:

> *Since this knowledge is socially objectivated as knowledge, that is, as a body of generally valid truths about reality, any radical deviance from the institutional order appears as a departure from reality.* (Berger & Luckmann, 1971, p.83)

Knowledge, in this sense, is presented as little more than a series of socially accepted and deeply embedded norms that through a process of trial and error has appeared to justify a legitimate claim to being a truth. Through this process of typification knowledge becomes embedded and associated with institutional forms. This, to a large extent reflects Gadamer's presentation of the need to re-position our attitude towards the notion of prejudice. The marginalisation of the centrality of individual prejudice, or the unique positioning of individuals in relation to knowledge statement, has largely been lost as a result of the Enlightenment's presentation of objective knowledge and its 'discreditation' of prejudice.

> *If we want to do justice to man's finite, historical mode of being, it is necessary to fundamentally rehabilitate the concept of prejudice and acknowledge the fact that there are legitimate prejudices. Thus we can formulate the fundamental epistemological question for a truly historical hermeneutics as follows: what is the ground of the legitimacy of prejudices? What distinguishes legitimate prejudices from the countless others which it is the undeniable task of critical reason to overcome?* (Gadamer, 2004, p.278)

Prejudice here can be associated with the contestation that is necessary and ongoing within the knowledge discourse and indicative of the nature of this contestation. In particular, it is concerned with the social characteristics of this contestation as a process of individual self-reflection and the externalisation of one's understanding of one's own position. This philosophical position is the basis of Gadamer's definition of hermeneutics and draws any discussion of understanding inevitably towards an ontological position rather than an epistemological one. Hermeneutics, for Gadamer, is the study of being.

> *The understanding and the interpretation of texts is not merely a concern of science, but obviously belongs to human experience of the world in general.* (Gadamer, 2004, p.xx)

This forms the basis of a challenge to the legitimacy of scientific knowledge claims.

> *The human sciences are connected to modes of experience that lie outside science: with the experience of philosophy, of art and of history itself. These are all modes of experience in which a truth is communicated that cannot be verified by the methodological means proper to science.* (Gadamer, 2004, p.xxi)

Science is, therefore, not the basis upon which any legitimate knowledge claims can be based. Rather it is to language that we must look for the means by which we are able to communicate our understanding of the social world.

> *Humans live within language. Every encounter with reality presupposes linguisticality, the linguistic constitution of understanding. Human reason cannot hold a position outside of language and then translate that position into language. Even reason is constituted linguistically.* (Johnson, 2000, p.57-58)

Truth, reality, understanding and knowledge are all constituted through language and it is the dialogic process that will ultimately determine the nature of the knowledge that we accept. Knowledge is, therefore, based upon a series of dialogues, a series of opportunity to discuss our own engagement with the environment around us and our own identity in relation to this environment.

For Gadamer and for Lyotard the developments associated with ICT can be associated with the need creation and the consumer stimulation required to sustain a productive capacity that is its own purpose.

> *Gadamer says that this relationship of science to technology in modern life has obscured concern for if and how work actually benefits people and for whether or not the achievements of technology actually serve life.* (Johnson, 2000, p.68)

Language and the social dialogue that it represents is the mechanism by which knowledge emerges. The institutionalisation of knowledge claims within the knowledge-economy place an emphasis upon the language or the rhetoric of language

that is used within the organization. How we use language within institutions helps to form knowledge and these formations appear to be more prevalent, substantial and formative.

The legitimacy of knowledge claims, therefore, that these institutional forms can make is enhanced and this can be to the point where any challenge to it can place one outside of the perceived reality or normality as it is contemporarily understood. Michel Foucault in his analyses of sexuality and sanity explores these power dynamics behind this socially based knowledge context.

> *Power must be analysed as something which circulates, or rather as something which only functions in the form of a chain. It is never localised here and there, never in anybody's hands, never appropriated as a commodity or piece of wealth. Power is employed and exercised through a net-like organization. And not only do individuals circulate between its threads; they are always in the position of simultaneously undergoing and exercising this power. They are not only its inert or consenting target; they are always also the elements of its articulation. In other words, individuals are the vehicles of power, not its point of application.* (Foucault, 1980, p.98)

Although the vehicles of power; individuals exercise this power as part of established social formations. It is the institutions and organizations within the social that make up the wider knowledge discourse. This discourse is a power discourse that is intricately

related to the creation and dissemination of knowledge. The context within which this discourse operates is fluid and dynamic. The 'chain' and the 'net' are these social formations and individuals engage with this dynamic process of knowledge creation and dissemination but in association with the mechanisms inherent within these social formations.

The knowledge discourse is, therefore, a representation of this process of the typification of habitualised action. This, itself, primarily emphasises the socially constructed nature of knowledge. It emphasises our experience of phenomena and the negotiated nature of knowledge within the social. Beyond an individual level, in other words within the social, knowledge is formed, but although it may form itself into an apparently solid truth, the contested nature of knowledge identifies the inability to ultimately accept any truth as absolute or objective.

However, the contesting of a truth in this way itself represents a significant positioning of both the individual and groups within the social. For individuals this is a potentially dangerous and subversive activity, primarily because the opportunity to claim legitimacy within the knowledge discourse is one that is related very closely to power and authority within the social. For example, the knowledge claim of a university has been substantial. An individual academic standing in front of a class of undergraduates draws legitimacy from the position of the university within the knowledge discourse. From its own history and from the contemporary legislative and policy frameworks within education, the university is able to present itself as having a legitimate claim to

the knowledge that it is making available through its teaching and research. The individual academic is supported by the legitimacy of the institution and their association with it.

No individual or group is excluded from this discourse, but it is the legitimacy of their knowledge claims that will determine the extent of their authority within the knowledge discourse. My own personal legitimacy will be enhanced by the successful completion of this thesis. In completing and presenting this thesis I am opening myself up to the scrutiny of a social formation that can claim to provide me with this legitimacy.

The dynamics within the different elements within the knowledge discourse and the relationship between the different elements, will determine the positioning of legitimacy within the knowledge discourse. Far from being a monolithic structure this knowledge discourse is now seen as being a fluid and dynamic series of interactions and it is postmodernity that has most effectively presented this fluid context by challenging the objectivity of scientific knowledge and the overwhelming claim to legitimacy that it has presented within a modern industrial context.

d. Organizational Knowledge

Knowledge, therefore, is dependent upon complex inter-relationships where truths can be identified but their significance and position within the wider knowledge discourse is externally determined within a fluid social discourse of knowledge. Although many of Goldman's criticisms of the postmodern view of knowledge can be legitimately

accepted, the question that is central to this thesis is not one directly related to this epistemological debate but to the impact that changing dynamics within the social knowledge discourse have on the claims for legitimacy within this discourse.

The nature of the challenge here is essentially and inevitably based not upon the socially constructed nature of knowledge but the impact that the social has in relation to knowledge and to truth claims and legitimacy. Among the issues raised here is the position of the individual or the self in relation to the fragmented nature of the environment. This presents the condition associated with the postmodern, where plurality and a lack of unity are more substantial characteristics.

> *Thus the hallmark of postmodern architecture was context and montage. In it, as in the entire postmodern movement in the social, cultural and political thought of the late twentieth century, the situation defines the content of meaning. There can be no recourse to a higher principle of form, a universal law or a transcendent idea. Meaning is to be defined by its use.* (Delanty, 2001, p131-132)

Where there is no universal law with which to refer back, then value and meaning have become defined in terms of how knowledge has been applied. To a large extent this mirrors Lyotard's view of performative knowledge and the instrumentalism associated with Adorno and Horkheimer. Here knowledge is set within the fractured context of the social.

> *Lyotard drew a parallel between the fracturing of knowledge into heterogeneous discourses resistant to unification and the decentring of society.* (Seidman, 2003, p.172)

The relationship between knowledge and the state is significant here as it is the fracturing of the bond between the state and knowledge that has helped to create a more fluid and dynamic discourse of knowledge. One consequence of this has been the emergence of the market into this knowledge discourse and perhaps best exemplified by the process of globalization.

> *It is clear that theories of globalization share a view that the nation state is in decline and that transnational processes are becoming more important.* (Delanty, 2001, p.117)

Within this context knowledge appears to be emerging as a commodity that has value within a context that is culturally determined. Here the social structures that have been associated with the nation and the state no longer define cultural identity.

> *The sociological phenomenon of the present age is that cultural identity is no longer defined by social structures, be they those of the nation or class. It has lost its reference points as a result of globalization and the undermining of the state.* (Delanty, 2001, p.143)

Cultural models might now be regarded as a more significant element within the knowledge discourse and these models form a complex and fluid context of legitimation drawn as they are from diverse groupings, associations and allegiances. One significant manifestation of the knowledge emerging from these cultural formations is the use of knowledge itself to legitimise action.

The position of the state in 'late-modernity' has impacted upon the dynamics within the knowledge discourse and by its loss of legitimacy the social has been superseded by more cultural dynamics. The main difference appears to be the emergence of knowledge as a commodity within the market.

> *The ideology of communicational 'transparency,' which goes hand in hand with the commercialisation of knowledge, will begin to perceive the State as a factor of opacity and 'noise'. It is from this point of view that the problem of the relationship between economic and State powers threatens to arise with a new urgency.* (Lyotard, 1984, p.5)

More specifically, the emphasis on the cultural construction of knowledge inevitably places the opportunity to acquire legitimacy within the knowledge discourse more fully within cultural contexts. These contexts are ill-defined and diverse but will include the cultural dynamics that exist within commercial organizations. This is the emergence of the market as a legitimate element within the knowledge discourse and again supports

the view of emerging performative/organizational knowledge. This is the knowledge that is defined by its use value and by its practical application.

> *Knowledge is no longer the fruit of idle curiosity, pursued in the spirit of open and disinterested inquiry, but is something which now invokes use-value and application. In this more mercantile context, the principle of Newtonian knowledge has been suspended in favour of forms of knowledge in which utility is uppermost.* (Syme & McIntyre, 2000, p.3)

The paradox, therefore, of organizational knowledge is based upon the emergence of a culturally determined form of knowledge that draws its source and impetus from the loss of unity characterised by modernity and the fragmentation associated with postmodernity. Organizational knowledge appears to derive its legitimacy from the processes that postmodernity has instigated, but shares many of the characteristics associated with knowledge within modernity. It is knowledge that claims a logical and rational basis and in this way it is strongly founded upon the principles associated with the Enlightenment.

i. Gibbons and Mode 2 knowledge production

Gibbons (1994) has highlighted the emergence of what is referred to as Mode 2 knowledge production. The main characteristic here is the contextualised basis of knowledge which can be said to be valuable. This obviously places it very close to practice.

> *Mode 2 is characterised by a shift away from the search for fundamental principles towards modes of enquiry oriented towards contextualised results.* (Gibbons, 1994, p.19)

In contrasting Mode 1 with Mode 2 knowledge production there is clearly an attempt to create a distinction, which in the first instance looks to present a form of knowledge more appropriate to the emerging economic environment.

> *In this contemporary economic environment, technological innovation becomes the means of keeping ahead – and technological innovation requires the generation and deployment not only of new and specialised knowledge but of a knowledge geared to problem solving in work contexts and one that lends itself to computer mediated communication.* (Usher, 2000, p.99)

Usher goes on to highlight some of the limitations inherent within this type of knowledge, in particular, the invalidity of the distinction between these modes of knowledge production. The universities, particularly in Scotland, have long been concerned with producing knowledge that can be applied in the 'real world'. Also, Mode 2 knowledge cannot be separated from Mode 1 knowledge, the knowledge that emerges from the research associated with traditional university endeavour.

> *When these problematic elements in their argument are highlighted in this way, it does raise the question of why the proponents of the 'new knowledge production' thesis could not figure this out for themselves.* (Usher, 2000, p.103)

The main reason for this, as Usher goes on to say, is largely related to the need to establish this form of knowledge and present it as a legitimate form of knowledge within the wider knowledge discourse, what Foucault referred to as the 'discursive domain'. This can be related to the contestation within the knowledge discourse that is being highlighted here and in the Knowledge Discourse model below.

The contradiction being highlighted here is the fact that these forms of knowledge, be it Mode 2 or organizational knowledge, draw their emergence from the acceptance of a more socially distributed context of knowledge production and yet have presented a form of knowledge that can be identified with existing knowledge forms.

> *What universities have experienced is a gradual loss of their status as primary producers of a particular kind of knowledge and, correspondingly, their monopoly position as certifiers of competence in knowledge production.* (Usher, 2000, p.105)

> The implications for the university in relation to these developments will be explored in Section 3 below. However, at this point, it can be said that knowledge is operating within a more fluid context and given an emphasis that inevitably is placed upon the need to justify and legitimise knowledge claims. This relates not only to those who might be regarded as new entrants to the discourse but also to the existing social formations that have had or held such legitimacy in the recent past.
>
> Mode 2 knowledge production, in relation to this understanding of the situation, places an emphasis upon the need to legitimise and it is this that largely answers Usher's question as to why proponents of the new knowledge production appeared not to see the limitations inherent within the type of knowledge they were presenting. They did not see this because the purpose is not primarily to support this form of knowledge but rather to support their ability to present it, to make this type of knowledge statement.

Organizational knowledge, therefore, emerges from this context of change and draws its legitimacy from the perception of the need to meet and exist within a context of constant change. However, this perception of change and fluidity as the determining characteristic of our current socio-economic existence is itself an expression of the consequences of the shifts within the knowledge discourse.

> *It is now one of the characteristic dimensions of our society, in so far as one's professional expertise, individual career path, and social position are concerned, to engage in retraining – in what is known in French, as* le recyclage. *It is now the case that everyone who does not wish to fall behind, be left on the shelf or lose their professional standing must 'update' their knowledge, their expertise – in short, their practical range of skills – on the labour market.* (Baudrillard, 1998, p.100)

Le recyclage is an important characteristic of organizational knowledge and of the paradox that it is central to it. Essentially, it is the re-creation or re-positioning of knowledge within an environment that is dependent upon both a lack of unity and a need for unity. Postmodernity, as it has been defined here is the process by which the primary discourse of knowledge is broken down. It is breaking down a knowledge discourse that holds legitimacy in terms of its knowledge claims within it. This creates an opportunity to acquire legitimacy within this discourse and the emphasis upon change and its imposition upon the notion of progress are indicative of this shift. Organizational knowledge is acquiring legitimacy by parasitically drawing on the strength of scientific knowledge and resolving its own subjectivity and partiality by presenting *le recyclage* and the need to meet the perceived challenges of a context of constant change.

> *We may ask ourselves whether the 'recycling of knowledge', under its scientific cover, does not conceal this same kind of accelerated, obligatory, arbitrary*

> *change as fashion, and does not bring into play at the level of knowledge and persons the same 'built-in obsolescence' as the cycle of production and fashion foists on material objects. In that case, we should have here not a rational process of the accumulation of scientific knowledge, but a non-rational process of consumption, indissociable from all the others.* (Baudrillard, 1998, p.100)

As the process that is postmoderninty loosens the legitimacy within the knowledge discourse commercial and market oriented interests have presented organizational knowledge as a legitimate form of knowledge. In doing so it seeks to append the trappings of legitimacy associated with knowledge and the institutions that represent this legitimacy. Teaching and learning is invested with this legitimacy and organizational knowledge is looking to present a translation of this into or upon organizational knowledge itself.

The aim here is not to contest any of the epistemological positions that have been outlined above but to draw on this wide debate and use it to develop an understanding of the wider discourse. Here the purpose of knowledge is not to represent any objective truth within a grand narrative but to sustain dynamics within local narratives. This effectively and immediately raises the spectre of relativism and the possibility of there being no one truth, nor many truths, but potentially no untruths! The legitimacy of scientific knowledge is challenged within this postmodern perspective or at least the overwhelmingly prominent position of scientific knowledge within the wider

knowledge discourse is challenged by the principles inherent within postmodernity, but this need not necessarily be a concern.

It is the social and cultural contexts that determine the elements that can legitimately contribute to the knowledge discourse, and the value of their knowledge claim. So, who has a right to claim legitimate knowledge, be it scientific or otherwise, is dependent upon dynamics within a socio-cultural context.

What begins to emerge from this continually shifting knowledge discourse is often contradictory and apparently conflicting phenomena. Where knowledge becomes locally contested within local narratives the dominant form or characteristic of legitimate knowledge will be determined by power dynamics within existing social and cultural structures. The legitimacy of knowledge, and therefore knowledge, is the product of these power dynamics. Ironically where power remains substantially within a modernist perspective there will be sustained a knowledge that is largely derived from the Enlightenment principles based upon scientific rationality. Local narratives might be said to sustain the vision associated with grand narratives and simplistically might do so because of the overwhelming social need for the reconciliation of the contested nature of knowledge. There is a natural and logical recognition of the need to sustain the creation of knowledge and to apply it to the sustaining of a mechanism for human progress and existence.

However, in considering the nature of the current knowledge discourse there is a need to examine in more detail the implications inherent within postmodernity. In particular, the position of the university within this discourse illustrates a changing dynamic where the source of legitimacy has been altered and the university no longer has such a central role in the knowledge creation process. Knowledge remains a social concept but its legitimacy and the basis or source of this legitimacy can be seen to be altered.

Scientific knowledge is not in doubt but its pre-eminent position relative to its own legitimacy within the wider knowledge discourse has been challenged by characteristics associated with the postmodern. Critical social theories have, to a large extent, identified the weaknesses in the grand narrative associated with the Enlightenment view of inevitable human progress through scientific rationality that is embedded within the notion of modernity. Not least it has presented the need to critically challenge and to contest.

> *Theory puts the notion of a discipline under constant interrogation – not so that traditions can be undermined in any naively subversive way (although much contemporary theory is subversive) – but so that traditions can be opened up to the possibility of their changing in productive ways.* (Phillips, 2000, p.40)

Critical social theories attempt to engage this interrogative process and in doing so, open up and sustain the dynamism within the knowledge discourse.

The personal knowledge (Polanyi, 1963) that we have might be our own to form and to develop as we see fit, but it is only when it is allowed to emerge into the social that it takes on any sociological meaning. This meaning is essentially the purpose of knowledge and it is the sharing emphasis behind all social activities. Knowledge in this sense is the reconciliation of the contested nature of individual or personal knowledge to its emergence or embedding within the social. It is an ongoing process and one that reflects the changing dynamics within a social and cultural discourse of knowledge. This knowledge discourse is fluid and dynamic and the elements within it play out a process through which what we can claim as legitimate knowledge is formed. This can progressively be seen as a recognition of the social construction of knowledge.

> *He* [Durkheim] *sought causal explanations, which have been opposed by positivists since Auguste Comte. In a manner that is inconsistent with the positive philosophy, he posited that there are real kinds of social phenomena and sought explanations of these phenomena in terms of their underlying real essence. For Durkheim, social phenomena are to be explained ultimately in terms of such unobservable entities as collective representations and social forces, which positivism would rule out.* (Pickering, 2002, pp.41-42)

Much of Western philosophy has been concerned with the nature of knowledge and how it might be defined. This epistemological debate has been dominated by the schools of deductive rationalism and inductive empiricism. Descartes as a Continental rationalist argued for the quality of the mind over the senses. The body might

experience through touch, sight or sound but only the mind can think. This inherent separation of mind and body continues to challenge philosophers. In Britain, empiricists like John Locke and in particular David Hume, stressed the notion that there are no innate ideas or concepts and that only experience would allow the formation of ideas and the creation of knowledge.

> *Empiricism, like rationalism, embodies a foundationalist approach to questions of epistemology in that it seeks to begin with a rock-bottom analysis of human cognitive experience upon which to construct the structure of knowledge.* (Gill, 2000, p.18)

Immanuel Kant sought to provide some synthesis in relation to these two quite distinct approaches of empiricism and rationalism by presenting the transcendental dialectic, where he sought to illustrate that it was possible to deduce the basis of human understanding from the 'inside'. Both *a priori* and *a posteriori* knowledge can form a synthesis and be seen to have both a basis as a rationally deduced fact and as a more empirically formed piece of information. Kant sought to overturn Hume's assertion that knowledge was absent from the natural science. By drawing on the concept of causation Kant was attempting to illustrate that scientific knowledge was open to the influence of human experience:

> *Although we never know the content of our future experience, as Hume so deftly pointed out, we do know that it will take place within the causal nexus provided*

by the structure of the mind. This is all that is necessary for science to function as a legitimate cognitive enterprise, and Hume's objections to the inductive process have, in Kant's view, been overcome. (Gill, 2000, p.25)

Our view of knowledge continues to develop but essentially there has been a move from the empirical and rationalist position that can be represented by positivism. Jürgen Habermas (1986, 1992), for example, challenges positivism and rationalism that has become scientifically and technologically centred. Habermas would describe this as an example of a pathological social form that has disturbed the balances within modernity. Rather than representing the end of modernity Habermas has sought to redress this balance within modernity. Postmodernity, however, challenges the notion of what Jean-François Lyotard (1984) and others have called 'metanarratives' that are present within modernity. This addresses the goal of knowledge and specifically challenges the notion that knowledge supports a meta or grand narrative, such as the good of all. Rather the goals of knowledge have become less distinct. In a practical sense we are less able to identify knowledge and there is presented a challenge in terms of how we are able to manage the diversity that can be identified within the knowledge discourse.

ii. Lyotard and the Postmodern Condition

In his seminal work The Postmodern Condition: a report on knowledge (1984) Jean-Francois Lyotard has presented a view of knowledge that seeks to reflect the nature of the postmodern engagement with the knowledge discourse. Lyotard highlights for us the shifting emphasis within the discourse that can be

associated with the postmodern. In particular, he highlights the move from an epistemological context based on the notion of the grand narrative and its replacement by a context dominated by local narratives. Within this a specific form of knowledge emerges that challenges scientific forms of knowledge that have emerged within modernity.

> *Scientific knowledge does not represent the totality of knowledge; it has always existed in addition to, and in competition and conflict with, another kind of knowledge, which I will call narrative in the interests of simplicity.* (Lyotard, 1984, p.7)

Here Lyotard is accepting the diversity within the knowledge discourse and the essentially contested nature of this discourse. Knowledge is a complex resource and his view of narrative knowledge reflects the contextual diversity from which it emerges.

> *What is meant by the term knowledge is not only a set of denotative statements, far from it. It also includes notions of 'know-how,' 'knowing how to live,' 'how to listen,' [savoir-faire, savoir-vivre, savoir-ecouter], etc. Knowledge, then, is a question of competence that goes beyond the simple determination and application of the criterion of truth*. (Lyotard, 1984, p.18)

Within this more socially embedded form of knowledge an ontological sense of knowledge is presented by weaving its identification of our understanding of our own actions and our own interactions with each other into the emergence of narrative forms of knowledge. Narrative knowledge is a knowledge that does emerge from the social relationships within which we emerge, rather than being based upon a single idea or grand narrative, be this either the theology of the Christian Church or the scientific rationality of the Enlightenment.

> *The question of the legitimation of knowledge is formulated in different terms. The grand narrative has lost its credibility, regardless of what mode of unification it uses, regardless of whether it is speculative narrative or a narrative of emancipation.* (Lyotard, 1984, p.37)

Within this context and within this understanding of knowledge the process of legitimation becomes central and legitimation is relevant only within a context characterised, if not defined by contestation. For Lyotard the nature of this contestation has led to the emergence of a knowledge that is based upon its use value, its performativity.

The contested environment of knowledge allows us to deny the relativism perceived as one of the main issues with the notion of postmodernity and the absence of any foundational basis for knowledge. This shifts the emphasis onto an ongoing process of contestation embedded within social relationships, what

Lyotard refers to as the 'fabric of relations' (Lyotard, 1984, p.15). This to a large extent is a re-presentation of the nature of postmodernity and ultimately allows Lyotard to present a less linear view of the knowledge discourse. Rather there their being a sense of postmodernity following modernity, the characteristics of modernity are constantly present, constantly forming and reforming the nature of knowledge, to the point where is becomes simply a question of extent or degree.

> *The postmodern would be that which, in the modern, puts forward the unpresentable in presentation itself; that which denies itself the solace of good forms, the consensus of a taste which would make it possible to share collectively the nostalgia for the unattainable; that which searches for new presentations, not in order to enjoy them but in order to impart a stronger sense of the unpresentable.* (Lyotard, 1984, p.81)

Here postmodernity and the position that it might adopt is a justification in itself, rather than being based on any pre-established criteria. Postmodernity becomes the playfulness that allows the challenging of the perception of existing forms.

> *Lyotard refuses to think of the postmodern as a new 'now' look, a look, the latest fashionable attitude.* (Reading, 1991, p.54)

Postmodernity cannot be seen here as a new development, following on from modernity. Rather it is a willingness to engage, a willingness to challenge, to receive the possibility of alternatives and ultimately to reject a sense of foundational principles upon which all things must be based – beyond the process itself of contestation and the legitimacy that will continue to emerge from this process of contestation.

Within this understanding of postmodernity as a process of contestation and challenge the mechanisms by which this is conducted becomes paramount. How does the knowledge discourse resolve its essentially contested nature? How do we sustain the production of knowledge? For Lyotard, as mentioned, this is achieved through the 'fabric of relations', this is essentially a social process.

> *A self does not amount to much, but no self is an island; each exists in a fabric of relations that is now more complex and mobile than ever before. Young or old, man or woman, rich or poor, a person is always located at 'nodal points' of specific communication circuits, however tiny these may be. Or better: one is always located at a post through which various kinds of messages pass. No one, not even the least privileged amongst us, is ever entirely powerless over the messages that traverse and position him at the post of sender, addressee, or referent.* (Lyotard, 1984, p.15)

Within this essentially social fabric the contestation within the knowledge discourse is played out and this is largely through the rules which make up this discourse. Central to this, for Lyotard, is language.

> *The different discourses that make up a society's knowledge – be they physics, chemistry, literature, laws, customs, or even gossip – all have different sets of rules for what counts as legitimate statement.* (Malpas, 2002, p.21)

These rules form part of a 'language game' allowing the contestation within the discourse to be resolved according to socially determined rules. Knowledge, here, is firmly rooted in social action, within which we all play a part. Again for Lyotard, the postmodern condition is the loss of consensus within the knowledge discourse characterised by the undermining of both speculative and emancipatory grand narratives that sought to provide a foundation for human social interaction through the legitimation of appropriate knowledge. The loss of this consensus has resulted in social fragmentation, a loss of identity and the reduction of society itself to an individual level.

Re-acquiring the consensus in turn requires the acquisition of legitimacy. To acquire legitimacy within this fluid and dynamic context there is a need to be able, in the first instance to substantiate a position and for Lyotard the loss of the grand narrative has inevitably resulted in a reconfiguration within the social

bonds that make up society. Postmodernity in this sense can be seen as simply a loss of consensus.

However, Lyotard ultimately points to the emergence of performative knowledge within this contested environment. Based upon the perception of the technical advantages and advance represented by ICT, performative knowledge begins to emerge as a presentation of organizationally useful knowledge. Knowledge which does not conform to this definition will ultimately lose its legitimacy. Knowledge that does not have the characteristics that can be applied within a technological environment will progressively be regarded as less useful.

Like Gibbon, Lyotard is focusing on the mergence of a type of knowledge and again like Gibbon this performative form of knowledge can be criticised for simply not defining a form of knowledge that has not always been fully embedded within the knowledge discourse. However, the significance here is the impact, not of the form of knowledge but the process by which these knowledge claims are made. Lyotard's performative knowledge and Gibbon's Mode 2 knowledge are not new statements about knowledge itself. Rather they represent a re-configuration of legitimacy within the discourse.

e. Key Points:

- **Emergence of the axis of contestation or a re-definition of the nature of postmodernity.**
- **Emergence of the residual reflection or a drawing of legitimacy from existing perceptions of legitimacy within the discourse.**

Scientific knowledge and the objectivity that it claims, has been impacted upon by the emergence, associated with postmodernity, of socially constructed forms of knowledge. The importance of this, from the point of view of this thesis, is that this challenge to modernity and objective scientific knowledge can be aligned with the fluidity within the wider knowledge discourse. More precisely, it represents the contested nature of the knowledge discourse.

So, we can identify an axis of contestation here; where previously there had been a greater consensus within the discourse there is little challenge to the dominant view of knowledge, but where this contestation can be seen to reach a critical point, as appears to be the case within the contemporary environment, greater contestation allows alternative views of knowledge to be presented within the discourse.

Greater contestation within the knowledge discourse is being aligned here with what is normally presented as the postmodern. Postmodernity, in this context, is simply indicative of a greater degree of contestation within the knowledge discourse. In this sense what is regarded as postmodern actually can be seen as an element that precedes

modernity. Essentially, any period where there is a lack of unity in terms of knowledge statements can be equated with what is currently referred to as the postmodern.

However, rather than this being a stage or period beyond modernity, this is simply a period of greater contestation. Arising out of this greater contestation is the emergence of organizational knowledge, which can be equated with Lyotard's performative knowledge or Gibbon's Mode 2 knowledge production, that draws its legitimacy from its own understanding or engagement with the discourse. This has resulted in it drawing from the Enlightenment tradition and the presentation of a form of technical rationality.

This appears contradictory as it is dependent upon the challenge to this position but yet presenting itself in relation to this position. This is the residual reflection of the Knowledge Discourse Model below.

3. THE PEDAGOGY OF KNOWLEDGE TRANSFER (PKT)

This chapter explores the characteristics and nature of the residual reflection within the Knowledge Discourse Model. Both technology and the study of cultural characteristics of organizations have presented a powerful context within which to promote the organizational knowledge. It is presented here as the Pedagogy of Knowledge Transfer.

KM and OL are presented here as supporting evidence of the shifting knowledge discourse. Understanding the nature of these growing disciplines helps to view more effectively the emerging epistemological position of KM and OL. Each represents the key elements within what is referred to here as PKT. This pedagogy arises from the perceived need to embed social learning within a practical work-based environment.

KM can be presented as two distinct developments. First, the application of technology to the management of explicit knowledge has supported Lyotard's main argument concerning the nature of performative knowledge. Here the reliance on technology is perceived in a way that largely inhibits a critical engagement with either the relevance or efficacy of the use of this technology and draws us towards an uncritical acceptance of the technological solution as the only possible solution. Second, the recognition of the limitations that are being identified in relation to the application of technologies has been aligned with individual engagement with these new organizational practices. This has led to the need to make transparent the social context of organizations, if these

organizations are to be manageable and understandable in ways that are largely familiar to organizational managers. This has largely manifested itself in a series of mechanisms that too can be embedded within this emerging pedagogy and it is based upon the need to enhance aspects of individual transparency as an actor within the organization. This too seeks to apply the functionality of technologies in order to support and enhance this transparency and here the application of Michel Foucault's popular notion of panopticism is critically applied to this element within this analysis of the wider knowledge discourse.

Therefore, both KM in its first generation guise as a technological imperative and OL as a second generation form of KM, focussing on the need to make transparent the relationship between the individual and the organization (Argyris, 1993), together represent an increasingly powerful element within the wider knowledge discourse and is presented here as a distinct pedagogy that can be related to the emerging forms of organizational knowledge. This can be seen to be having a direct impact upon this discourse and other elements that claim legitimacy within this discourse. In particular, the university is responding to these emerging claims for legitimacy and it is an analysis of this that forms the basis of the final chapter.

a. The importance of knowledge within a context of change

The Information Age (Levinson, 1997; Davis & Meyer, 1998; Castells, 2001; Van Dijk, 2006) and the revolution that is associated with it have, through its recognition of the centrality of information and knowledge to the production process, assisted in the

emergence of the concept of the knowledge-economy. This is a concept and a context or environment that is characterised by the need to respond to constant change, and it is only knowledge that appears to be able to sustain any operational viability:

> *The competitiveness of a firm is more than anything a function of what it knows, how it uses what it knows, and how fast it can know something new.* (Davis & Meyer, 1998, p.199)

In accepting the relationship between organizational well-being and knowledge and placing such an emphasis upon the importance of knowledge is the distinguishing characteristic of organizational knowledge as it emerges within the Information Age and helps to forge our understanding of the knowledge-economy.

> *Explicitly recognising knowledge as a corporate asset is new, however, as is understanding the need to manage and invest it with the same care paid to getting value from other, more tangible assets. The need to make the most of organizational knowledge, to get as much value as possible from it, is greater now than in the past.* (Davenport & Prusak, 1998, p.12)

The emergence of the concept of the knowledge-economy raises the awareness of knowledge and begins to place upon it the characteristics that align it with the aims and objectives of the organization. If knowledge is a key organizational asset then those characteristics of knowledge that specifically relate to this will inevitably be

emphasised and focused upon. This, essentially, is the concept of organizational knowledge that is being considered here. One key characteristic here is the ability to respond to the perception of change inherent within the notion of sustaining competitiveness.

> *The modern world is swept by change. New technologies emerge constantly, new markets are opening up. There are new competitors but also great new opportunities.* (Blair, 1998, foreword)

Change of this nature and on this scale appears to present a very clear course of action.

> *Our success depends on how well we exploit our most valuable assets: our knowledge, skills, and creativity. These are the key to designing high-value goods and services and advanced business practices. They are at the heart of a modern, knowledge-driven economy.* (Blair, 1998, foreword)

The survival of the organization depends upon the underlying fluidity within its environment. The organization requires responsiveness, agility and flexibility.

> *To survive in the new competitive environment, no enterprise can afford to stand still. All have to be open to new ideas, new ways of working, new tools and equipment, and be able to absorb and benefit from them.* (Commission of The European Communities, 2000, p.5)

To be responsive, agile and flexible in the ways that organizations now appear to need to be emphasises the nature of the importance of knowledge to the organization. It is its use of knowledge that will determine its success or failure within the knowledge-economy. Central to the organization's engagement with knowledge is the development and presentation of an epistemological position and to a large extent this focuses on learning.

> *The new, knowledge-based economy is becoming a striking feature of life in all advanced economies. Increasingly, economic success and prosperity are coming to depend on learning, the creation of knowledge and its application, and businesses working smarter and not harder.* (McLeish, 2001, foreword)

By focusing on learning the organization engages with the existing knowledge discourse making one of the challenges inherent within the Information Age and the knowledge-economy directly related to the position of the university in relation to knowledge. More specifically, this appears to call for a critical re-examination of the knowledge discourse itself. Who has legitimacy within this discourse and can this position be sustained within the changing climate or context that is beginning to emerge and is characterised by the notion of the knowledge-economy?

> *New media create new information, which in turn requires new modes of acquisition.* (Levinson, 1997, p.31)

These modes of acquisition reflect the changing relationship between teacher and learner. If knowledge and information are emerging legitimately from more diverse sources then the implication is that pedagogical processes will also be emerging in different and more varied contexts and forms. The knowledge-economy and the Information Age more generally, recognise that pedagogy as a process is no longer exclusive to children or young adults at school, college or university.

> *Learning has become too important to be left to educational institutions and in-house training departments.* (Boud & Garrick, 1999, p.5)

This changing perspective on learning has resulted in a greater acceptance of a more diverse pedagogical context. As a result of this the role of educational institutions is being re-considered and re-aligned in accordance with the emerging principles of the knowledge-economy;

> *In the long term, the importance of the knowledge factor must be taught in EU Member State schools. University and school lessons must be harmonised and adjusted accordingly as a precondition for scientific integration in Europe and improved mobility for scientists.* (Commission of The European Communities, 2000, p.9)

The university itself is changing in response to the massification process that has emerged. But also, the purpose of these universities has been more fully and more comprehensively aligned to the performative characteristics of organizational knowledge which essentially align knowledge with practice, through experience. This in turn mirrors the recognition that information and knowledge represents the most significant organizational resource for the 21st Century.

> *It is a defining fact about organizations in the Information Age: Knowledge and information take on their own reality, which can be detached from the physical movement of goods and services. From this divergence come at least two important implications. First, knowledge and the assets that create and distribute it can be managed, just as physical and financial assets can be. Indeed, intellectual and physical-financial assets can be managed separately from one another; they can be managed together; they can be managed in relation to one another. Second: If knowledge is the greatest source of wealth, then individuals, companies and nations should invest in the assets that produce and process knowledge.* (Stewart, 1997, p.31)

As Bell (1974) has pointed out, the post-industrial context (often identified with the emergence of the Information Age) is characterised by the need to sustain competitiveness, rather than dominance through conflict. Applying the concept of structural differentiation organizations in the contemporary context have specialised and this in turn has led to an increasing pace of innovation and change:

> *These two concepts – the pace of change and the change of scale – are the organizing ideas for the discussion of the central structural components of the post-industrial society, the dimensions of knowledge and technology.* (Bell, 1974, p.174)

Knowledge has therefore, become important for practical organizational development and indeed, survival to an extent that has not previously been recognised.

> *With the shift in business focus and the increased emphasis on knowledge, organizations need to adapt to the changing markets and tap new opportunities. This affects the organization's structure and forces it to be more flexible and effective in terms of management, employees, and infrastructure.* (Al-Hawambeh, 2003, p.9)

This inevitably means that the move from information to knowledge rich organizations will subject the knowledge discourse to different and more diverse pressures than might have been placed upon it when it was, largely, seen to be more settled within the domain of the university or wider education system. Questions are inevitably asked concerning the relevance and usefulness of knowledge and specifically the legitimacy of the university to represent the position that it has done in relation to knowledge statements. This is the practical expediency we associate with the commercial sector.

> *The nature of knowledge cannot remain unchanged within this context of general transformation. It can fit into the new channels and become operational, only if learning is translated into quantities of information. We can predict that anything in the constituted body of knowledge that is not translatable in this way will be abandoned and that the direction of new research will be dictated by the possibility of its eventual results being translatable into computer language.* (Lyotard, 1984, p.4)

Jean-Francois Lyotard's important report on the nature of emerging knowledge, discussed above, within what is referred to as the postmodern highlights the nature of both the knowledge context and of knowledge itself. The context is one characterised by fluidity and change, it is one where knowledge is more contested. Knowledge, within this context, appears to be aligning itself with what Lyotard refers to as performative knowledge, here referred to as organizational knowledge. This knowledge is being presented as an organizational asset, it can be assigned a use value and it draws its understanding of knowledge from the complexity inherent within the data and information embedded within the emerging technological environment. To engage with knowledge in this context requires us to engage with this technology and to place it in a more prominent position.

> *Along with the hegemony of computers comes a certain logic, and therefore a certain set of prescriptions determining which statements are accepted as 'knowledge' statements.* (Lyotard, 1984, p.4)

What is identified here is the nature of the contestation present within the emerging knowledge discourse. It is one where legitimacy can be seen to be passing to a context dominated by the technologies now associated with contemporary information systems.

Pedagogy is therefore subjected to pressures that can be located within a wider commercial organizational environment and no longer exclusively within the educational environment. Knowledge transfer is being presented here as the pedagogy of organizational learning. It is the means by which learning is facilitated and, importantly, understood within this organizational context. It is a pedagogy based on social learning as opposed to individual learning, where the purpose of learning is not to support an individual's development but the objectives of the organization. It is a pedagogy that draws on 'real-life' experience, is accepting of the ill-defined nature of its own content, requires a collaborative and reflective approach and largely adopts a cross-disciplinary approach within an environment encouraging to openness, frankness and mutual benefit through mutual understanding. However, this organizationally based pedagogy cannot exist in isolation or separate from the pedagogy associated with the 'traditional' educational environment, primarily because this very environment is itself, through the process of massification, now dwelling within the same emerging environment.

> *Higher education is inexplicable today apart from the interests of society and state in it. Those interests spill over into the operation and value of academe.*

> *The boundaries can and have been breached. Indeed, in many places, those within academe have themselves opened the main gates to allow in those external forces; and those forces have become internal ones. The forms of skill, knowledge and capacity required by the external world are willingly supplied by academe.* (Barnett, 1994, p.64)

The implications here concern themselves with the definition of knowledge and the wider knowledge discourse. The epistemology that appears to be emerging is one of commercially and economically useful knowledge – organizational knowledge. These definitions are not new nor are the characteristics that represent them. Organizations have always learnt and have always applied knowledge to their processes. However, the difference would appear to lie in the perception of the purpose of the university. If knowledge was ever seen as being the preserve of these academic institutions, or even that those institutions represented a particularly valuable relationship between themselves and knowledge, then this relationship, or its perception, is being impacted upon by the pressures inherent within the knowledge-economy. Within this context knowledge is not in any sense exclusive to the university, indeed it values the diverse sources of knowledge creation and production and acknowledges the value in supporting and enhancing this diversity.

One key element of PKT has been identified here, namely that there is a context characterised by change and that this in turn has resulted in a focus on learning as a key

organizational process. This opens up the knowledge discourse and exposes it to organizational imperatives.

b. Organizational knowledge as experience

The KM movement has concerned itself with knowledge as an organizational asset and has driven ahead the pedagogy that can be regarded as one of knowledge transfer. Importantly it has located the creation of knowledge within an organizational context and has inevitably sought to legitimise the knowledge created or produced by these organizations.

The basis of organizational knowledge according to KM is experience:

> *Experience at work creates its own knowledge. And as most work is a collective, co-operative venture, so most dispositional knowledge is intriguingly collective – less held by individuals than shared by work groups.* (Little, Quintas & Ray, 2002, p.24)

This clearly identifies the social nature of knowledge within this context. It is both personal, within the mind of the knower but also of value only when it has been put into a form that can be understood and applied by more than the individual. PKT is, therefore, about understanding how this personal knowledge will be made explicitly available by individuals to others.

> *Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of the knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms.* (Davenport & Prusak, 1998, p.5)

This definition of organizational knowledge as being based upon individual experience represents the two faces of context knowledge (the understanding of an organizational environment) and content knowledge (the subject expertise acquired by individuals). It is not only what you know regarding any discrete discipline be it accounting, building a wall or the psychology of the Internet, but also your accumulated experience as an actor within the organization itself.

> *Knowledge develops over time, through experience that includes what we absorb from courses, books, and mentors as well as informal learning. Experience refers to what we have done and what has happened to us in the past. "Experience" and "expert" are related words, both derived from a Latin verb meaning "to put to the test." Experts – people with deep knowledge of a subject – have been tested and trained by experience.* (Davenport & Prusak, 1998, p.7)

Experience is, therefore, a crucial element of organizational knowledge. It places the emphasis upon the social and encourages an introspective or reflective approach to the individual's actions.

> *An individual justifies the truthfulness of his or her beliefs based on observations of the world; these observations, in turn, depend on a unique viewpoint, personal sensibility, and individual experience.* (Von Krogh, Ichijo & Nonaka, 2000, p.8)

If individual experience is the basis of forming and exploiting organizational knowledge and it is this knowledge that is becoming the most prevalent definition of knowledge then it would seem to be natural for KM to focus upon those techniques that are capable of opening up and understanding the mechanism for creating organizational knowledge through experience. This requires of the individual an engagement with the organization that is open and trusting if this experience is to be externalised and moved from its tacit form in the mind of the individual to an explicit form that places this experience within a social domain and allows it to be exploited by more than the one individual.

This tacit to explicit model (Nonaka & Takeuchi, 1995) recognises the formation of knowledge within individuals as a result of social or organizational interaction.

> *Tacit knowledge is highly personal and hard to formalise. Subjective insights, intuitions and hunches fall into this category of knowledge. Tacit knowledge is deeply rooted in action, procedures, routines, commitment, ideals, values and emotions...It is difficult to communicate tacit knowledge to others, since it is an analogue process that requires a kind of 'simultaneous process'.* (Nonaka, Toyama & Konno, 2002, p.43)

Explicit knowledge, however:

> *Can be expressed in formal and systematic language and shared in the form of data, scientific formulae, specifications, manuals and suchlike. It can be processed, transmitted and stored relatively easily.* (Nonaka, Toyama & Konno, 2002, p.43)

The purpose of this movement from tacit to explicit is to ensure that what knowledge there might be residing within the organization is made available to the organization as a whole and is not 'locked' inside individuals. In doing this, the organization hopes to unlock the 'hidden gold' of its intellectual capital:

> *Today, when knowledge has become the primary raw material and result of economic activity, organizational intelligence – smart people working in smart ways – has moved from a supporting role to a starring one. For the people who allocate money to corporations (that is, investors) and people who allocate*

> *money within them (that is, managers) and the people who allocate their lives to them (that is, employees), intellectual capital has become so vital that it's fair to say that an organization that is not managing knowledge is not paying attention to business.* (Stewart, 1997, p.56)

Organizational knowledge is fundamentally a recognition of the social configurations within organizations themselves and the role that this plays in relation to the creation of knowledge. These social relationships extend themselves to personal beliefs and into both formal and informal contexts where this created knowledge is shared.

> *Recognizing the value of tacit knowledge and figuring out how best to use it is the key challenge in a knowledge-creating company, one that requires extended conversations and good personal relationships – that is, knowledge enabling.* (Von Krogh, Ichijo & Nonaka, 2000, p.9)

This highlights the embedding of knowledge creation within an organizational context and specific aspects of the pedagogy that might be related to this form of knowledge. Extended conversations amongst individuals who relate positively to one another is a key component in the application and exploitation of organizational knowledge. This raises questions and issues related to how an organization might look to foster these positive relationships and to a large extent this helps to justify the centrality of the 'human' element within KM, specifically the Human Capital.

One key element of PKT has been identified here. Organizational knowledge is formed through individual experience and that this in turn highlights the need to support mechanisms that will ensure the transition from individual experience to organizational asset. This makes the individual the key to the successful acquisition of organizational knowledge.

c. Human Capital

The emergence of organizational knowledge based on experience inevitably focuses not only on the social dynamics themselves but the individuals within these dynamics. The nature of tacit knowledge makes it vital that if explicit knowledge is going to be created and exploited by the organization then there must be willingness on the part of individuals to participate and engage positively with what processes there might be in place to transform their own personal tacit knowledge into an explicit form.

In this way individuals become a form of capital in their own right:

> *The idea of investing in human beings as a form of capital has...fuelled a very powerful discourse of workplace learning. This discourse involves thinking in terms of human value (and performance) as a return on investment in a cost-to-benefit ratio. Human capital theory is thus a way of viewing the preparation of workers to meet the labour requirements of a market economy.* (Garrick, 1999, p.217)

Many examples of the value of Human Capital can be found in the literature. Tom Stewart (1997), for example, relates the story of Taco Inc. a pump and valve company and its Learning Centre:

> *In here, where there are classrooms, a computer lab, a library, and a conference room, and at nearby community colleges and universities, this small (1995 sales were between $80 and $90 million) privately held company provides employees with an astonishing offering of educational opportunities – more than six dozen courses in all. A few are brief, standard stuff, such as orientation programs, fire and safety drills, introductions to Taco's products, Weight Watchers, and quit smoking programs. But there's more.* (Stewart, 1997, p.80)

The 'more' includes courses that include the awarding of company diplomas and cover such areas as customer care and employment law. The significance of cases such as this lies not only in the explicit educational activities that they assume, but also in relation to the impact that these have upon the knowledge discourse itself. To an extent the alignment of organizational activities with various forms of educational activity and not least the adoption of the language of education, places these organizations within the wider discourse of knowledge. To an extent they are a statement of their legitimacy in relation to this knowledge discourse.

This type of case is indicative of the consequences that can be expected from a growing sense of value in Human Capital. Inevitably this places an emphasis upon the pedagogical processes that can support and enhance this capital. It is not surprising that this seeks to understand and develop the type of skills that have been associated with teaching and learning.

One key element of PKT has been identified here, namely that individual experience can be re-presented as an organizational asset through a suitable programme of teaching and learning. The key elements identified above begin to form a distinct pedagogy and this is developed below.

d. The Elements of the Pedagogy of Knowledge Transfer

The necessity, from a management perspective, of ensuring that Human Capital and the knowledge that it represents is managed effectively raises the obvious issue of just how such management should be undertaken. This includes the **acquisition and creation** of knowledge and the **transfer and sharing** of knowledge.

d.i. Acquisition and creation

For PKT the knowledge that is being identified supports and sustains the aims and objectives of some form of social grouping. It is this social or collective formation that sustains the learning within the group and therefore requires there to be a quite specific engagement by individuals in this learning process.

> *In the knowledge economy, education is key to creating new knowledge, adapting to the fast-changing working environment, acclimatising to new socio-political structures and dealing with the increasing amount of information created every day.* (Al-Hawamdeh, 2003, p.11-12)

In the first instance it is necessary to make transparent the knowledge that can be acquired by the organization. There is a need to identify the sources of useful organizational knowledge and this is often presented as the personal or tacit knowledge of individuals. It was Michael Polanyi who highlighted the tacit dimension of knowledge. This emphasises the personal nature of this knowledge and how personal engagement with learning is crucial.

> *Suppose that tacit thought forms an indispensable part of all knowledge, then the ideal of eliminating all personal elements of knowledge would, in effect, aim at the destruction of all knowledge.* (Polanyi, 1983, p.20)

The 'hidden gold' of KM is largely concerned with creating a learning environment that can unlock these personal elements by effectively engaging with the individual and aligning their aims and objectives with those of the organization. However, in the first instance there is a need to systematically understand the way in which organizational knowledge is acquired. Therefore, organizations embark upon a programme of

knowledge accumulation through acquisition programmes that will include dedicated learning initiatives aimed at enhancing the knowledge base of the organization.

Knowledge acquisition is a practical process, the aim of which is to begin the process by which an organization will create its knowledge base. This, in turn, will allow an organization to effectively exploit the knowledge assets present within the organization through the identification, analysis, mapping and application of the asset. As a practical process it will cost money, take up time and use valuable resources and must therefore illustrate that it can have a good return on investment.

Generally, the process should allow for the development of sound strategic partnerships; allow the organization to retain the expertise it has developed and be in a position to make better decisions. Knowledge acquisition includes both external and internal sources of knowledge as each contributes to the knowledge base of the organization.

External to the organization knowledge can be acquired from a number of sources. These might include *experts in the field.* Using experts in the field can require the organization to recruit on a variety of different bases. This might be short-term limited contracts or on a consultancy basis. It is important to link recruitment policy with the strategic knowledge goals and to attempt to ensure that individuals who are selected are capable of carrying out the requirements of these goals. As part of this there has been an increase in the amount of *headhunting* that goes on, particularly in North America.

Other organizations also represent and important source of external organizational knowledge. As a more co-operative form of knowledge acquisition this can be through collaborative ventures with other organizations. An example of this might be the taking over of *hot shops* or smaller but dynamic companies in order to attempt to acquire the dynamism present. This is often unsuccessful as the individuals who have the knowledge often leave rather than be subsumed by a large organization. This means that the takeover process itself is quite important and what efforts can be made to prevent the brain drain (the loss of organizational knowledge) need to be implemented. Strategic alliances are a less radical form of this type of knowledge acquisition. Genuine co-operative ventures often prove useful where all partners can close a gap in their knowledge through this type of co-operation.

Customers too are an important source of this type of knowledge. These can include any groups or individuals who have an interest in the products or services of the organization, users, suppliers, employees, members of the public, shareholders and so on. The importance of this group is largely in relation to the perspective that they have of the product or service. Increasingly, there has been customer involvement in product and service development. Generally this type of association improves communication between the organization and the customer allowing a more informed understanding of the needs of each. Customer surveys, pilot projects and so on all constitute this type of knowledge acquisition.

Finally, there are *specific knowledge products* represented by the patents that are held by either individuals or organizations and access to this can be acquired through a licence. Similarly the purchase of a particular piece of software can have an impact upon an organization's knowledge base. This could be a form of groupware, linking up all the particular experts within the organization; it might be buying CD-ROMs. However, as with the purchase or acquisition of all of these products it is their use that is important or their integration into the existing knowledge base.

Internal to the organization knowledge can be acquired from a number of sources, such as textbooks, reports, journals, messages or even conversations. These sources can be found in filing cabinets, databases, on desktops, in resource centres and libraries as well as tacitly in peoples' heads.

Individuals, therefore, make an important contribution to knowledge acquisition. It is their judgements and their experiences that are being acquired. In particular, the person holding the knowledge in their head - usually referred to as the **domain expert** and the person responsible for extracting that knowledge in such a way as to make it an organizational asset - usually referred to as the **knowledge engineer**, is a key relationship within the knowledge acquisition process. Each of these individuals should bring different skills to bear upon the process:

The domain expert will know the domain - he or she will be experienced in the domain and will have formal as well as informal qualifications backed up by learned experience based on-the-job. They will have an understanding of the tasks involved and the

relationships which exist within the domain between individuals, sources and flows of information. They should be a confident communicator, be able to express the knowledge and experience associated with their expertise, be able to provide suitable contexts within which theory can be tested and will be patient.

Clearly the domain expert is a key individual in the knowledge acquisition process. Their selection as experts will be based on experience and perceived expertise, often coming from their reputation within the organization and will not necessarily be based on academic qualification or seniority.

This highlights one of the key characteristics of PKT, namely the dispersal of traditional responsibilities in relation to teaching and learning. Here, clearly, the expert is required to not only hold this knowledge but also to be able to transfer it. The skills required of a domain expert are therefore similar to those of any teacher.

Difficulties arise in relation to these experts where there is more than one expert identified. This is further compounded when there are differences between the experts. To some extent this highlights the need for there to be an intermediary within the process and it is indeed one of the roles of the knowledge engineer to deal with these types of difficulties.

The knowledge engineer will have a sound understanding of the technology supporting knowledge based information systems. This will include modelling techniques and

appropriate methodologies, will have good interpersonal skills, and will possess a formal or informal interest in areas such as psychology or cognitive science. Individuals here need to be able to learn quickly and must ensure that a domain expert is encouraged to participate and contribute to the process and regards it as a positive process.

The role of these two individuals is crucial to the success of the knowledge acquisition process and the skills required by both are quite different. One is responsible for the content, the other for the elicitation of that content and the subsequent representation of it in an appropriate way.

The view that each has of the process can be quite different, for example the expert view of how well they are able to explain the knowledge that they hold often is quite different from the view of the knowledge engineer. The domain expert often believes that they are able to express themselves well, but the knowledge engineer often sees the expert's skills in this respect as often far from adequate.

This makes the elicitation of expert knowledge a key element in the internal knowledge acquisition processes. In the case of knowledge engineering the domain expert is skilfully questioned and interrogated in order to produce a series of generalised examples. Based on the collection of these examples it is possible to use *inductive generalisation algorithms* that are computer representations of these examples that can subsequently be applied to comparable problems within the same domain. These

algorithms are designed largely to transform the operational knowledge of the domain expert into heuristic rules for making inferences (this process is often referred to as case-based reasoning). The skilled knowledge engineer should aim to gain the respect of the domain expert in order to elicit the knowledge data. This might require learning elements of the domain, the basics or the jargon and acronyms used. Some of the techniques involve software and can be automated - some programs can now engage the domain expert in a conversation or dialogue.

An example of the tools used in this type of process is the *decision tree* that attempts to represent the processes involved in answering a particular question or addressing a particular problem. A decision tree begins at the *key node* or *root node* or starting question/problem. It then requires a response in answer to the question posed and continues with subsequent questions until the leaf or *terminal node* is reached - this will be an answer related to the key node. The decision tree is not particularly good for large complex issues but is good for a few combinations of actions and conditions.

The decision tree does not represent a genuine situation where each question has an unequivocal answer. In reality there are more probabilities than certainties, often no right answers. Within a decision tree a wrong answer could send a computer program down the wrong path never to be seen again. This has led to the development of the *probablistic decision tree*, employing *probablistic reasoning*. They are essentially based on the inclusion of outcome statistics within the original calculation. The

objective of these types of tools is to represent the knowledge base of the organization in order to be able to then encode it within a suitable computer program.

Once the knowledge base has been represented and captured within a suitable program it will pass through a series of stages to ensure that it operates in the expected way. These processes will include *verification* that will both consider the technical accuracy and the intellectual accuracy. The latter is carried out with the assistance of the domain expert and the former the knowledge engineer. Both will *validate* their efforts in relation to the user specifications or management objectives in relation to the initial project proposals and ensure that the end product meets these specifications.

This highlights key characteristics of PKT. The nature of the dispersed responsibilities, namely the shared responsibility for both teaching and learning, which contrasts with traditional pedagogical models where there is a clearer distinction between teacher and learner and the application of technology to the exploitation of the knowledge base.

There are many means by which the knowledge represented by the above can be acquired through the organization. They can be either **formal** or **informal**. Formal might include reports, attendance at meetings or conferences, publications (hard copy and electronic), discourse via email lists and so on. Less formally knowledge can be acquired through conversations in the staff canteen or in the corridor. It might also be during the coffee breaks at conferences where many suggest the real learning goes on.

Knowledge acquisition is the initial recognition of the learning activities that are taking place every day within all organizations. Understanding these is one of the key elements within PKT. An important aspect is the informality of the process.

> *The totally unexpected and playful still (thankfully) happens from time to time and one does not realise its significance until after the event. Such serendipity can occur as spontaneous experience – like a jolt or surprise that shapes one's learning.* (Garrick, 1999, p. 219)

The organization allowing or facilitating these types of knowledge acquisition both formal and informal will be making a positive contribution to the accumulation of the organizational knowledge required by the organization in order for it to maintain or sustain its own competitive position within whatever market it might operate.

Organizational knowledge is acquired, therefore, from a number of different sources both internal and external to an individual organization. This diversity or fragmentation is a key component element of PKT, not least in terms of the more dispersed responsibilities. The responsibility of the teacher falls to each individual within the learning context and similarly the responsibility of the learner likewise falls to each individual.

PKT can, therefore, can be seen to be embedded within a social context. What expertise one might have is recognised as valuable and applicable in many different contexts and

the goal of KM is to ensure that the organization is capable of exploiting this valuable resource.

The careful construction of a system capable of exploiting the knowledge base of an organization has led to the presentation of detailed knowledge architectures that have exploited and applied Information and Communication Technologies (ICT) to support the implications inherent within the characteristics that are emerging in relation to PKT. These architectures emphasise three key elements. First, the *context* will identify the aims and objectives of the organization; it will seek to express these and provide the most effective service to users of that organization's product or service. This rather simplistic statement begins the process through which we can begin to identify the operational cycles concerned and the data and information that might support them. These are what are called the 'leverage points' or the 'information leverage points', in other words they identify the information that will allow the most effective means of achieving the objective. Second the *content* should support the context, it should provide to managers and other employees the data and information that will allow them to act upon it. It can be all types of information, but importantly recognises the value of that information. Third, *people* are important with the aim of getting the right information to the right people and delivering the content.

Achieving the correct balance and synergy between these three elements is the goal of Knowledge Architecture. Knowledge Architecture is essentially a blending of these necessary components to allow the exploitation of the resources to meet set objectives.

> *Above all, building a successful knowledge architecture means assessing the important content for the success of your organization, then putting people and technology behind that information.* (Applehans, Globe & Laugero, 2000, pp.32-33.)

To achieve the goals of knowledge architecture and in identifying the sources of knowledge within an organization it is important for it to develop a vocabulary to ensure that knowledge is correctly and consistently understood; that knowledge is identified, modeled and explicitly understood, shared and reused among different applications; that a culture is created that encourages knowledge sharing.

In order to do this it is necessary to promote the importance of knowledge partly by increasing awareness of it and by establishing a base of skills within the existing personnel that are able to exploit the knowledge of the organization. This is not an easy thing to achieve, as knowledge exists within the organization at different levels of abstraction, where knowledge is valued differently depending on the user, there is no fixed quality and is often intangible or incomplete. The function of the knowledge audit attempts to meet this requirement by detailing, or profiling, the knowledge base of individuals.

> *Profiling is the key to executing a successful audit. Effective profiling of key partners, employees, and customers will give you a clear picture of which KM*

projects are the right starting points. (Applehans, Globe & Laugero, 2000, p.37)

For each knowledge asset that is identified it is necessary to identify whether or not there are mechanisms by which that asset can be developed for use, preserved for potential future use, kept up-to-date and used effectively by being transferred to the relevant groups or individuals, transformed to continue to enhance its value and ultimately assessed to ensure this value to the organization.

Content and availability of the knowledge asset is the first priority. Content refers to its domain, type and quality, in other words where has it come from, is it explicit, tacit and so on, and how complete it is, how up-to-date is it? Availability refers to the form that it takes, whether or not it is available at a particular time and at a particular location. The organization of knowledge in this way clearly identifies a discrete series of activities that draw on classification and cataloguing skill associated with professional librarianship and information management.

In this way PKT highlights the accessibility of knowledge and the individual's ability to sustain a high degree of literacy within the rich information and knowledge environment. In other words, where the educational environment has largely dissolved the boundaries between the responsibilities of the teacher and the learner, that appear to exist in a traditional educational environment, then it becomes incumbent upon each participant to fulfill both a teaching and learning role simultaneously. The PKT reflects

this blending of roles and ultimately requires of the individual a level of participation that is both receptive and positive in terms of the contribution to the overall knowledge base of the organization.

The acquisition of knowledge, therefore, within an organization is to a large extent dependent upon that organization's culture and the capacity and willingness of individual participants to share their knowledge. Given this there are sound mechanisms through which the shared knowledge can be captured and subsequently re-presented to the relevant individuals or groups within the organization. To do this key roles have been identified, techniques and tools developed and perhaps most importantly of all the strategic commitment of the organization has been won.

PKT, at this stage, is a subtle process focusing upon a series of organizational learning activities. The accumulation of a knowledge base recognizes the existence of valuable knowledge within the individual and the need to capture it. This is done through a series of techniques essentially designed to support the individual's expression of their tacit knowledge. In this sense the individual is supported in playing the traditional role of teacher by making their tacit knowledge explicit. In doing so they create an organizational knowledge resource that then needs to be managed in such a way as to ensure its most effective use. Here information management skills supported by Information Systems and the technologies associated with these systems are applied. PKT, therefore, is based upon the redistribution of responsibilities within a teaching

and learning environment. Individuals do not have discrete responsibilities for either but share responsibilities for both.

4.ii. Transfer and Sharing

Knowledge acquisition outwith academic institutions, is a fully recognised characteristic of the contemporary learning environment. Individuals do indeed learn within many different contexts that are not limited to specific periods of time. The emphasis is not on the expertise or content knowledge of individuals but on their tacit experiential knowledge (Styre, 2003). This knowledge is based upon their understanding of their immediate working environment and the pedagogy that emerges in relation to this type of learning is one that is primarily based upon the principles of collective learning.

> *Most knowledge resources and assets in organizations and companies are thought of as being possible to codify. There is thus a postulated affinity between representation (language, symbols, expression) and knowledge* (Styre, 2003, p.113)

As Styre has pointed out there are limitations in relation to this position, not least, as Polanyi (1963, 1983) has emphasised, the essential symbolic complexity of representing tacit knowledge. This ultimately presents an essential element of PKT, namely the shift from an epistemological to an ontological position. The nature of the learning associated with PKT inevitably requires the individual to present an

understanding of themselves, what they seek to achieve and what their values and objectives are. This is necessary, as will be illustrated below in relation to Senge's five disciplines, in order to meet the requirements of collective learning. PKT is dependent upon an open engagement of individuals within the social context of the organization

Collective learning is, therefore, a social process and is based on the assumption that we learn by doing. Practice and experience are crucial and the dynamics of learning here emphasise social roles. Knowledge is moving here towards a processional dynamic where expertise is no longer the main emphasis. Instead practice and experience are the key elements and the pedagogical issue is to identify how knowledge of this type is transferred from one to another. Rather than going through a process of learning we now have a process of knowledge transfer through sharing. Inevitably the emergence of organizational knowledge results in this pedagogy based upon knowledge transfer.

The principles of knowledge transfer are based upon a context of social interaction, but one that inevitably will operate within a context of organizational power structures. It is here that PKT presents the main limitation of organizational knowledge, that is, the fundamental assumption of individual intellectual engagement with the process of knowledge transfer. In order to transfer knowledge there is a need to address key cultural issues. It has been recognised that knowledge transfer often occurs informally but where organizational knowledge becomes the focus of value and is acknowledged as valuable by organizations then there is immediate pressure placed upon the informal

characteristics of organizational knowledge to lend itself to a more formal management mechanism. This mechanism, again, is PKT in so far as it is seeking to present the most conducive context within which to exploit organizational knowledge.

The barriers to knowledge transfer are often presented as cultural barriers of language, authenticity and personal position and dynamics within the organizational structure. The purpose of KM is to understand and challenge these barriers, as they will inhibit the application of organizational knowledge.

Dixon (Dixon, 2000) has presented five key processes or mechanisms that can be associated with the transfer of knowledge. First, Serial transfer is a process that moves the unique knowledge that each individual has constructed into group or public spaces so that the knowledge can be integrated and made sense of by the whole team (Dixon, 2000, p.35). Second, learning theorists have long known that the more a learning experience resembles the place and situation where the knowledge will be used on the job, the more effective the transfer of learning. They refer to this as a near transfer (Dixon, 2000, p.54). Third, *far transfer* is applicable when a team has learned something from its experience that the organization would like to make available to other teams that are doing similar work (Dixon, 2000, p.79). Fourth, **t**he pieces are in place for *strategic transfer* when a team has taken on a task that happens only infrequently (a one-off project) and wants to benefit from the experience of others, in other parts of the organization, that have done a similar task (Dixon, 2000, p.102). Finally, ***e****xpert transfer* is applicable when teams facing an unusual technical problem

beyond the scope of their own knowledge seek the expertise of others in the organization to help them address it. Typically, the knowledge that is requested is not found in a manual or in standard documentation. (Dixon, 2000, p.129)

Each of these mechanisms by which knowledge is transferred are presented and justified as being unquestionably 'good' for the organization. There is an inherent acceptance that these mechanisms will and can be implemented by organizations striving to become capable of learning. They uncritically accept that the individual in turn accepts that their own best interests lie in the sharing and transfer of knowledge for the benefit not just of the organization as a collective but of themselves as an individual.

Similarly the SECI model (Nonaka, Toyama & Konno, 2002) identified the means by which knowledge is shared. The SECI process has four elements, first, *socialisation*, where knowledge is acquired through social processes. It is recognised that tacit knowledge is place and time specific, making it a fluid and dynamic resource. The need would be appear to be to ensure that the ability or opportunity to acquire or create it is present within the learning environment. Second, *externalisation*, were tacit knowledge is made explicit. Some piece of knowledge is put into a form that can be made accessible to all. Given the limitations of tacit knowledge that were mentioned above it must be that the type of tacit knowledge being referred to here does not fall into the category of that that is time and place specific! Third, *combination*, when tacit knowledge is made explicit it must then be fully exploited by the organization. This can

be done through ensuring that is accessible stored, effectively move and creatively manipulated by the organization. Information Systems can play an important part in this particular element of the process. Last, *internalisation*, where explicit knowledge and its effective use should form the basis of the creation of tacit knowledge. In turn this will begin the process all over again in what has been described as the knowledge spiral.

The SECI process, therefore, identifies this virtuous spiral of knowledge creation through the effective application and management of this knowledge spiral. Essentially, each part of the process is associated with the following:

Socialisation	Tacit to tacit	Empathising
Externalisation	Tacit to explicit	Articulating
Combination	Explicit to explicit	Connecting
Internalisation	Explicit to tacit	Embodying

This process is inclusive and comprehensive. It should be allowed to grow from an individual level to a level beyond the individual organization to that encompassing the environment within which the organization operates. This is again, essentially, related to the relationship that an individual has with the organization. It might need to address mental models, the development of a shared vision or the prevalence of a blame culture, considered and discussed below. These types of issues are closely associated with what is referred to as *ba*.

> **Ba** *is the context shared by those who interact with each other, and through such interactions, those who participate in* **ba** *and the context itself evolve through self-transcendence to create knowledge.* (Nonaka, Toyama & Konno, 2002, p.49)

This presents a challenging picture of the knowledge creation process. It is essentially one that attempts to identify collective learning activities, but often relies too heavily on the assumption that there is an overwhelming willingness to share what knowledge one has. This leaves only the challenge of storing it, moving it and manipulating it – the classic Information Management tasks. The need for a trusting environment is inevitably highlighted.

> *As knowledge needs to be shared to be created and exploited, it is important for leaders to create an atmosphere in which organization members feel safe sharing their knowledge.* (Nonaka, Toyama & Konno, 2002, p.62)

This makes the fundamental assumption that it is the role of the leader to lead this type of experience based learning process. One significant factor here is clearly the perception of the individual within this process and often the application of an educational language and vocabulary helps to sustain an agenda that inherently embodies positive images. As adults, as learners and as employees within a social learning context there is a need to ensure that, if individuals need to accept added

responsibility, as has been seen, for the learning that is taking place, then they must identify with the process. Otherwise, the level of intellectual engagement that is required and expected cannot be sustained. This had emerged through the attempts to embed the notion of empowerment both through adult learning programmes and organizational learning initiatives.

> *With digital connectivity and increasing access to information, the primary resource for competitive advantage is shifting from financial capital to knowledge and information. This has led to a shift in social structure, as control of the work has moved to smaller and smaller units. We are rapidly moving toward a time when individuals control their own means of production and manage their own inputs, outputs, commitments, contracts, and profitability. This is true whether they are working within the boundaries of a corporation or externally as a sole proprietorship or contract worker.* (Allee, 2003, p.31)

This connection between the development of the networked, digital environment and working practice clearly focuses upon the re-distribution of responsibilities within the workplace. On the one hand it appears to enhance and develop the power of the individual to control their own working patterns, but on the other can be seen to sustain existing power dynamics. Inglis (Inglis, 1997) posits that truth within society is either invested within the exercise of power or that truth is independent of the exercise of power. Within both of these there is an implicit acceptance of power operating within a particular social context. In this sense he is acknowledging a structuralist paradigm:

> *It [power] is invested in rules, regulations, discourse and practice.* (Inglis, 2003, p.3)

This is clearly placed within his central analysis of empowerment and emancipation. In considering the role of individual workers within an organizational context, Inglis (2003) is essentially concerned with asking, what is the impact of empowerment upon the relationship between individuals within the organizational context, how might the concept of emancipation impact or affect this relationship and how might the practice of emancipation be applied within an educational context?

In asking these questions Inglis (2003) draws on the concepts associated with System Theory and of the Learning Organization. In particular, he associates empowerment with these concepts.

> *This conception of empowerment can be located within a structural-functional or systems theory of organizations and society* (Inglis, 2003, p.5).

Learning programmes within this context can be aligned to the notion of empowerment and an individual's ability to notionally acquire autonomy and self-direction in relation to this learning. Both of these are recognised as important and significant component elements of adults as learner.

> *Empowerment involves people developing capacities to act successfully within the existing system and structures of power, while emancipation concerns critically analysing, resisting and challenging structures of power* (Inglis, 2003, p.4).

The distinction here is the critical engagement that can be expected, where empowerment is inherently based upon an assumption of support for existing structures. Emancipatory activities can challenge this structure and inevitably the power structures and dynamics that it represents. However, empowerment forms an important element in relation to the emerging knowledge discourse in that it does inherently provide this notional sense of learner autonomy and self-direction which can be seen to operate as a mechanism for reconciling individuals to existing power structures and ensuring that organizational learning programmes support rather than undermine these structures. This, essentially, is a shift in the nature of control, with a greater emphasis being placed on the means of self-control. This is far from allowing greater individual control of learning. To have control, for the individual, requires an understanding of the structure of the power that is being exerted be this social, educational or organizational.

Foucault identified and considered similar power relationships within particular contexts, where knowledge itself is represented as a system that sustains power and that knowing is a means of exerting power. The social, emerging as nation states through

the Nineteenth Century, acquired the legitimacy of 'corporal identity' and in doing so equated the protection of the state with the protection of the individual.

> *It is the social body which needs to be protected, in a quasi-medical sense. In place of the rituals that served to restore the corporal identity of the monarch, remedies and therapeutic devices are employed such as the segregation of the sick.* (Foucault, 1980, p.55)

Similarly, the shift in relation to the knowledge-economy has seen this corporal identity be acquired by organizations, opening them up to scrutiny, seeking to identify the nature of their social activities with a view to allowing the protection of these social characteristics, presumably for the benefit of the individual members.

> *Knowledge networks already exist in most organizations. The first step is not to create them but to simply find them and then make them visible to themselves and to the rest of the organization. A number of companies, however, are taking this a step further. They are looking at the naturally occurring practice communities and finding ways to work with them as more deliberate learning communities.* (Allee, 2003, p116)

The process is one of visibility and transparency within a context of co-operative and supportive social interaction. It emphasises the value of knowledge that emerges from this type of interaction and the pedagogical techniques that might exploit it. These

techniques are firmly embedded in a sense of self-control and empowerment by being based upon social action outwith the business environment:

> *One of the features of a real community is that it largely self-organizes. However, workplace communities are also serving a business purpose and need a level of structure and support that will enable them to be effective.* (Allee, 2003, p.125)

Within an organizational context, power relates to the acquisition of knowledge where there is knowledge to be acquired, valued and ultimately used for the benefit of the individual or group in possession of it. Power becomes devolved within the myriad structures developed and being developed around it and its possession is ephemeral. KM, to a large extent concerns itself with the identification of those managerial skills that will foster an understanding of these key organizational dynamics. These are centred on forms of social activity that support learning.

> *Any company serious about supporting knowledge sharing must add working in deliberate ways with environment and culture to the skill set for leaders and managers.* (Allee, 2003, p.129)

Again, for Foucault, the availability of information is intrinsically linked with the inherent organizational power dynamics and if power were the ability to argue from an informed standpoint then being informed or having access to information would be

crucial. This in turn makes the processes of transparency all the more key to organizational activity.

> *Power will be exercised by virtue of the mere fact of things being known and people seen in a sort of immediate, collective and anonymous gaze. A form of power whose main instance is that of opinion will refuse to tolerate areas of darkness.* (Foucault, 1980, p.154)

Major developments in our ability to access information, including through the education system, but also more generally through the development of written forms of communication, the invention of printing and latterly through the electronic dissemination of information have impacted upon our ability to be informed and, of course, for information about ourselves to be made more transparent.

> *That something rather like a knowledge explosion was experienced in the sixteenth century has often been suggested, in connection with the Northern Renaissance if not with the advent of printing.* (Eisenstein, 2005, p.43)

Being informed, therefore, is intrinsically linked to the purpose of learning. However, the notion of empowerment rather than providing the individual with power, as it might on the surface appear to do, actually acts as a support to existing structures and not to the challenging of these structures. Empowerment within an organization can be used

as a means of not only providing the individual with a notion of having power but also of sustaining and bolstering the structure itself.

> *The old issues of exploitation, control and deskilling of workers have not gone away; rather they have been wrapped up in different management clothing.* (Inglis, 1997, p.5)

Inglis (1997) attempts to draw comparisons between this established notion of empowerment and Mezirow's theory of Transformation in learning that sees the acquiring of a sense of 'self' as a route to greater control for the individual and Foucault's proposition that self-control in education operates largely not as a liberating force but as a more subtle form of control. This highlights one of the main underlying assumptions that power exists to be exerted within structures such as the educational system or within any organizational learning context. Equally, it is assuming that there is a relationship between the power present and the individual. Also, this relationship can be manipulated either to undermine the position of the individual in favour of the organization or vice versa. In terms of empowerment, Inglis (1997) is clearly accepting Foucault's view that power is exalting the individual to greater productivity in the modern era.

> *The process of empowerment described earlier can be seen as a more subtle development within a series of apparatuses whose purpose is to produce greater*

> *discipline, create obligations, and develop good productive work practices.* (Inglis, 1997, p.12)

Epistemologically, therefore, Inglis (1997) is assuming a great deal about the relationship that exists between power and truth or knowledge. He is placing adult education within a perceived social structure and is using organizational management as a more specific illustration of the position, as he sees it, of adult educators. In considering educational establishments he is also assuming that they are largely, at best, empowering institutions that are maintaining power over their learners while rather ironically patting themselves on the back for being more learner-centred and, by implication, willing to hand power over to the learner. However, it is being argued that this is not happening. Rather the choice that learners have does not in any sense allow them to challenge the structure of the system itself.

> *The power of educational organisations centres around established practices developed and inculcated in bodies over centuries. Self-disciplined students arrive and place themselves in an orderly fashion in seats facing towards the teacher to whom all students' eyes and bodies are directed.* (Inglis, 1997, p.13)

Within the context of organizational learning this presents a powerful view of how the relationship between the individual and the organization might be applied and might be used to both support existing power structures and to engage individuals positively in programmes that effectively form part of a programme of self-control.

Inglis (1997) does suggest that power can be inherent within our own learning and that we can as individuals control the power exerted upon us, by understanding that power.

> *Adult educators can be enthused by Habermasian optimism, namely that power and its colonising effects on the lifeworld can be overcome; that it is possible to reach a just, free and equal society through rational communication. In all of this, adult education has a crucial role to play.* (Inglis, 1997, p.15)

This suggests that individuals within organizational learning programmes can also control the power being exerted upon them. Through open communication within a context of mutual trust, a more optimistic view of learning within this context of power dynamics might be sustained. However, the mechanisms for sharing knowledge and even the concept of *ba* say little beyond there being an expectation of individual engagement. Empowerment might be presented here as one of the justifications for individual engagement, drawing as it does from adult education on the need to ensure a sense of individual control of the learning process and of autonomy within it.

e. First Generation Knowledge Management: Information and Communication Technologies (ICT), the infrastructure of PKT

PKT is a dual system that on the one hand exploits ICT to provide a framework for knowledge sharing and on the other concerns itself with the mechanism for engaging

individuals within collective and social learning contexts. These two elements represent what McElroy referred to as 1st and 2nd Generation KM

> *The knowledge-based society of the 21st Century is characterised by knowledge-generation as the primary source of wealth and social well-being. This economic development, facilitated by networked actions of a variety of global actors utilizing new information and communication technology (ICT) including Internet technologies, is fundamentally changing the 'rules of the game' of performing in both private and public organizations*. (Huotari & Iivonen, 2003, p.2)

The tacit to explicit model, considered above, opens up a series of practical applications whereby the management of explicit knowledge can be achieved. By its very nature explicit knowledge is knowledge that has been externalised and is capable of being used within a social organizational context.

> *The more that knowledge is explicit, codified, and universal, the more it acquires the transferable nature of a commodity*. (Gheradi & Nicolini, 2001, p.39)

As an organizational asset it is explicit knowledge that KM seeks to exploit.

> *Explicit knowledge, because of its nature, is typically captured and exchanged throughout the organization. The smart manager recognizes the challenge of explicit knowledge as one of handling the sheer volume of information that is available.* (Koulopoulos & Frappaolo, 1999, p.42)

Explicit knowledge is instantly identifiable with information. The management challenge is the management of this information. Information Systems and their exploitation of ICT has therefore, driven a great deal of the KM movement.

> *Knowledge representations stored in information systems can be called knowledge artefacts. Generally the purpose of KM is seen to be to provide these resources for use.* (Huotari & Iivonen, 2003, p.5)

These knowledge artefacts are based upon an understanding of our experience which in turn creates our own understanding of an organization's operational activities and of our own specific knowledge-based role within the organization. KM recognises the value of this experience and identifies it as an increasingly crucial element in the organization's continued development and well-being. The challenge for KM is to be able to exploit and use this type of experientially-based organizational knowledge:

> *If, as the saying goes, organizations don't know what they know, the solution is seen to lie primarily in better techniques for search and retrieval. Given the opportunity, information appears to flow readily. Hence the belief that*

> *technology, which can shift information efficiently, can render organizations, which shift it inefficiently, obsolete. A great deal of hope (and money) is thus being placed on the value of intranets.* (Little, Quintas & Ray, 2002, p.27)

The necessity, from a management perspective, of ensuring that knowledge is managed raises the obvious issue of just how such management should be undertaken. The tacit to explicit model, therefore, has opened up a series of practical applications whereby the management of explicit knowledge could be achieved

1st Generation KM (McElroy, 2003) essentially presents organizational knowledge as a complex form of information. Here the application of ICT has allowed the practical benefits associated with the effective and efficient management of information to illustrate the value of this form of organizational knowledge. From the use of more flexible database models, to the speed of information networks, organizations can now perceive as being realistic the opportunity to operate globally.

> *At the heart of most KM strategies to date can be found data warehousing, groupware, document management, imaging and data mining. By continuing to promote that kind of narrow, techno-centric brand of thinking, the nascent field of knowledge management places its own credibility at risk.* (McElroy, 2003, p.3)

This risk essentially highlights the limitations inherent in these technical systems and their poor performance in relation to the management of tacit knowledge, discussed below as 2nd Generation KM. However, within 1st Generation KM the ability to store and to move information has impacted upon the management of organizations. For example, a management decision made by Toyota in Japan can be disseminated to all of its global partners instantly. Importantly the response to that decision can also be transmitted more effectively and this type of ability has led to a growth in the acquisition of organizational data and information, in order to provide a better view or understanding of the operation of the organization. This is often presented as a cooperative venture that allows organizations to respond more quickly to customer needs, for example. In supermarkets, reward cards are used to both give customers genuine savings in return for the opportunity to collect data on their shopping habits. The ability to analyse the growing volume of data and information that is now being sought is again facilitated by the application of ICT, for example, data mining techniques are automated tools that are capable of identifying patterns within large data sets.

> *Inseparable from the concept of control are the twin activities of information processing and reciprocal communication, complementary factors in any form of control. Information processing is essential to all purposive activity, which is by definition goal directed and must therefore involve the continual comparison of current states of future goals, a basic problem of information processing*
> (Beniger, 1986, p.8)

In these ways the storage, movement and manipulation of accumulated data and information supports the value that commercial and other organizations can now perceive in a rudimentary form of organizational knowledge – that is information. KM, to a large extent draws on these principles to support a view that more complex forms of information, increasingly referred to as organizational knowledge, can now be captured and applied to further enhance the understanding of the key relationships that exist within and between both organizations and individuals. This in turn supports Beniger's (1986) view of the 'Control Revolution' where information processing is at the heart of management activities that seek to understand the organization. Through this understanding they can better control or manage the activities of the organization. This draws the Information Age into the broader sphere of management and aligns it with the development of the material economy and ultimately the knowledge-economy.

> *Micro-processing and computing technology, contrary to current fashionable opinion, do not represent a new force only recently unleashed on an unprepared society but merely the most recent instalment in the continuing development of the Control Revolution.* (Beniger, 1986, p.435)

The root of KM is very much within Information Management, drawing on the functionality of ICT to present a practical and realistic means to better understand the organization. Management is founded upon this need to understand, in order to manage and this places an emphasis both upon information and knowledge. This has manifested

itself in Fordist or Taylorist forms of scientific management where the application of ICT was regarded as being a means to enhance understanding and control of organizational processes.

> *The organizational effects of technological change are entirely a product of the need to control the labour process in order to increase profits.* (McLoughlin, 1999, p.51)

This raises important issues for KM, primarily relating to the perceived relationship between individuals within the organization. ICT has been presented as a technology of liberation, in that it can sustain the autonomy of individuals within the organization. Rather than undermining the position of manual staff through the application of automation, or the replacement of operational staff by Transactional Processing Systems, these ICT applications were presenting a paradigm shift in relation to work and the production process.

> *What was taking place here was an innovatory organizational response to a set of new global product and technological conditions. In a situation where product markets are increasingly characterised by instability and uncertainty, organizations are motivated to seek to use new technological opportunities to generate product innovations which will meet the new 'fragmented' pattern of demand.* (McLoughlin, 1999, p.53)

This perception of fragmentation and the application of technology to sustain an ability to remain viable within, again, a perceived context of constant change inevitably presents the technology itself as the determining factor in relation to organizational survival and competitiveness. This has led to the notion of 'flexible specialisation' which essentially recognises the need to sustain a state or constant innovation.

A Post-Fordist perspective on the role and functions of organizations has focused on the changing relationship between labour and capital precipitated and represented by technological applications. There are less certain boundaries between labour and capital.

> *In its place it leaves flexible technology and flexible specialisation which present both threats and opportunities to the shifting and multilayered and levelled interests which now characterise organizational relationships.* (McLoughlin, 1999, p.55)

ICT has, therefore precipitated a paradigm shift in relation to organizational relationships. The workplace has become one that is less defined by discrete operational or managerial activities. Organizations now need to operate within a context of constant change, where technology and its ability to be applied in a constantly innovative way, sustains the very existence of the organization. It is within this context that organizational knowledge has emerged.

At an operational level the application of ICT appears as a straightforward utilitarian application, but its emergence within a more intellectual context presents what Baudrillard referred to as 'a new anthropomorphism'.

> *Where earlier modern technologies were concerned with the utilitarian reproduction of more efficient tools and enclosing technologies, such as the office and home environment, the new anthropomorphic technologies are concerned with autonomous consciousness, abstracted power and identity.* (Lane, 2000, p.32)

This intellectual engagement reflects itself in what can be regarded as a key component element of PKT. Based as it is on experience and placed as it is within a social context the transfer of knowledge becomes an environment where the functionality of technology is brought to bear upon individual identity and power relations. To an extent this can be seen to confront one of the most basic of distinction within Western philosophical thought, that is, the one between Plato's position on knowledge and that of Aristotle.

> *Plato saw knowledge as eternal and accessible through philosophical training and thinking; Aristotle conceived of knowledge as being achieved through experience and practical work.* (Styre, 2003, p.55)

This new anthropomorphism of technology invests it with the potential to investigate what Kant referred to as the 'thing in itself', rather than being limited to the social understanding that we, as individuals, are capable of. It is Lyotard who touches on the implications of this for knowledge and the emergence of organizational knowledge.

> *For the mercantilization of knowledge is bound to affect the privilege the nation-states have enjoyed, and still enjoy, with respect to the production and distribution of learning. The notion that learning falls within the purview of the State, as the brain or mind of society, will become more and more outdated with the increasing strength of the opposing principle, according to which society exists and progresses only if the message is circulated within it are rich in information and easy to decode.* (Lyotard, 1984, p.5)

Lyotard is highlighting here the shift within the knowledge discourse where knowledge creation is shifting from one position to another. In order to effectively do this then legitimacy must also pass to the new source of knowledge production and creation. Part of this process involves the undermining of previous forms of legitimacy, as Lyotard goes on to say.

> *The ideology of communicational 'transparency,' which goes hand in hand with the commercialisation of knowledge, will begin to perceive the State as a factor of opacity and 'noise.'* (Lyotard, 1984, p.5)

ICT, in taking on its new anthropomorphic characteristics is positioning itself in such a way as to be able to more effectively take on the mantle of legitimacy as it begins to be undermined through the perception of the state as 'noise'. 1st Generation KM is essentially the identification of PKT as a technical process that can be supported and enhanced by the application of information and knowledge based technologies. It rests upon and draws its theoretical position from a positivistic understanding of knowledge or from a rational-utilitarian position, itself based upon the belief that what is tacit can be made explicit.

> *Rational utilitarianism is not focused on political conflict, social stratification, or inequality. Instead, rational utilitarians seek to explain society in terms of people's rational motivations and the manner in which they rationally perform exchanges so that everything functions in the best possible way*. (Gheradi & Nicolini, 2001, p.38)

Organizational knowledge, therefore, represents an epistemological position that currently draws upon a technological determinist perspective to support its validity and legitimacy within the more fluid knowledge discourse. It is the knowledge-economy that recognises that organizational knowledge appears to present the most appropriate and significant resource for organizations where the physical has been replaced by the intellectual and where innovation has replaced industriousness and productivity.

f. Second Generation Knowledge Management: Organizational Learning (OL), the culture of PKT

KM recognises a need for social learning. In this sense it appears to reflect the wider context of learning occurring within an increasingly diverse context and exploits ICT to transfer knowledge and facilitate the sharing of knowledge. The extent to which this is done and why this is or is not willingly done is at the heart of the KM/OL debate, at the heart of the distinction between 1st and 2nd generation KM and represents the risk identified by McElroy above.

> *The most significant distinction between authors who write about organizational learning can be summarised according to whether they emphasize it as a technical or a social process.* (Easterby-Smith, Burgoyne & Araujo, 1999, p.5)

This raise questions regarding the applicability of ICT to social learning environments and to an extent presents the need to consider issues beyond the functionality of technologies and to focus more fully on the relationship between the individual and the organization (Argyris, 1993).

OL and the emergence of the concept of the Learning Organization (LO), reflects the socially embedded nature of PKT. Learning within a social context has the purpose of exposing the relationship between the individual and the organization in order to manage, or seek to manage the extent and nature of the intellectual engagement of

individuals. This aligns PKT with Kusch's communitarian epistemology where the social context of learning is paramount.

> *Knowledge is not just social in that it is a social status; it is also social in that it is typically attributed to groups rather than to individuals.* (Kusch, 2002, p.1)

To do this there is put in place a comprehensive programme that seeks to make transparent key elements of an individual's attitude to the organization. For example, Peter Senge (1995) in his seminal text, The Fifth Discipline, presents the need to look at Mental Models, Personal Mastery, Team Working and Shared Vision all within a systemic view of the organization. Through the techniques espoused in the LO literature, such as 'right-hand column', an individual is drawn into a programme that seeks to make their tacit and personal knowledge explicit. The need to do so is based upon the premise that learning makes a positive contribution that is now seen to be vitally necessary for organizational survival within a fluid and changing competitive environment.

The origin of this type of thinking might be traced back to Friedrich Schleiermacher (1768-1834), who in his attempt to present a methodological approach to understanding explicitly stated that part of his programme was to understand the *Other* within the social:

> *Psychological hermeneutics develops the capabilities of one person to stand in another's position, to transform oneself into that other person. This approach is an attempt to understand what that person means. It is grasping the inwardness of another mind.* (Johnson, 2003, p.11)

The implications of this are quite profound and Schleiermacher's attempts to apply this, by basing his knowledge upon the authority of the Bible, indicates to today's audience the fundamental difficulty in applying his approach. Hermeneutics, in attempting to address the key issue of understanding an individual within the social is, like KM, recognising the need to unlock the hidden gold of individual knowledge but this knowledge increasingly becomes more problematic when it defies objective definitions and becomes more subjective within the social.

> *Knowledge is always a process, and a relational one at that, which cannot therefore be located simply in an individual head, to be extracted and shared as an organizational asset. Knowledge is the act of conversing, and learning occurs when ways of talking and therefore patterns of relationship, change.* (Stacey, 2001, p.98)

Stacey is highlighting the social fluidity of knowledge itself and presents it as a process as opposed to it having a discrete and objective identity. This has led to the need to place knowledge within a context of communication and symbols.

> *Humans communicate with each other in the medium of symbols, where these symbols are the responsive bodily interactions of relating. These active symbols are meaning and knowledge. Knowledge, therefore, is not an 'it' but a process of action. Action is undertaken in the living present and is, therefore, ephemeral.* (Stacey, 2001, p.116)

OL, therefore, must seek ways to enhance our understanding of the individual and can do so through the appreciation and interpretation of individual expression in such things as art and language.

Language plays a very large part in the development of an organizational methodology that can be applied to PKT. For example, storytelling within the organization is described as a 'sense-making' tool that can at once challenge the teller and negotiate meaning. Gabriel refers to 'poetic tropes' which are narrative devices that seek to generate meaning and bridge the divide between information and experience.

> *Story-work involves the transformation of everyday experience into meaningful stories. In doing so, the storytellers neither accept not reject 'reality'. Instead, they seek to mould it, shape it and infuse it with meaning, each in a distinct and individual way through the use of poetic tropes.* (Gabriel, 2000, p.41)

In these ways OL seeks to support and present practical mechanisms that can be associated with PKT. They manifest themselves in the communicative participation of

individuals within the social environment that is the organization and like any social environment there are elements of both power and ideology involved.

> *To go on together, people have to account to each other for what they do. In other words, the maintenance of relationships imposes constraint. Power is constraint that excludes some communicative actions and includes other. However, at the same time, power enables. The process of turn-taking/turn-making is both enabling and constraining at the same time and it therefore immediately establishes power differences in which some people are 'in' and others are 'out'.* (Stacey, 2001, p.149)

This type of dynamic organizational environment is a crucial element within PKT. Ideology and power structures will impose themselves upon any attempt to engage in social forms of learning.

Here OL/LO presents a view of knowledge that very much reflects the ongoing tension between knowledge that has the purpose of representing existing understanding and the need to create new ideas and challenge the old. However, it again appears that there is a rather contradictory action here. The transparency represented by the activities of the LO are, or can be seen to be, actions that ultimately or potentially support existing power structures. Foucault in presenting a view of *panopticism* is detailing a practical agenda of control through observation. The application of ICT within organizational practices and procedures can also be seen to 'expose' the behaviour of individual

employees. Coupled with this the drive for a form of social or collective learning can also be presented as part of this panoptic view, casting its all-seeing eye over individual actions and under the guise of learning!

This view of the LO allows for a more critical appreciation of the types of activities associated with the LO. For example, Action Learning is one particular example of learning that is essentially work-based. It recognises the need to ensure that, not only learning takes place, but also that it is effective and appropriate for the specific needs, perhaps of the knowledge strategy of the organization. At the same time it is also recognising that learning is an important function for the organization.

If learning is to be effective we can look practically at how to conduct a learning session and we can look at what we believe we can achieve by learning. In more traditional pedagogies the goal is to encourage a deep approach to learning where there is an expectation that individuals will move beyond rote learning and learning for a specific, but limited, purpose. It might be argued that within a structured organizational context that strategic learning might be more appropriate but this fails to see value in the reflective process. Even within a highly structured context there remains value in encouraging the reflective and deep approach and it is this that is at the heart of the drive towards intellectual engagement.

Within this we can identify the creation of knowledge. Therefore, from the KM perspective, deep learning, that is critical and reflective, is a positive goal that should be

embedded within the learning that is taking place throughout the organization. Schön (Schön, 1983) is most associated with this need to embed the crucial element of reflection within organizational learning programmes.

f.i. Schön and the Reflective Practitioner

The process by which experience is transformed into knowledge requires reflection within a continuous process of analysis, consideration and re-presentation.

> *Professional practice is a process of problem solving. Problems of choice or decision are solved through the selection, from available means, of the best suited to establish ends. But with this emphasis on problem solving, we ignore problem setting, the process by which we define the decision to be made, the ends to be achieved, the means which may be chosen.* (Schön, 1991, p.40)

Knowledge in this sense has a definable use value, it is performative and it is very much embedded within a cultural or narrow social focus. Its purpose is to make choices; support decisions; facilitate planning and achieve established goals, aims and objectives. All of these choices appear to support a partial view of knowledge but the expectation is that this knowledge will be definitive.

Where there are categories of applied theory then standardised techniques can be used to address them. However, where these categories do not exist then we are in a context where knowledge is only partial. This can be recognised in many professional contexts, such as within the different diagnoses that might be presented within psychiatry or in the presentation of proposals in relation to town planning. Essentially, this is the subjective context where there is not a clear and unequivocally correct answer, or solution to the problem. The issue for organizational knowledge, resting as it does upon a paradox, is that it emerges from this partial context yet has legitimacy more associated with more narrow forms of scientific knowledge.

> *When we go about the spontaneous, intuitive performance of the actions of everyday life, we show ourselves to be knowledgeable in a special way.* (Schön, 1991, p.49)

This ability to act knowledgeably can be distinguished from having knowledge. In particular it is more dynamic in nature and represents a process that can be re-applied and re-used. It is not the knowledge that represents the end of a process, the answer to a question or the solution of a problem; it is the ability to answer that question and to solve that problem. With the knowledge-economy characterised as it is by the need to meet constant change, this knowledge-ability would appear to be more appropriate than identifying specific items of

knowledge, embodied in answers. Schön refers to this, essentially as 'Reflection-in-action'.

> *The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behaviour.* (Schön, 1991, p.68)

Reflection, therefore, can be said to represent a form of learning, and indeed it is regarded as being an essential element that will distinguish the surface from the deep learner. It is a qualitative statement of its own legitimacy both in relation to elements of the previous discourse and of the emerging discourse. The ability to re-assess and re-present material is the goal of education. It is not to reproduce from pre-defined contexts or from within pre-defined parameters. It is the ability to operate effectively within different contexts and with different and changing parameters. It is these characteristics that largely represent organizational knowledge. It is based on experience and within a culturally negotiated context there is an opportunity for ongoing reflection in order to sustain the creation of knowledge.

Schön is clearly identifying reflection and the reflective process as one that will has a positive bearing upon the creation and definition of organizational knowledge. In accepting this there must be made available some opportunity to

reflect within organizational practice, there must be ways in which reflection can be supported both physically through the environment and in terms of it being recognised as a worthwhile process. This might manifest itself in 'quiet rooms' or designated times, either at specific times or an acceptance that so many hours within the week will be put aside for it. Reflection, in other words, must form part of the knowledge strategy of an organization and it creates an important element within PKT and can be associated or appended to organizational knowledge.

In doing this organizations are supporting the view expressed by John Dewey where he considered not the outcome of reflection to be the real value but the process underpinning it. He goes beyond considering the physical environment and concerns himself more with being able to identify how able or otherwise we as individuals might be in being reflective. In considering this he describes a journey through what he referred to as 'perplexity'.

There appears to be a growing belief that the body of knowledge that might represent a profession is constantly changing. Knowledge itself is in a state of flux and as such it is a partial resource. As Schön has said:

> *As the tasks change, so will the demands for usable knowledge, and the patterns of task and knowledge are inherently unstable.* (Schön, p.15)

> Schön has highlighted here two key issues, the need to embed reflection as a practical process within organizations and more significantly has reinforced the notion of the environment within which organizations can now be said to operate as one of fluidity, dynamism and change. This context, often associated with postmodernity, is presented here as a period of contestation within the knowledge discourse (see the Knowledge Discourse model below, p.164).

The interest in relation to Action Learning has largely been as a result of the need to develop a more thorough understanding of the way in which learning takes place in the work-place.

> *Action Learning is the continuous process of learning and reflection, supported by colleagues, with an intention of getting things done.* (McGill & Beattie, 1995, p.21)

More generally it is accepting of the fact that there is a need to provide a more flexible link between theory and practice. Perhaps not surprisingly Action Learning does draw on an Experiential Learning model:

- **Experience:** observing and reflecting on the consequences of action in a situation
- **Understanding:** forming or reforming understanding of a situation as a result of experience

- **Planning:** planning actions to influence a situation based on newly formed or reformed understandings
- **Action:** action or trying out the plan in the situation.

Central to this Action Learning is the need to provide an opportunity for reflection.

> *The action learning set's two main functions are to support individuals in reflecting on their past actions in order to learn from experience; and to explore their current issue, concern or problem in order to help in the construction of the next action.* (McGill & Beattie, 1995, p.40)

Many of these concerns are of interest to KM. They touch on issues such as empathy, empowerment and trust. It seeks to encourage individuals to form appreciations of the position of others, to provide an adequate structure of support and stimulation and to ensure that this is all done within a context where none of these individuals feel threatened or unable to fully participate. Here an almost ontological element can be identified, where organizational learning processes can be aligned with the view of the organization as a living entity.

> *Seeing a company as a living being implies that it creates its own processes, just as the human body manufactures its own cells, which in turn compose its own organs and bodily system. Is this not exactly how the informal organization of any large company comes into being? The networks of relationships and*

> *communication channels essential to anyone doing any job are indeed created by the people themselves.* (Senge, foreword to de Geus, 1999, p.3)

This identification of the organization with a living entity can be presented as a technique to address the issue inherent within the organizational dilemma, namely the relationship between the individual and the organization. As a living entity there is an inherent empathy.

> *You might argue that, whereas you are an individual being, a corporation is simply a construct, composed of creatures. It may contain many personae, but it is not alive in the same way, foe example, that a human being is alive. But within your body, there are cells, viruses, bacteria, intruders and parasite, often acting without your conscious control and sometimes (for example, when you get the flu) varying from your purpose. A company contains managers, employees, shareholders, subsidiary companies, buildings, technologies and financial assets. Both of these personae, you and the company, thrive best when most of the small entities are reasonably well dedicated to the survival and potential of the whole.* (de Geus, 1999, p.111)

Similarly the very context of change, fluidity and uncertainty can be seen as a further element in building the individual connection through association with the plight of the organization. This aligns experience with the need to meet the crisis of a context that is constantly changing.

> *Neither an individual nor a company will ever begin to learn without having seen something of interest in the environment. That is why surviving and thriving in a volatile world require, first of all, management which is sensitive to its company's environment.* (de Geus, 1999, p.30)

Individual identification with the organization is a significant factor within the concept of the LO and the biological existence of this organization and its struggle to survive within a hostile environment can be seen as an extension to the anthropomorphism Baudrillard (1998) identified in relation to technology and the Darwinian evolutionary concept of the survival of the fittest. Drawing on these well-established and largely scientifically based constructs, the LO presents a powerful view of its own legitimacy within the knowledge discourse. By aligning itself with these types of principles it is drawing on a powerful theoretical position, based on rationality and the concept of modernity. Essentially, this is an example of how the LO is seeking to reflect modernity and how and why its response to the postmodern condition might be seen as a residual reflection of modernity. More practically they begin to form the questions that need to be addressed when considering the development of an organization that is capable of learning. These questions centre on the need to identify the characteristics of the organizational dilemma. They look to make transparent the relationship between the individual and the organization.

Perhaps the most well known model of this is Peter Senge's five disciplines (SENGE, 1995), with each discipline questioning the individual and directly attempting to make explicit their personal view of the organization. The five disciplines include *Systemic Thinking*, thinking about the organization as whole an: how it relates both to itself and to its external environment; *Personal Mastery*, where the notion of the 'organizational dilemma' is where the needs of the individual have to some extent to meet the aims and objectives of the organization. Where there is no meeting then there is likely to be little willingness to co-operate and share within the organization and as such it is unlikely to function as an effective learning organization.

Personal mastery is about, in the first instance, defining the objectives of the individual and quite simply asks the individual to define what these might be. In doing so the individual makes transparent their own aims and objectives. To do this they are encouraged to reflect on their values and how the organization might better support these.

Mental models as a concept stems from, amongst other things, educational psychology and cognitive processes that are concerned with how we construct and adapt our understanding. This was expressed by Jean Piaget as *schema* and refers to our own personal constructs of the world around us. For example, we all have our own political opinions and these are formed from a series of influences throughout our lives. Perhaps this might be parental and other social concerns, or personal experiences. Once we form

schema, they tend only to be adapted and are rarely completely replaced. So, learning is a process of interpretation in relation to these formed opinions.

Within an organizational context we bring these schema to our relationships and importantly we form or construct schema or mental models about the experience we have of the organizational environment, again perhaps formed from any number of different experiences and so on. It will impact on our attitude to people. Do we regard people as being trustworthy or are they to be considered potentially devious? An LO seeks to make people aware of these models and work with them, or reflect upon them to attempt to ensure that they do not form a barrier to effective individual participation. It will ask individuals to identify and reflect upon their mental model and seek to reconcile issues that might effect the organization.

One of the techniques that is often used here is the so-called 'left-hand column'. It starts with a problem, perhaps there is a feeling that somebody is not pulling their weight or that the individual is being treated unfairly. The individual is asked to describe the situation and imagine a context in which they are having a conversation about this issue, perhaps with the person concerned or with their line manager. The suggestion is that in these conversations there are really two dialogues going on at the same time. If you took a piece of paper and drew a line down the middle you could write the actual conversation in the right-hand column but then also write what was not said in the left-hand column. In this column is what was being thought or felt during the conversation. Again this emphasises the imposition of what might be regarded as

qualitative research techniques, associated with discourse analysis, to make visible or transparent the attitudes or views of the individual.

Shared Vision again is dealing directly with this 'organizational dilemma'. It is essentially assuming that where there is a shared vision for the organization then there is an implied balance between individual and organizational aims.

How one might go about building a shared vision for an organization based on Senge's model will indicate a great deal about how effective this organization might be in terms of its ability to learn. Finally, *Team Learning* itself is based on sound communication and where individuals are willing to participate in dialogue.

Each of these disciplines rely fundamentally on trust and trust in turn relies on the extent to which the individual feels that their own interests, their own aims and objectives are synonymous with those of the organization. In other words, for Action Learning, as a social form of learning, to be effective there is a need to address the organizational dilemma. The concept of the organization as a living entity, the sustaining of a context of constant change and fluidity and the exploration of individual perceptions of the organization all seek to address this dilemma, either directly by investigating individual perceptions or more proactively seeking to manipulate individual perceptions of the organization.

These are essentially studies of human behaviour and they are becoming embedded into management science to an extent that has previously not been the case. The models of the human sciences are being used to examine key aspects of organizational behaviour and not least the organizational dilemma being considered here. Chris Argyris, (1993) has contributed a great deal to this study of organizational behaviour and has suggested a number of key concepts that relate directly to the development of the LO. His models of **single** and **double loop learning** seek to identify, with single loop learning, the tendency to detect errors without questioning to any great extent the underlying policy that is ultimately responsible for this. With double loop learning the underlying policy reasons for errors is actively examined and does take a more recognisably systemic view of the organization which Senge (1993) also identified as his key fifth discipline.

Similarly, Argyris's (1995) Model I and Model II theory again identifies characteristics of organizational behaviour that undermines effective action. Model I thinking is essentially about a defensive mindset where individuals are willing only to avoid blame and maintain unilateral control. Within the organization this leads to defensive operational routines which, being sustained by the same process, get worse and worse and can become significant detrimental factors in terms of organizational performance. Where an organization is said to be operating as Model I it will inevitable create an Organizational I Learning System characterised by defensiveness and escalating error. Model II organizations are synonymous with the LO. It involves the active exploration of individual ideas and not surprisingly attempts to lessen defensiveness.

Organizations attempting to apply these theories have developed learning programmes that seek to identify, explore and manipulate these behavioural characteristics. Action Learning is an example of these practical learning situations. They operate through 'sets' which bring individuals together, as set members, in a largely reflective context. Set members bring their experiences to the meeting and the goal is to make these meetings as conducive to knowledge sharing as possible. In doing so time and space are important elements. An appropriate amount of time needs to be given to these meetings and they should be in an environment that will be conducive to the purpose. Brainstorming can be carried out as part of the set meetings, they usually employ a facilitator and they are expected to produce tangible results, usually in the form of reports.

In carrying out his own interventionist research Argyris also emphasises the important element of trust. This is a key concept for the LO and can be both a positive and a negative element.

> *Lack of trust can make the set impotent as individuals are unlikely to focus on real and important issues where they feel they will be ridiculed or that others will discuss their issue outside of the set. A ground rule of confidentiality can give a feeling of security and intimacy required for openness and frank discussion of difficulties.* (McGill & Beattie, 1995, p.66-67)

Creating the level of trust that is appropriate in order to achieve the results sought by Action Learning sets is highly problematic. As said, trust goes to the heart of the individual's relationship with the organization. Essentially it has a social dimension, where trust can be identified with an individual's need to understand the expectations of others in relation to their own actions.

> *Trust develops through interactions when we learn to understand other people's expectations. Because of this phenomena, trust is particularly crucial in situations where we depend on each other, and therefore more critical between two partners than two strangers.* (Huotari & Iivonen, 2003, p.8)

Trust, therefore can be placed within a context of social interaction and from the perspective of the LO it is a necessary prerequisite to the type of interaction necessary to stimulate shared or social learning behavioural characteristics. However, what is also raised here is the question that is centred on the individual's capacity to trust within a competitive and structured organizational context. It is relatively straightforward to accept the need for trust, but its inhibitors are potentially great. Again there is, or appears to be a need for transparency and the creation of a shared or common vision.

> *Because trust is based on other people's expectations, an understanding of these expectations it is essential for building a trusting relationship.* (Huotari & Iivonen, 2003, p.9)

Neither trust nor the value of understanding the expectations of others in relation to the development of a trusting relationship can be questioned. However, how to go about this tends to be limited to mechanisms that do not consider the political and ideological implications of attempting to create and manage a trusting environment.

> *There seems to be a void in the literature concerning the form of government suitable for a learning organization and the role of political activity which, within the framework provided by that form, might facilitate the essential spontaneity of activity and relationship while safe-guarding the interests of the organization's members.* (Coopey, 1995, p.195)

The political and ideological environment within which organizations operate draws upon the notion of knowledge that is associated with power. Where knowledge becomes more embedded within social practice, as has been argued here, the power within the social, within the organization, has an opportunity to adopt legitimacy within the wider discourse.

> *While power is moderated by the facilities used by actors to draw upon or to frustrate the imbalance of resources within the structure, communication depends upon the meanings which can be articulated and shared within the constraints of structure and ideology, and sanctions rely on the application of norms which are institutionally legitimated. In totality, those involved in social interactions can attempt to exercise control of the dialectic through their*

> *discursive facility linked to any combination of resources and any negative and positive sanctions of coercion and inducements on which they can draw.* (Coopey, 1995, p.198)

Communication within a context of organizational culture and behaviour forms a crucial power dynamic that in relation to PKT highlights not a context of social co-operation, mutual support and trust, but of control.

> *This tradition represents a line of thought that directs attention to the structure of dominant and subordinate interest groups, to social conflict, and to power systems. Its principal thesis is that society is based on conflict and that, in the absence of open conflict, a process of domination prevails. In this tradition the social order is perceived as the outcome of a struggle between groups and individuals seeking to ensure that their own interests predominate over those of other.* (Gheradi & Nicolini, 2001, p.36)

Rather than expanding boundaries of self-directed and empowered individual action within a movement of democratic egalitarianism, social learning sustains, through visibility, transparency and the maintenance of a form of knowledge dependent upon the need to meet the challenges of change, a coercive, controlling and potentially oppressive management approach. It does this by emphasising the need to meet constant change and the subsequent reliance upon individual learning being embedded within the social context of the organization.

> *Given that learning organizations are, by design, less structured than more traditional forms, and that structures themselves provide socially accepted rationalizations for specific types of activities, we should probably expect to find a high volume of informal communication as people seek to resolve the uncertainty created by ambiguous situations and the relative dearth of structural cues to behaviour.* (Coopey, 1995, p.202)

Where knowledge begins to emerge within this context of local narratives, where legitimacy is determined by the dynamics within the negotiated context of social environments it is inevitable that rhetorical and discursive capabilities become key elements in the defining of organizational knowledge. These new capabilities rest upon a dynamic that recognises the need for transparency and concealment.

> *Power and conflict render the circulation of knowledge non-transparent and conceal the social conditions of its production.* (Gheradi & Nicolini, 2001, p.37)

Therefore, in considering the LO, two largely opposing views can be identified. On the one hand it is seen as being idealistic and ultimately unrealistic. On the other it is a nightmare for those operating within it. It is about the continued exertion of political power over individuals within the organization.

This essentially asks for a re-addressing of the fundamental issue of what knowledge is as an organizational resource. If it is seen as a resource that can be codified, stored in a database, manipulated and moved through the organization in its explicit forms, then there is an acceptance that knowledge is complex information. Complex information can be equated with scientific forms of knowledge that are distinguished only by the uncontested nature of this knowledge. The process of producing scientific knowledge is a method that ultimately seeks to rid knowledge of its contested nature.

However, the partiality of knowledge, the tacit and personal nature of knowledge has always presented an opportunity to deny the claim that all knowledge can be defined as scientific knowledge and that in fact there are forms of knowledge that cannot be identified and codified in the ways outlined above. Rather it is a partial resource and that given this there is a need to seek to understand the process of knowledge and of being knowledgeable.

However, both of these views give us a very different perspective on KM. The former is a technological focus largely reliant on the belief that sophisticated technological developments will be able to encompass less structured characteristics of knowledge transfer. The latter clearly espouses a more cultural focus that recognises the need to look at relationships within organizations and in particular how learning takes place within organizations. Each concerns the role of the individual in relation to the organization. Each requires a degree of intellectual engagement that effectively mirrors

the value that is being placed upon knowledge as an organizational asset and, as has been seen, this ultimately rests upon the need for transparency.

Therefore, it is to be expected that the LO and the development of PKT, will seek to embed principles and practices that can support this requirement for open-ness and visibility. This manifests itself in the presentation of the role of the professional. Within a professional context the notion of the professional has embodied the trust, dedication, commitment and creativity that is sought by organizations within what is perceived to be the fluid knowledge-based environment.

> *Historically, the professions arose out of the monopolization and institutionalisation of sources that had the legitimacy to produce and transmit knowledge.* (Gheradi & Nicolini, 2001, p.36)

Professionalism, therefore, is associated with legitimacy in relation to knowledge statements and in turn associates the individual with both this legitimacy and with a specific body whose purpose it is to define the professional in terms of their potential contribution to society. In other words, they have access to a complex body of knowledge not readily available to others and it is their professional responsibility to make it available. This again emphasises individual personal responsibility for their potential contribution to the well being of the organization and it embeds a crucial element of PKT. It recognises that teaching within the LO is the responsibility of all individuals and to encourage them to do this it is presented as part of their professional

role. The status associated with the professional can be seen to be the point of leverage in relation to organizational practice and behaviour necessary for the development of the LO.

Therefore, through the LO, professionalism and the spread of the notion of professionalism can be seen to support key characteristics, including, autonomy, self-regulation, accountability, responsibility, capability and trust.

These attributes relate specifically to the position that the professional would expect to adopt, both within society and now as part of the knowledge-economy. Professionalism now forms the individual's responsibility within an organization that seeks to promote itself as a LO.

Acquiring these attributes has traditionally been through recognised academic qualifications at a higher level. These attributes identify and embody the process and recognition achieved by the professional. It is difficult to either suggest that professionals have exclusive claim to these attributes or that the professional represents each in equal measure. Accountability, responsibility and so on are difficult concepts to measure either in terms of their growth or decline. Nevertheless, professionalism represents an ideal standard, a benchmark of behaviour and service that will be constant, reliable and unquestionable.

The growth in professional education can be presented as supporting the growing need of the LO to embed professionalism into its workforce by drawing on the legitimacy of educational institutions, such as universities, with a view to enhancing the level of intellectual or professional engagement of individuals with the organization.

Therefore the very nature and purpose of higher education can be seen to be changing within this context and in response to the development of the LO. The development of the Enterprise University, for example, is described by Ramsden:

> *Its focus is on competence. It is orientated clearly to the outside world, and it espouses continuous learning in a turbulent environment. Its management style is one of devolved leadership; its decision making is flexible and emphasises accountable professional expertise; its dominant unit is the small project team. Its standards are related to market strength; and evaluation is based on achievement and repeat business. Students are seen as clients and partners in the search for understanding.* (Ramsden, 1998, p.32)

Inevitably, professionalism within a knowledge-based economy will be a more sought after trait, drawing as it does on characteristics that support the key elements of the LO. Not least the fundamental element of trust supported by individual autonomy coupled with professional accountability and responsibility.

> *Trust was understood by employees as a chance to work independently and take responsibility for their own work, a chance to tackle challenging and demanding tasks, as well as managers' support to employees' careers, and managers' habit of asking employees' opinion and giving feedback.* (Huotari & Iivonen, 2003, p.10)

Essentially, the LO is attempting to present an opportunity to encompass within the context of scientific knowledge, the social embedded nature of knowledge. It does so by looking for mechanisms to expose individual behaviour and encourage individual intellectual engagement as a means of ensuring the capture and use of human intellectual capital. Rooted in the tradition of modernity, rational utilitarianism and the power dynamics associated with control and conflict this appears to challenge the postmodern condition that would claim that there is a legitimate separation between scientific knowledge and socially constructed knowledge. The social nature of knowledge within the LO does not deny, necessarily the grand narrative upon which the scientific agenda is based but recognises complexities within the nature of social knowledge. By presenting not only a series of behavioural characteristics associated with individual action but also perceptions of the empowerment of the individual through their engagement with these social learning contexts and a biologically based view of the organization operating within a Darwinian context of constant struggle or conflict, there is presented a compelling and powerful discourse. Not least, its basis within modernity lends it the legitimacy of this position and in bringing it within the knowledge discourse and identifying the need to learn as the key factor in

organizational success and survival it is inevitably introducing a powerful element into this knowledge discourse. Knowledge, even social knowledge, is drawn towards the scientific agenda upon which modernity is based and it is this knowledge that appears to characterise the PKT.

g. Key points

PKT is a form of learning that is emerging from a shifting knowledge discourse. It celebrates a perception of a growing diversity in educational opportunities and ultimately looks to influence where legitimacy rests in relation to knowledge statements. Organizational knowledge would appear to have a growing legitimacy based as it is upon the need to draw on experience in order to form knowledge statements that can conform to the requirements of KM. KM has emerged from the legitimacy of organizational knowledge and helped to form a distinct pedagogical approach that seeks a synergistic relationship between technological functionality and cultural dynamics. The emerging pedagogy that can be associated with knowledge transfer draws together these elements and in doing so continues to support the claims for legitimacy being made by organizational knowledge.

- The infrastructure of PKT is the technological support to the acquisition and transfer of organizational knowledge.
- The culture of PKT is one based upon explicit mechanisms to share organizational knowledge and these are increasingly embedded within the concept of the LO.

- LO seeks to present mechanisms to understand and manage behavioural characteristics that will ultimately help create an organization that is capable of learning.
- LO draws on the need to enhance deep learning principles through the embedding of reflection within practice.
- This social form of learning is based upon the need to develop trust through transparency.
- This draws on a general professionalisation of the workforce.
- This is presented in terms of individual empowerment.

First and second generation KM, as they have been presented here, reflect a consistent theoretical position based upon rational utilitarianism. This is a position that is fundamentally drawing upon the position of modernity, where this can be associated with modernity's acceptance of knowledge conforming to identifiable principles, largely scientific principles. This is the grand narrative that has emerged from the Enlightenment and KM/OL can be aligned with this position.

The role of technology in 1st Generation KM reflects a technologically determined perspective that seeks to manage explicit knowledge by storing it within databases, to move this knowledge to where it is required through technologically based networks and to manipulate this knowledge in such a way as to ensure that it sustains its value as an organizational asset.

2nd Generation KM, far from presenting a more social constructed or subjective view of organizational knowledge, based upon cultural and social dynamics, presents cultural and social engagement as a series of behavioural mechanism. These mechanisms further enhance the opportunity to control and exploit the knowledge asset.

LO certainly requires or encourages a detailed consideration of social phenomena and is accepting of the fact that collective or social forms of learning are based upon individual engagement or participation. However, they do not, to any large extent look beyond an instrumentality that identifies mechanisms to expose the nature of an individual's intellectual engagement with the organization. This in itself is indicative of the theoretical position inherent within this literature. Where there is no ability to consider the alternative to performative/instrumental forms of knowledge, that Lyotard (1984) has highlighted, then it is not surprising that this inability should manifest itself within this emerging knowledge discourse.

> *In this contemporary economic environment, technological innovation requires the generation and deployment not only of new and specialised knowledge but of a knowledge geared to problem solving in work contexts and one that lends itself to computer-mediated communication*. (Usher, 2000, p.99)

PKT can be aligned with the practices outlined above in relation to OL and the emerging concept of the LO. Here knowledge is the making explicit of the experience of individuals in order to support the aims and objectives of the organization.

> *We must thus expect a thorough exteriorization of knowledge with respect to the 'knower,' at whatever point he or she may occupy in the knowledge process.* (Lyotard, 1984, p. 4)

KM, emerging from the discipline of Management Science, reflects the shifting dynamics within the knowledge discourse and is mirrored by Experiential Learning and Lifelong Learning, emerging from the discipline of Education, as will be considered below.

PKT can be characterised by, the social nature of the learning environment, the distributed responsibilities both of the teacher and the learner, the need to ensure a degree of individual transparency, the need to ensure that individuals are capable of identifying and making explicit their personal knowledge under the drive to ensure the professionalisation of the workforce and the embedding of reflection as a key organizational learning characteristic.

PKT, in needing to ensure a more thorough externalisation by the individual of their own understanding of their aims and objectives, in order to then equate these with those of the organization, is an ontological engagement with knowledge as opposed to an epistemological one. It concerns itself with an individual's sense of themselves as much as it concerns itself with their cognitive understanding of the world around them and to an extent this is a further reflection of the dissipation of the learning environment. This

draws further elements into this analysis where there can also be identified more explicitly the emergence of learning programmes outwith what might be regarded as traditional educational contexts. These will be considered below with a view to finally addressing the impact of these shifting elements upon the perception of the role of the university.

4. THE UNIVERSITY IN THE KNOWLEDGE ECONOMY

This chapter highlights the positioning of the university in relation to the emergence of organizational knowledge, PKT and the wider knowledge discourse. Experiential Learning and Lifelong Learning are presented as manifestations of residual reflection within the discipline of Education. They are, essentially, aligned to PKT.

Accepting that there has emerged a context of increasing fluidity within the knowledge discourse and that this has resulted in turn, in the emergence of organizational knowledge, then the consequences of this should be identifiable in relation to the role and purpose of the university. Traditionally, within modernity, the university has occupied a central position in relation to the presentation of knowledge claims. In other words it has had legitimacy within the knowledge discourse.

This legitimacy can now be acquired and claimed by other bodies and institutions as a result of the challenges inherent within postmodernity. For the university there has been, or appears to be a significant alignment with the characteristics of organizational knowledge and this has resulted in the emergence of a university with quite distinct characteristics. This university has been described variously as the Entrepreneurial University, the Learning University and even the Postmodern University. The characteristics of this university have, to a large extent, aligned themselves with organizational knowledge and support the pedagogical implications of knowledge defined in this way.

However, the paradox that has been presented in relation to organizational knowledge is also embedding itself within the practices of the university. This, essentially, means that the university can be seen to be supportive of what is being presented here as a residual reflection of a form of knowledge that remains embedded within modernity and has largely failed to critically engage fully with the implications inherent within the postmodern challenge. Rather it seeks the sources of legitimacy within the knowledge discourse and applies these to its own actions.

The university's role as a critical element within the knowledge discourse is undermined by this engagement with organizational knowledge. The need to re-engage this critical capacity and to see the university as central here is often presented as the requirement or the task for the university within postmodernity and the fluidity that this represents within the knowledge discourse. However, the ability of the university to take on this role is often assumed, based upon the legitimacy of the university within the knowledge discourse associated with modernity. This assumption can be challenged and by implication the university can be seen to be participating in its own loss of legitimacy – the knowledge claims of the university are being undermined while it aligns itself with a form of knowledge which itself is a reactionary residual reflection.

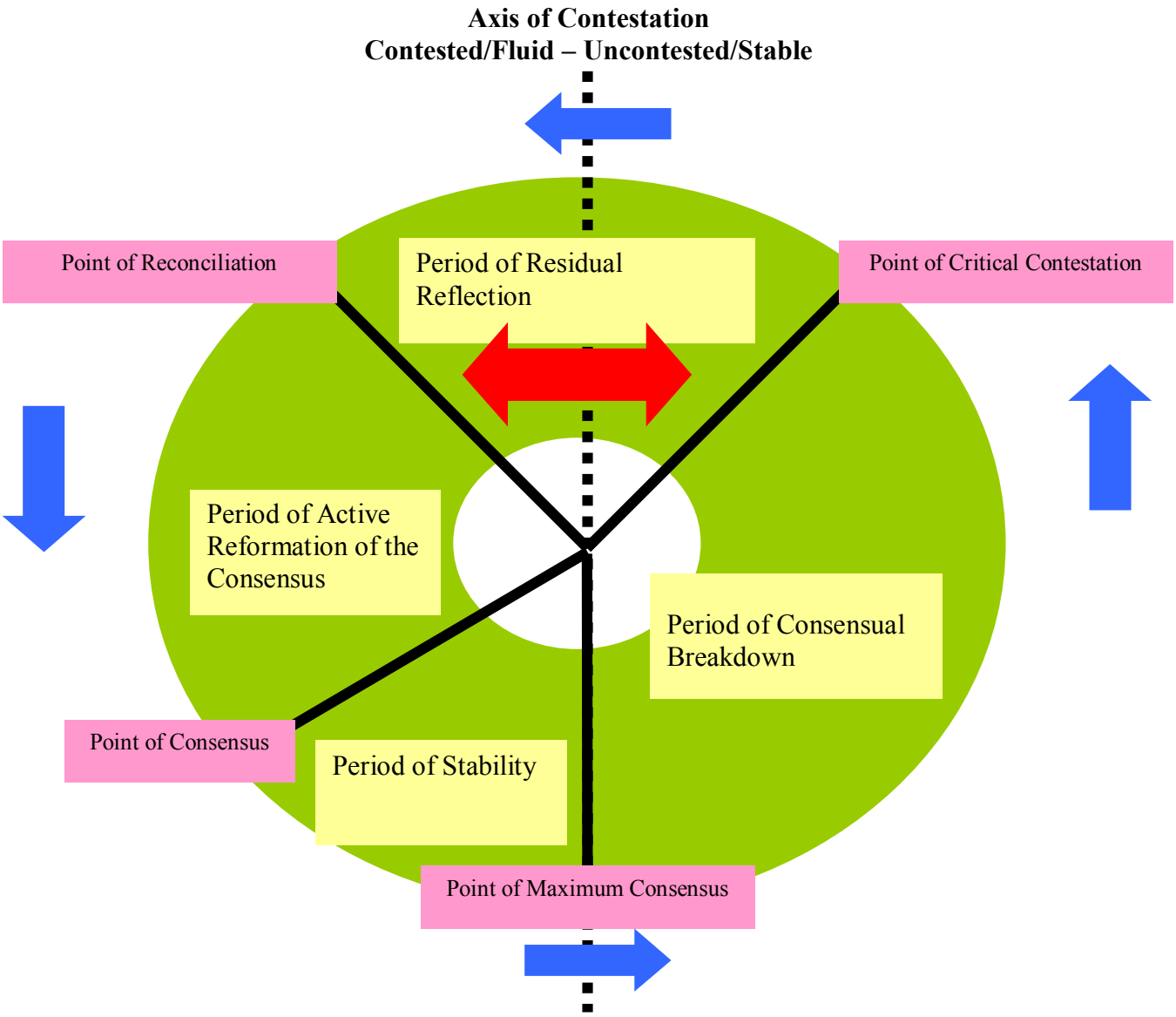
Within this analysis the university appears to be failing at a point in time where its influence and position has never been more significant. The university is neither engaging with the challenges inherent within postmodernity, nor is it able to function with the same degree of legitimacy within the emerging knowledge discourse that it

itself perceives and to a large extent supports by its own actions. The university is not actively seeking to reconcile the contestation inherent within the knowledge discourse and is, instead, aligning itself with reactionary elements within this contested knowledge environment. This loss of critical engagement within the knowledge discourse has serious implications not just for the university, but also in wider sociological terms. Perhaps we need to look beyond the university, for the capabilities to critically engage with the implications inherent within a knowledge discourse that has moved to a more contested point?

The Knowledge Discourse model below represents the continual and cyclical process of the knowledge discourse. In addressing the position of the university in relation to this discourse, the model will be used to illustrate the critical periods and points within this shifting context. Essentially, it will be used to support the positioning of the university within the period of residual reflection and to resolve and to understand the paradox that the current position of the university appears to be in, within the postmodern. To a large extent this model draws on Fuller's (2003) cycle of epistemic formation that explains how, through a process of movement-paradigm-ideology, knowledge is constituted within a social formation. The university is at the heart of this formation.

> *In its various historic inventions and re-inventions, the university has been the institution most directly implicated in the conversion of ideologies to movements by providing a site for the incorporation of dispersed ideas by society at large in some systematic fashion, as defined by the curriculum.* (Fuller, 2003, p.226)

a. The Knowledge Discourse model



Where KM and the concept of the LO can be presented as the manifestation of the shifting knowledge discourse, as it is being identified within the discipline of Management Science, there is similar and associated recognition evident in other disciplines, including Education. Here the same basis can be identified, namely the awareness of a more fluid educational context, the explicit acceptance of learning as a phenomena that manifests itself outwith the parameters of the education system and where there is a growing emphasis on the need to enhance and make transparent the role of the individual within a context of social responsibility.

On the one hand there is a breakdown of existing barriers and parameters and on the other the maintenance of the need to ensure the continued engagement with these mechanisms. This is the need to sustain a unity where this unity begins to disintegrate; this is, essentially, the postmodern condition, where the loss of unity manifests itself in efforts to use this loss of unity to sustain continuity. This is a contradictory position and is being referred to here as a residual reflection within the knowledge discourse.

As has been outlined above, within Management Science, this has manifested itself in the presentation of KM and the characteristics associated with OL. These are, essentially, attempts to sustain the status quo where the main supports for this view or position have been undermined. Both KM and OL are part of this residual reflection, attempting to draw on the characteristics of postmodern uncertainty to provide a degree of stability at a point where the degree of contestation is such that there is an apparent tendency to look back rather than forward. The sought for social cohesion, or consensus

within the knowledge discourse appears to be in closer proximity to the point of critical contestation, than the point of reconciliation.

Within the discipline of Education this same phenomena within the knowledge discourse can be identified within the fields of Experiential Learning and more widely, Lifelong Learning. Each represents an acceptance of the perceived parameters of PKT and seeks to presents a view of the role of the individual within this period of residual reflection.

b. Experiential Learning (EL)

> *Experiential learning (EL) recognizes and celebrates knowledge generated outside institutions. If learning can be defined as change or transformation, in the sense of expanding our range of possibilities and action, experiential learning is expansion that challenges the hegemonic logic of expert knowledge, refuses disciplinary knowledge claims of universal validity, and resists knowledge authority based solely on scientific evidence.* (Fenwick, 2003)

Tara Fenwick's comment above at once illustrates the inherent separation that has come to be felt between work and learning. Learning has become associated with formal education, but this perception has been a development from a point where this separation was not recognised. In other words, there was a time where we learnt directly from others and knowledge was transferred from one to another without

necessarily the interjection of the 'educator'. Lave and Wenger (Lave & Wenger, 1991) are often associated with the coining of the related concept of 'legitimate peripheral participation' that closely considers this idea of the individual being drawn away and separated from learning – or the imposition of the educator.

> *'Legitimate peripheral participation' provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artefacts, and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice. A person's intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a socio-cultural practice. This social process includes, indeed subsumes, the learning of knowledgeable skills.* (Lave & Wenger, 1991, p.29)

Here the individual is being drawn from the periphery to the centre of learning activities, but, of course, within an organizational context the individual must form part of a social structure and therefore, EL, like OL, can be seen to be considering the reconciliation, from an educational point of view, of the individual to the social. This, to an extent, helps to clarify the significance placed upon the individual within both EL (drawing on adult learning concepts such as autonomy and self-direction) and OL (drawing on concepts such as empowerment and disciplines such as personal mastery).

David Boud (2003) has identified the new pressures, associated with the re-alignment or re-positioning of the individual in relation to learning, that are being placed on practice as a result, to some extent, of this pressure to learn, to identify the learning processes and ultimately to understand how it is individuals learn at work.

> *We are asking ourselves now, how is it that people actually learn in real settings? And, how can learning be promoted everywhere? The answer is not the one we expect. It is not just more RPL, more courses and more web-based programs. But I suspect it will be a more reflexive development in which the major learning interventions involve noticing what we are doing, what gets in the way of doing it better and how we do it in congenial ways with those we interact with.*
>
> *This has been called informal learning, but that term undervalues the most important learning of all. The new challenge to practice is to find ways of acknowledging how we and others learn in our many locations and build on that without the act of formalising learning destroying what we are trying to foster.* (Boud, 2003)

It is the individual that learns, rather than the organization. However, this does not mean that the external context within which learning takes place is of no significance. Clearly this context does have a bearing and it is this that has moved the consideration of learning, to some extent, away from it being a process of internalisation and towards

one that places merit in the external environment. In a practical sense it considers the learning that a learner can achieve through collaboration, as opposed to working alone. Most of this work is based on Vytgotsky's concept of *proximal development* of which there are many interpretations. Essentially, it asks us to consider social forms of learning.

By creating a sense of individual responsibility, by emphasising the professionalism of all individuals within the context of the knowledge-economy, where individual experience is the key organizational asset, the 'hidden-gold' of an individual's accumulated experience is placed within a context that allows it to be externalised and thus not only made available but also makes the individual more transparent and more 'controllable' from a management perspective – when viewed, of course from a Foucauldian perspective!

This can be illustrated by a number of organizational developments, not least the development of CoP. This places individual learning fully within a social context where learning takes place within practice.

> *Learning, thinking, and knowing are relations among people in activity in, with, and arising from the socially and culturally structured world. This world is socially constituted; objective forms and systems of activity, on the one hand, and agents' subjective and inter-subjective understandings of them, on the*

other, mutually constitute both the world and its experienced forms. (Lave & Wenger, 1991, p.51)

CoPs are essentially open-ended networked environments that seek to create a collaborative learning experience. They are distinguished from other networked environment by the emphasis placed on the autonomy of the individuals within these communities. There is no implicit end product, they might form and re-form themselves, they have no specified memberships and members should be free to come and go as they see fit. This aligns the CoP with the recognised need to re-assign responsibilities within a learning context based, in turn, upon a sense of professional responsibility.

CoPs are, therefore, collaborative electronic environments that can be seen to support the principles inherent within OL and to be consistent with an understanding of EL. They are a synthesis of both 1st and 2nd Generation KM. They are a trusting and trusted environment, where individual participants will generate and share the knowledge necessary to sustain organizational effectiveness. Nevertheless, the functionality of the CoP, as a network does not inherently address issues of social and cultural engagement that will ultimately determine their effectiveness. A network allows you to communicate but does not necessarily encourage you to do so, it can be presented as a means of sharing, but does not necessarily lead to more sharing and a network connects but does not determine the qualitative nature of that connection

A CoP will only be functioning as a CoP where it addresses the type of issue that is highlighted above. Here the presentation of a context of constant change, the engagement of the individual through a process that might be seen as both empowering and one that draws on the professionalisation of their position, seeks to address the issue of required intellectual engagement and is a vital element of the PKT.

One of the most important distinctions that begin to emerge here is the re-definition of the purpose of learning. Rather than individuals learning abstract facts and generalisations while sitting at the feet of an expert, it is more about learning how to effectively learn within a supportive and collaborative context or environment. Within an organization this might be learning how to be able to apply knowledge to any particular issue that may arise. Brown and Duguid (2000) have touched on this in their consideration of social learning. It is about being knowledgeable over having knowledge. Within a more fluid context where truths appear to be more difficult to pin down, it is the ability to react and to act knowledgeably that is clearly the more appropriate. Does this not express more effectively the experience of an individual, rather than some representation of the amount they know – their technical expertise?

Within this context learning takes place when not only knowledge has become internalised, but when it has moved from an internal position to an external one. Rather than assessment forming the basis of understanding of the quality of internalisation it becomes the benchmark for the ongoing transfer of knowledge within virtuous knowledge spirals. The ability to sustain at both an individual and an organizational

level, these knowledge spirals is at the heart of a pedagogy associated with knowledge transfer.

The process of transfer is as significant as the accumulation of knowledge. This disperses responsibility within the teaching and learning process equally, eliminating the discrete role of the teacher, and investing the learner with the task of and responsibility for identifying what is to be learnt; motivation and orientation within the learning process; assessing and evaluating this learning process.

This can be equated with the characteristics associated with the empowerment of the individual learner, where this added responsibility appears to offer the opportunity to direct and control the processes that impact upon an individual's learning. Adult learning emphasises this need for empowerment, for self-direction and the enhanced contribution of the individual within the learning context.

> *On a residential, work-training exercise, some of the trainees approached the trainer with a view to being allowed to participate in the evaluation of their own performance. Until that moment, the pattern of the 24 hours had been one of daytime interaction between the trainee and the trainers, followed by evening self-segregation by the trainers in order to evaluate the performance of the trainees. At this point (a turning point in the ethos of training groups), Lewin bowed to the pressures of the trainees. This established a new, more democratic*

> *ethos. Mature adult trainees were allowed to use their experiential learning of life to assist in their own education.* (Sutherland, 1997, p.83)

Empowerment, autonomy, self-direction and self-evaluation and all within a more egalitarian and democratic context, forms the powerful rhetoric of EL and is similarly embedded with the OL models. Within the social learning context of organizational knowledge, therefore, this re-allocation of responsibility is an inevitability given the nature of this learning.

Given this emphasis upon individual learning being accumulated and exploited by social formations, such as commercial and other organizations, much effort in recent years has gone in to considering not the technical transfer of facts and figures, but the means by which the learner is able to construct meaning. In recent years constructivism, for example, has been recognised as a process or theoretical position that supports this. Learning activities in constructivist settings are characterised by active engagement, inquiry, problem solving, and collaboration with others. Rather than a dispenser of knowledge, the teacher is a guide, a facilitator, and co-explorer who encourages learners to question, challenge, and formulate their own ideas, opinions, and conclusions (Abdal-Haqq, 1998). Similarities can be drawn here between constructivism and CoPs

Constructivism is very much based upon the work of Jean Piaget (1964), focusing on the socially constructed nature of learning. In doing so it requires the re-examination of

the cultural assumptions that underpin the context within which learning takes place. Specifically, this requires us to consider the power relationship that might exist within an organizational context.

> *Actors within an organizational setting are involved in a 'dialectic of control', attempting to maintain some semblance of control over their work lives. To safeguard their interests through relationships of mutual dependency, they take advantage of imbalances in personal access to resources – raw materials, finance, equipment and information; of opportunities to command the use of these factors; and of 'authorisation', which enables one person to exercise command over another. Over time, the dialectic serves as an adaptive process through which structures and their associated systems are confirmed or transformed and, with them, the bias in the distribution of resources.* (Coopey, 1995, p.197)

In relation to constructivism there appears to be no objective truth or reality. Instead a form of truth emerges and develops and a criticism of this view might be that it allows or justifies any view of reality, a position that can be associated with relativism. However, constructivism draws us towards a presentation of learning as a social process and can be closely associated with, not only CoPs, but also the Action Learning programmes considered above. Similarly, the Good Practice Audit (GPA) developed by Stephen Brookfield (1996) attempts to identify the characteristics of learning within a more social and practical context. The audit itself is split into three phases:

- Formulating the problem
- Analysing the experience
- Compiling the suggestions

> *It involves a mix of individual reflection and collaborative critical analysis and is focused on helping people deal with difficulties they have themselves identified...once the GPA gets going, the reflection, sharing and analysis become much more spontaneous and unstructured than the method seems to suggest. The conversations that ensue are open and unpredictable, yet they happen under the guise of a well-structured series of tasks.* (Brookfield, 1996, pp.27-28)

Clearly the GPA and Action Learning are based upon the notion of EL as outlined by Kolb and Fry (1975) and again can be closely associated with the development of the notion of the reflective practitioner and the discipline of the LO. Specifically, within KM this places some flesh on the bones of the SECI model (Nonaka, 2002). When considering tacit to tacit knowledge transfer we are considering a learning process and one that is embedded within organizational practice.

EL, therefore, is at the heart of organizational knowledge.

- Represents the externalisation of the experience of individuals.
- Emphasises the significance of the individuals within a social context.

- Is essentially collaborative and is therefore, dependent upon the development of a context of trust

c. Lifelong Learning (LL)

The concept of LL represents the dissolution and the embedding of learning within diverse social contexts. It points to the multiplicity of learning opportunities and to the ongoing engagement with these opportunities within a more egalitarian or democratic context. Learning is for all and for all time; it does not cease to be relevant and is applicable to all.

> *The crucial point for the present discussion is that people must be able to adjust to change that is at once both rapid and sweeping, both for their own well-being and for that of the societies in which they live. In earlier models of education, most deliberate learning was supposed to occur in childhood and youth, and most learning in the adult years was expected to be of the everyday kind. However, such models are based on the idea that adulthood is simply a time for reapplying old learning, an assumption that is not longer tenable*. (Knapper & Cropley, 2000, p.15)

Again the context or the environment is one of change and the need to meet this change through constant learning. The pedagogical issues here are significant and the implications for teachers can largely be seen, again, as being concerned with learner autonomy and self-direction.

> *A vital part of the curriculum of the developing and practicing teacher must be not how to teach teachers how to teach, but to teach them how to stimulate learning and confident self development in people of all ages.* (Longworth, 1999, p.29)

The basis of LL is the acceptance of the dispersed responsibility within the teaching and learning relationship. The teacher becomes a facilitator and a guide who has responsibility for ensuring that there is developed a significant degree of independence on the part of the learner.

> *Within every community there exists an enormous untapped resource, that is the talents, skills, knowledge and wisdom of people from every walk of life.* (Longworth, 1999, p.32)

This identification of the value of knowledge that is embedded within a wider social and cultural context is a manifestation of the postmodern paradox. On the one hand there is a realisation that epistemologically modernity's view of knowledge is breaking down and on the other hand there is an attempt to re-locate legitimate knowledge within a wider social context.

> *The lifelong curriculum of higher education cannot be contained entirely within the university, nor indeed within the formal education system: despite great*

> *resistance the reach of the university and its lifelong curriculum will have to come to extend lifelong and society-wide* (Coffield & Williamson, 1997, p.61)

The impact of this has a direct bearing on the institutions within the knowledge discourse and not least the university.

> *This is certainly a concern for those traditional universities whose natural reflex is to look inwards at procedures and protocols, rather than outwards at the educational marketplace. Competition is widening and at a glance at the educational pages of the more upmarket newspapers and magazines shows how the effect of distance learning and Internet technologies will offer wider choices to the potential learner. Nothing is more certain than that higher education in the cities of the developed nations will look very different in ten years' time.* (Longworth, 1999, p.84)

Wider choice facilitated by the application of ICT characterises this new environment of learning. LL inevitably reflects the position of the learner.

- *The learner is now the customer whose needs are paramount.*
- *The learner will have a greater involvement with the content and methodology of his/her own learning and a more developed sense of ownership of it.* (Longworth, 1999, p.100)

In reflecting the position of the learner in this way the dynamics within the wider knowledge discourse are being impacted upon, not least by extending legitimate knowledge production away from what has been seen as traditional context, such as the university.

> *It [Lifelong Learning] extends beyond the formal educational providers to encompass all agencies, groups and individuals involved in any kind of learning activity...it rests on the belief that individuals are, or can become, self-directing, and that they will see the value in engaging in lifelong education.* (Tight, 1998, p.474)

As Tight goes on to say the acceptance of this definition of LL in the major Educational Reports, The Kennedy, Dearing and Fryer Reports, points to a recognition of a primarily economic imperative behind this educational development.

> *This acceptance is grounded in fairly simplistic assertions about the need to increase economic competitiveness by producing more knowledgeable, skilful and hence more productive workers; and about the desirability of using learning to create more fulfilled, aware and 'socially cohesive' citizens.* (Tight, 1998, pp.477-478)

This linkage between LL and the economic imperative, via the state, reflects the way in which the knowledge discourse is on the one hand being presented as an agenda for personal fulfilment and on the other the generation of greater economic effectiveness.

> *For a variety of reasons, teaching and learning activities are of fundamental importance to all of us. Unfortunately, in the past, there were many who thought that these activities ceased when individuals left school, college or university. Fortunately, this 'ill-informed' opinion is rapidly disappearing as the notion of 'lifelong learning' gains more impetus.* (Barker, van Schaik & Hudson, 1998, p.310)

In response to the demand to identify the learning that is seen as such a valuable organizational asset various performance support initiatives and systems have been put in place which directly attempt to ensure that the process of learning within the organization is made visible.

> *It is well-known that complex knowledge structures called mental models are important as a basis for non-recurrent skills. The prominent role of these models in lifelong learning processes means that an adequate understanding of them is of vital importance. (*Barker, van Schaik & Hudson, 1998, p.316)

Again there is an emphasis upon the social nature of knowledge production, embedded as it is within the individual but whose responsibility it is to share this knowledge.

Knowledge within a context of EL and LL share characteristics also associated KM and OL and supportive of organizational knowledge; they can be seen to be supportive of the existing ideological position of an organization; the power structures within that organization will determine the knowledge that in turn will inform the learning agenda; organizational knowledge and the epistemology associated with it can be extended almost to this ontological level where knowledge production and sharing is what we do and what we are; our individual lives, our experiences, form the knowledge context and we take on more responsibility for its dissemination for the benefit of the wider social and cultural groups with which we engage.

PKT, therefore, is a pedagogy that is fully embedded within the principles of EL, LL, KM and OL. These principles highlight the social nature of learning and the need for individual engagement and move us towards a form of learning where there is less room for the intellectual and where rhetorical and other language games, played out within a social context, will determine the learning agenda.

Within the context described as the postmodern condition, this learning focuses on performative knowledge, referred to here as organizational knowledge. This knowledge draws its value from its proximity to practice and becomes associated more fully with experience. The legitimacy of organizational knowledge statements also becomes based upon this practical use value and draws on the fundamental belief in the ability to make knowledge explicit, either through its direct statement or through mechanisms of social

engagement. This positions organizational knowledge in proximity to technical-rationality or a more positivist view drawing as it does on principles associated with modernity.

The identification of organizational knowledge with modernity while at the same time emerging from a context that can be identified with postmodernity is the key paradox within this thesis. This is happening and is fuelled by the identification of knowledge as an asset within the post-industrial context, the significance of technology within the wider discourse of knowledge (1st generation KM), a general sense of insecurity while within a more contested knowledge context (associated here with postmodernity and the emergence of socially constructed theories of knowledge) and the proximity to what appears to be legitimacy within the knowledge discourse (the extraction of legitimacy from the existing education systems and its embedding within more diverse socio-economic contexts).

This leaves only the latter point to be explored more fully. The presentation and sustaining of the position of organizational knowledge within the wider knowledge discourse is dependent upon the legitimacy acquired by or assigned to this form of knowledge. It will be argued here that the university can be seen to be actively promoting this form of knowledge and that the consequences for the university will be an enhanced position within the emerging knowledge discourse. However, if this discourse itself is understood as an ongoing contestation, as is presented here, and that the point within this contestation can be illustrated as being a period of residual

reflection, then the true consequences for the university might be perceived to be quite different, or potentially quite different.

d. The university and PKT

The role of the university within this appraisal can be to support the legitimacy of the knowledge claims of organizational knowledge. In doing so, the university will align its own agenda with practice and value the proximity of itself to the production of performance-based organizational knowledge. For example, the development of virtual learning has allowed for the application of ICT which, in turn, has allowed a series of developments to emerge that have appeared to open up educational opportunities for universities.

> *In our view there are three important possibilities: first, the provision of virtual classroom environments that enable learning at home and in the workplace; second, the development of virtual university systems that can provide organizational structures that will support lifelong learning and which will facilitate the development of progressively richer mental models; third, the use of performance support systems that are able to provide 'just-in-time' support in order to augment an individual's mental models (thereby enabling enhanced task performance to be achieved).* (Barker, van Schaik & Hudson, 1998, p.316)

These three possibilities can be clearly aligned with organizational knowledge in that it will enhance transparency, support the view of individual empowerment and clearly

identifies the applicability of implementing ICT-based solutions as the mechanism to support the production and exploitation of knowledge. In particular, the ideal of connectivity, associated specifically with the Internet, has created a potential market that is largely not dependent upon a geographical location. Any academic institution can deliver the content of its programmes anywhere in the world and distance learning initiatives have done just this.

However what these initiatives are also doing is aligning university practice with PKT and in doing so aligning their knowledge with organizational knowledge. The characteristics of this knowledge are largely socially based as has been seen, but universities remain institutions founded on the principles of expert knowledge. This is reconciled where expert knowledge is both codified and presented in an explicit form. This rather contradictory position emerges, again as has been seen, from Lyotard's view of the performativity principle. All knowledge, that is perceived to have any value, can be codified and the knowledge of an expert can be written down and presented in accordance with the principles of Information Management. In doing this the university is participating in the acceptance of knowledge as defined as organizational knowledge. The content of this knowledge is not the key here, but the process by which it is made visible. In replicating an educational programme for distribution around a virtual campus network the university is stating its acceptance of a rational utilitarian agenda. In doing so it is positioning the university in relation to ICT and the knowledge statement that they are associated with. This is, essentially, the view of these technologies as either liberators or oppressors.

> *Science and technology have important enabling features which increase the number of available strategies, heighten flexibility or effect the ability of the powerful to exercise control and constraining forces which limit choices, reduce options and impose penalties and risks. It is therefore by no means contradictory to maintain that knowledge societies become more standardised and more fragile.* (Stehr, 1994, p.13)

In considering the application of ICT within a learning context we are, therefore, commenting upon the effectiveness of the communication of knowledge. Do ICT represent a means of enhancing learning and the transfer of knowledge or do they limit it by narrowing it down to a scientific managerial definition? Throughout history the means of transferring knowledge have reflected the priorities at that time, not only in the typologies of knowledge but also in the institutions through which it is transmitted.

> *If I wanted to cause a sensation, I would claim at this point that the so-called intellectual revolutions of early modern Europe – the Renaissance, the Scientific Revolution and the Enlightenment – were no more than the surfacing into visibility (and more especially into print), of certain kinds of popular or practical knowledge and their legitimation by some academic establishments. Such a claim, however exaggerated, would be no more one-sided than the more conventional assumption identifying knowledge with the learning of scholars.* Burke, 2000, p.15)

The impact of ICT has been compared with the technological impact associated with the printing revolution. By looking at learning contexts outwith the academic institution we are recognising the postmodern complexity of the learning environment. By considering organizations that actively seek to promote themselves as LO we can identify key elements of learning and how individuals achieve their learning goals. There is a fundamental assumption also being made here and that is that LO are largely defined as such through their effective use of ICT and their ability to assist in the management of the information and knowledge asset.

If organizational knowledge is based upon social participation supported by the effective application of ICT, as opposed to expert knowledge, there would be an expectation that the content of educational programmes is seen as being of less relevance than participation. This is indeed the case with many educational programmes which focus upon the need to ensure that students interact with one another and replicate the richer environment of learning though dialogue rather than simply receiving information and knowledge by sitting at the feet of an expert. .

This is not new to academic institutions but where an emphasis upon engagement is prioritised there is an inevitable move towards *learning how to learn*. Social and collective learning issues may ultimately marginalise expert knowledge to such an extent that it becomes de-valued. The nature of the knowledge environment and the postmodern condition outlined by Lyotard (1984) emerge here as pressures upon the

legitimate knowledge claims of universities. In both cases organizational knowledge emerges from local narratives and the legitimacy of any specific knowledge claim is inherently fragile and susceptible to an environment of change and the dynamic within the socio-cultural power structures that are beginning to determine the legitimacy of knowledge claims. Ironically, the knowledge claim that is emerging from the social constructed environment associated with the knowledge-economy is the knowledge of performativity – organizational knowledge. It must be knowledge that supports practice or justifies practice or a course of action to alter practice that is determined by the local negotiated narrative embedded within existing power structures.

Developments, such as modularisation, can be seen as recognition by these institutions, of the shifting knowledge discourse. Education here enters the marketplace and transforms itself into a commodity.

> *Higher education in the UK has departed from the European model in that, in the British shift to a mass system, the market has come into play. It is a matter of educational policy at both national an institutional level; and we are seeing, through policy moves at both levels, the generation of markets which are both external to universities and are inherent within universities. The modularisation of UK higher education is the key instance here.* (Barnett, 1997a, p.172)

Where these development focus on collaborative learning in relation to a limited body of content they are recognising the essentially social nature of learning. The task

becomes one of engaging the student with a discipline and guiding them towards an independence of action in relation to this discipline. This is essentially learning how to learn!

The impact of KM upon the knowledge discourse, therefore, had been to sustain a rational utilitarian view of knowledge and to present a pedagogy based upon Experiential and Lifelong Learning as the source or content of the knowledge that is regarded as of most significance, essentially practical experience. Universities have responded to this by developing specific programmes that align themselves with this emerging epistemology.

> *Change, rapid, all-pervasive and confusing, for many, is the basic driving force of the last years of the 20th Century, and the progenitor of the need for lifelong learning. It is not an ephemeral trend. New developments in technology will cause it to accelerate over the coming years and affect the lives of more and more people, whether or not they like it. Only a major human catastrophe can slow it down. Educational structures cannot resist its progress, they will have to accommodate it and prepare individuals for it, by themselves embracing and welcoming the new contents, methodologies and approaches.* (Longworth, 1999, p. 17)

The consequences for the university that can be identified in relation to this alignment and the emergence of PKT is essentially a repositioning of the university within the

wider knowledge discourse and it will inevitably impact upon the legitimacy of the university in terms of the knowledge statements that the university might make. To not participate with this discourse is inconceivable for the university even if it appears to be increasingly problematic. The critical position of the university in this respect will ultimately position it in term of its relation to the knowledge-economy.

KM, emerging from our understanding of this knowledge-economy, seeks to present the key responsibility for those within an organizational knowledge environment. It recognises the value of the experience of individuals and seeks to draw out and make explicit the accumulated context and content knowledge that individual employees might have. In doing so it requires of these individuals a level of intellectual engagement that must inevitably be based upon an individual willingness to engage at an appropriate level. So, language might be perceived as a barrier or the perception that one might undermine ones hard fought for position within the institution if valuable knowledge were shared might also act as a barrier. More significantly, from a management perspective the ability to exploit what is increasingly regarded as the most valuable of organizational assets or resources comes down to understanding the relationship between the individual and the organization. To what extent is an individual willing to intellectually engage with the organization and in doing so make explicit their personal, tacit knowledge? ICT, as has been seen, provides the infrastructure for PKT and OL the culture and together they are addressing these key questions. Education's response to this epistemological shift has been pragmatic and to reflect its main characteristics. Experiential Learning and Lifelong Learning, along with

various educational initiatives, including modularisation can be seen to represent this response of education to the shifting discourse of knowledge. The consequences need further consideration.

The university is an organization concerned with knowledge. As an organization it is a social formation that will inevitably reflect its own social positioning. Within modernity the university has sought a position of social objectivity through its association with the production of scientific knowledge. This epistemological positioning has allowed the university to place a value on the process of knowledge production itself. The process of higher education becomes a justification for itself. The alignment within modernity of science and the university supports the process of higher education, but does so only on the margins of practical expediency. While science is producing knowledge and forming the basis of the knowledge discourse and the university supplying the practical needs of this discourse then there is maintained a balance within the dominant discourse of knowledge. An epistemological harmony is sustained through the maintenance of the relationship between science and the university, but only so long as the position of science remains dominant within the knowledge discourse.

It is this dominance that has on the one hand been challenged by the postmodern condition and on the other by the emergence of the knowledge-economy that seeks a re-alignment within the knowledge discourse. This re-alignment is based upon a reactionary usurping of the perceived objectivity of science in the face of the

epistemological fluidity associated with the postmodern. In other words, in order to meet the challenge of epistemological uncertainty brought about by the challenges inherent within the postmodern, there is an understandable attempt to return to a position of previous certainty – the certainty associated with scientific objectivity. The knowledge-economy is this attempt to take on the mantle of scientific objectivity, to align itself with the legitimacy that science held within the dominant discourse of knowledge within modernity and importantly, aligning objectivity more with the power dynamics within organizations than with any rational or logically based methodology.

In doing this the marketisation of higher education within the knowledge-economy and the epistemological shift to competence based, performative, instrumental, organizational knowledge sets up the paradox that is central to this thesis. This paradox is simply the sustaining of an epistemological position that is aligned with modernity as a consequence of the fluidity within the knowledge discourse that is associated with postmodernity. Postmodernity appears to produce a knowledge that is aligned to modernity!

For the university there is also a need to re-align itself in relation to the challenges that appear to be emerging within the knowledge discourse. The agenda of the knowledge-economy is largely related to the need to ensure that the economic imperative within the knowledge discourse is sustained and promoted. This emerges as a need to ensure that there is produced the necessary practitioners to sustain this economic imperative. For the university the alignment of itself with this principle appears to be

unproblematic. The university, in serving the needs of science and the need for practical and professional skills, was able to sustain a position for itself as an independent entity within the discourse and it was this that largely sustained the view of higher education as a good in itself. This duality has been a characteristic of the university throughout its history.

> *It has sometimes been suggested that the distinguishing mark of the universities, as opposed to other institutions of further and higher education, is their concern with knowledge and the pursuit of learning for their own sake, not for the sake of some external practical end.* (Graham, 2002, p.20)

This relationship between learning for its own sake and learning for a specific purpose has been constantly debated throughout the history of modern universities. The purpose of knowledge transfer was on the one hand to uphold an established position and by doing so, maintaining it and on the other, to stimulate new and innovative ideas. These two purposes have often been antagonistic and in the development of universities this antagonism is apparent. In the first instance early academic institutions were, from a Western point of view, based upon the grand narrative of the Church, often drawing on the classical tradition as expressed particularly by Aristotle, Hippocrates and Aquinas. Later these 'old' universities, such as Bologna and Paris, were challenged during the Reformation by 'protestant' universities, such as Marburg (1527) or Koenigsberg (1544). Also, societies, such as the Royal Society of London (1660) represent this fundamental tension inherent within knowledge transfer; between the need to sustain a

system that can accommodate both the accumulated knowledge of experience and the need to ensure that knowledge can expand, be innovative and open to new ideas. Knowledge in the first instance looks to the past and in the latter to the future. Each is depended upon the other, but the human institutions that have sustained this duality have done so through a need to re-invent and at times demolish and re-construct.

> *In Europe, these cycles are visible from the twelfth century, when new institutions called universities replaced monasteries as centres of learning, to the present. The creative, marginal and informal groups of one period regularly turn into the formal, mainstream and conservative organization of the next generation or the next but one. This is not to say that the reform or renewal of traditional organizations is impossible. The new role played by a very old institution, the Benedictine monastery, in the organization of research in the eighteenth century is proof to the contrary.* (Burke, 2000, p.49)

New universities during the Reformation were not challenging the underlying grand narrative upon which this knowledge was based rather they were challenging its manifestation within social practice. Similarly, the challenge to the position of science within the discourse of knowledge production has had and will continue to have implications for the role and purpose of the university.

> *At the moment it is difficult to say exactly what kind of a political economy of knowledge is emerging, but if we follow some recent sociological accounts of*

> *knowledge production we can point to the contours of new cognitive and institutional configurations that have major implications for the university.* (Delanty, 2001, p.101)

The University as an LO might be regarded as an institution that has adopted PKT. It is a university that has accepted the implications of this specifically in terms of how knowledge itself is being defined. The Learning University is a university that operates within the wider educational environment, is sympathetic to the drive for widening access and knowledge's proximity to practice. It is a university that values the role that it has to play in directly supporting the knowledge economy and actively seeks to embed its principles within the curriculum. It is a university at ease with the student as customer.

> *A debate about the authority of academics in the era of top-up fees was ignited this week after England's higher education official warned universities that they would be forced to treat students as customers and do much more to meet their demands.* (Times Higher Educational Supplement, 11 Nov '05, p.1)

The implication inherent within the concept of the student as customer and of the wider acceptance by the university, of the principles associated with the knowledge-economy means that the university is or can be seen to be positively responding to the challenges of the current age, the post-industrial society and the knowledge-economy. However, in doing so they are explicitly aligning themselves with a view of knowledge that places

legitimacy for the creation of knowledge outwith the boundaries traditionally associated with the university.

The community that can be said to have legitimacy with regards to knowledge creation is now appearing to be more diverse than it has previously been.

> *The question of who defines the boundaries and membership of the relevant community, and hence who the knowledge 'belongs to' is a critical issue. One of the most substantial challenges to the university lies here, in the forces which are undermining its traditional ownership of the rules of intellectual discourse.* (McNair, 1997, p.28)

In making this move the university has aligned itself to a performative form of knowledge, to a form of knowledge that places value in the operational efficiency or effectiveness of that knowledge from the point of view of the organization and its operation and existence within the market. Knowledge within this context becomes a marketable commodity aligned to problem solving more than it is to academic theorising. Learning and the creation of knowledge in turn align themselves with practical contexts and in themselves can be seen to be deep forms of learning by requiring a high degree of engagement from the learner.

> *There is no denying the excitement which such approaches to learning generate, but the 'knowledge market' model is not unproblematic. Not only does it shift*

> *our notion of what kinds of knowledge are valuable, it also makes knowledge itself the subject of commercial transactions.* (McNair, 1997, p.31)

This particular position is not an alien one within a broader understanding of how universities have developed, specifically within Scotland. The Scottish university tradition has deep roots within a vocational environment (Davie, 1986; Walker, 1994). Ensuring that there were assured a healthy supply of engineers, lawyers and theologians the early Scottish universities operated very like training groups for the 'major' professions. This proximity to practice was not mirrored in the English university system and is often presented as one of the reasons for there being only two universities in England at a time when Scotland could boast five such institutions.

> *With the exception of Edinburgh, they were all religious foundations, of greatly differing sizes. As in their continental counterparts, their founding subjects were Theology, Law and Arts and a large part of their purpose was to provide education originally designed for the professional classes of the middle ages.* (Graham, 2002, p.6)

The proximity to practice of university teaching is, therefore, not new. However, the English and Scottish traditions developed quite distinct characteristics. Where Oxford and Cambridge developed exclusivity in relation to their stated purpose, Scottish universities attempted to present a more egalitarian view of the purpose of higher academic pursuits.

> *The social more of this exclusive society were as different as they could well be from the freedom prevailing at Scottish universities. The colleges were surrounded by walls, gates and ditches to keep gown well away from town.* (Walker, 1994, p.50)

This distinction mirrors an underlying tension embedded in the dualism associated with the relationship between the practical and the theoretical. This tension continues to impact upon the knowledge discourse in that it questions the validity of the role that universities have to play in relation to practical action. To an extent the presentation of an antagonism between theory and practice has allowed the construction of a powerful discourse that has sought to present a positive view of a re-alignment of this tension, largely towards a more practice-based form of knowledge.

> *Work-based learning enables universities to be collaborators with organizations rather than competitors in the competitive qualifications market. This is important for the university's positioning of itself at a time when the market place rewards close cooperative relationships between higher education and the 'real' world.* (Boud & Solomon, 2001, p.18)

On the one hand there is a powerful rhetoric of democratic egalitarianism and on the other hand a rhetoric that is based on cooperation rather than competition. This forms a powerful element within the knowledge discourse and it has had a specific impact upon

the presentation of the purpose of a university. This purpose embeds itself within, not surprisingly, a context of instrumentality.

> *So widespread has this way of talking and thinking* [instrumentality] *become, so much has it come to seem the natural and only way to talk about teaching and learning in the university – the default language, one might say – that anyone who wishes to avoid falling into it needs to adopt a deliberate strategy.* (Blake, Smith & Standish, 1998, pp.88-89)

This position within which the universities find themselves has been a direct consequence of the shift within the knowledge discourse that is being considered here. Ironically, it appears to draw on university traditions themselves to accomplish key manoeuvres within this dynamic and changing environment. The democratic intellect, associated with Scottish university traditions has placed these institutions in a susceptible position with regards to the major movements within the knowledge discourse. However, this is not a new concern and the position of the university in relation to both the state and the market in Scotland has been an issue for debate for some considerable time. Adam Smith, for example, was in favour of a laissez-faire approach to education, with minimal state intervention while Thomas Chalmers argued for increased state involvement.

> *This Scottish view of the state, it may be argued, represents the secularisation of a religious ideal of unity which goes back to the seventeenth, if not the sixteenth*

> *century. Parish churches, schools, and the universities which trained ministers and schoolteachers were designed to impose orthodoxy and ecclesiastical authority, and to create in a fissiparous nation a single godly community under unified spiritual direction.* (Anderson, 1992, p.69)

Here we might identify a strong sense of the religious influence within the knowledge discourse, but one that was inevitably being superseded by the influence of the state itself.

> *In the twentieth century, welfare-state thinking has given the state a new role as the guarantor of equal opportunity and the impartial arbiter of the distribution of scarce social resources.* (Anderson, 1992, p.69)

The marketisation of a mass system of higher education within an increasingly globalised context has impacted in turn upon the role of state within higher education, not least in Scotland. The notion of a national system is being eroded and this is expressed increasingly in the absence of any common curriculum. The expansion of higher education and the creation of new universities in the 1960's and 1990's have made it more difficult to sustain a sense of national continuity.

> *To maintain the Scottish character of universities means not only keeping them different from English ones, but also keeping them more like each other, and restraining divergent enthusiasms. And this now means not only the eight*

> *universities – including the technological ones with their own traditions – but the whole of higher education.* (Anderson, 1992, p.74)

This diversity rather ironically appears to erode the traditions associated with the Scottish university tradition, based upon an egalitarianism and openness. However, these characteristics largely related to the identifiable elements within the dominant discourse of the time. This was essentially the relationship between the Church and the State and just as the Church found its position being undermined by the emergence of the secular state, so this secular, national state is finding its own position being challenged by free market forces within the globalised economy that have drawn the university towards a discourse of knowledge that aligns itself less with the social welfare of the state and more with the commercial well-being of the organization.

The university, therefore, as an element within this knowledge discourse having largely emerged from the legitimate knowledge associated with the Enlightenment tradition and from a close association with the grand narrative of scientific knowledge, has reflected itself within a pedagogy dominated by a process that focuses upon the transfer of expert knowledge.

> *No institution has more epitomised the modern project than the university. The university is both an institution of knowledge and a major player in the formation of the epistemic structure of the modern national state. The epistemic condition of modernity is encapsulated in the ethos of the modern university*

> *where knowledge was given a consecrating function in society and at the same time an autonomy from society.* (Delanty, 2001, p.133)

This is a powerful and enviable position that has acquired a degree of legitimacy that gives the university a uniquely significant and powerful position within the knowledge discourse.

Where knowledge is embodied within the expertise of discrete disciplines and individuals within these disciplines there is an inevitable emergence of institutions that can facilitate the formal transfer of this knowledge. The university is this institution and the development of academic disciplines can, in this sense, be seen to reflect the legitimacy of knowledge associated with the Enlightenment. Within this there remains a contested view of knowledge. This focuses upon the transfer of knowledge within the context of the Enlightenment view of knowledge. Within this the challenge is not to the legitimacy of current knowledge but to the purpose of that knowledge.

The emergence of the concept of the postmodern university has sought to re-align the role of the university in accordance with the perceived breakdown of the Enlightenment view of knowledge. This too is accepting of the socially embedded nature of knowledge and flirts with the relativism that is such a concern to those who have long existed within a structured and essentially definable context of knowledge creation and value – this is the process associated with the de-legitimation of knowledge.

> *The de-legitimation of knowledge is one of the most pervasive aspects of the de-legitimation of authority. In the postmodern condition, the de-legitimation of*

knowledge came about as a result of the predominance of the performance criteria. (Delanty, 2001, p.135)

Here there is the first direct association between the shifting knowledge discourse and the impact of more market-based forces within this discourse, on the role and function of the university. This impact is directly upon legitimacy, and for the university it is the legitimacy to make statements within the knowledge discourse that is being de-legitimised. The university must now re-presents its position and actively seek to re-acquire the legitimacy that it has held, but there is no guarantee that this re-positioning of the university will be effective. The critical question relates to the perception of where the authority lies to re-allocate this legitimacy and it appears to be not the nation state but the commercial organization. At the same time the commercial organization seeks to acquire the same legitimacy, creating unique opportunities for co-operation, integration and a wider, more inclusive knowledge discourse!

In place of national culture the university has found new ideology in the corporate ideology of 'excellence'/ With this shift from culture to excellence the university as an institution shifts from being an ideological apparatus of the nation state to being a relatively independent bureaucratic system. The pursuit of excellence allows the university to use the commodity form to regulate the production of knowledge. Although claiming to make the university more accountable to society, the strategies that are adopted are not those of accountability but of accounting. (Delanty, 2001, p.139)

In this way the university can be seen to be responding to the residual reflection that has been highlighted as part of the knowledge discourse. It appears to be associating itself with those elements that are drawing on establish sources of legitimacy but the difference is that where previously the university had almost sole charge of this legitimacy it must now increasingly share this with other actors and in doing so compromise its own position within the wider discourse of knowledge.

Organizational knowledge and the legitimisation of this knowledge is one of the characteristics associated with this period of residual reflection. Performativity is, therefore, legitimised both by those elements that have acquired or retain legitimacy within the wider discourse.

> *Performativity does not legitimise knowledge but rather embodies what science has become in the postmodern condition, which in itself has been made possible by the development of technology*. (Usher, Bryant & Johnston, 1996, p.166)

A technologically led process of legitimisation has altered the balance within the knowledge discourse towards performative/organizational knowledge. The university can be seen to be aligning itself to this process and by doing so not only promoting its existing legitimacy but also altering the perception of its own legitimacy. Where the postmodern condition can be aligned with the period of residual reflection that is being presented here, we have a picture of a reactionary response within the knowledge discourse to the goal of reaching the point of critical contestation. The emergence of the

postmodern university, to an extent, can be associated with this and is the re-positioning of the university and its alignment to organizational knowledge.

For many the positioning of the university within this period of residual reflection represents the end of either knowledge itself, or of the university, or of both.

> *The market structure of the post-historical University makes the figure of the student as consumer more and more a reality, and that the disciplinary structure is cracking under the pressure of market imperatives. The means by which the question of the structure of knowledge can be preserved as a question in such a situation, the means by which knowledge can be something other than marketed information, are not the reassertion of a fixed disciplinary structure by dictatorial fiat. What makes the William Bennetts of this world so angry is that such a solution is no longer competitive. Hence I suggest that we make the market in courses a matter of Thought and discussion by situating it on the side of the faculty and administration, rather than by leaving it solely a matter for student desire – which the faculty seeks to satisfy and the bureaucracy seeks to manage.* (Readings, 1996, p.177)

The issue here is not the efficacy of giving some thought to the marketing of courses, the commodification of higher education or the re-creation of the student as customer, but the position of the university to control the process that will conduct this thought process and produce any meaningful/legitimate statement regarding it. The university

no longer acts alone in this discussion, its thought are not its own private ruminations; these are now within the wider domain of the knowledge discourse and subject to it, to a greater extent than has previously been the case.

The postmodern university, therefore, is presented as an institution that remains an integral part of the wider knowledge discourse. However, the implications of this emerge from the contextual dynamics within which it is now said to operate and pleas for the continuance of university life must be considered in light of this.

> *The university is, has been and can only be a place where thinking is a shared process, where the teaching is part of the unending dialogism of the outer society, 'where thought takes place beside thought.' There must be a future for the university in its work of thinking, which goes on outside the instruction package of corporate excellence, one that has survived the attractions and repulsions of the nostalgic and the romantic.* (Smith & Webster, 1997, p.14)

This rather heart felt plea highlights the issue that is being considered here, the impact of external forces upon the position of the university within the knowledge discourse. It recognises the impact of commercial considerations and pleads for the necessity of combating the limitations inherent within this form of knowledge. However, it also raises the important question of why must this university exist and in what form should it continue to exist?

> *The institutionalised institutions of higher education find the once unquestioned right of deciding the canons of professional skills and competence fast slipping out of their hands.* (Bauman, 1997, p.22)

Universities, nevertheless, have a strong position within the knowledge discourse, as it appears to exist at present. They are embedded within the legislative structure, have an enviable credibility within the socio-cultural context of most Western European nations and appear to be adding to this by embellishing their role and purpose with an economic imperative that seeks this embedded legitimacy in order to sustain the development of organizational practice. Using this position the task appears to be to locate a suitable role for the university.

> *The challenge for the university is to redefine itself within this new and larger frame.* (McNair, 1997, p.38)

Bauman presents the disintegration of unity (a characteristic aligned with the postmodern condition) as the opportunity that will provide the universities with their main role and function within the emerging knowledge discourse.

> *It is the good luck of the universities that there are so many of them, that there are no two exactly alike, and that inside every university there is a mind-boggling variety of departments, schools, styles of thought, styles of conversation, and even styles of stylistic concern. It is the good luck of the*

> *universities that despite all the efforts of the self-proclaimed saviours, know-betters and well-wishers to prove the contrary, they are not comparable, not measurable by the yardstick and – most important of all – not speaking in unison.* (Bauman, 1997, p.25)

Again such sentiment only sits happily with those seeking to sustain the position of the university within the knowledge discourse where the university itself sustains legitimacy. Where legitimacy is being lost and progressively lost at an increasing rate, then the good fortune of the university voice calling out against the more pernicious elements within the ever widening and expanding context of the knowledge discourse might potentially be seen as a voice that is fading and increasingly becoming an irrelevance, devoid of legitimacy and stripped of any power or authority.

As Scott points out the disintegration of the knowledge discourse leads to an alteration in the epistemological positioning of knowledge and its wider function.

> *Knowledge is no longer privileged, in the sense that its reproduction is restricted to an academic (and social?) class. Nor is it 'expert', in the sense that reductionist techniques are indubitably the most effective. As a result, universities, in the new mass age, are less able to guarantee students access to a privileged body of knowledge, because such a body of knowledge no longer exists.* (Scott, 1997, p.42)

This inability to guarantee a privileged position is a manifestation of the erosion of the university's legitimacy within the knowledge discourse. As this position continues to erode the insertion of supplementary roles and functions for the university begin to emerge. This, as has been considered here, is the emergence of performative forms of knowledge/organizational knowledge and the needs of the wider knowledge-economy.

> *Institutions of higher education are increasingly expected, as conditions of their funding, to adapt their provision to the changing occupational requirements of late industrial economies.* (Filmer, 1997, p53)

The inevitability of a transformation of the university into a training institution for the sustaining and development of a purely commercial and market-oriented agenda is a clear point of concern. However, the defence is often based upon the perceived need to sustain a critical perspective in the face of this growing agenda of commercialisation.

> *Institutions of higher education constitute the environments and provide the expertise and qualities required to reflect critically on contemporary social processes. Without such critical reflection we cannot expect to plan social changes, or to respond to the unforeseen and/or unintended consequences intelligently, rationally and humanely.* (Filmer, 1997, p57)

Rational, detached institutions, capable of ensuring a critical view of society requires a strong and sustained position within the knowledge discourse. Where this discourse can

be seen to be more fluid and dynamic then the most pertinent question relates to the changing position of the university within this discourse. Rather ironically this can be identified by the institutionalisation of the intellectual, a process that has emerged over the last hundred years and picked up some pace in recent years.

> *The structural shifts that affect intellectuals have in recent decades become so obvious that few can deny them. If Mannheim's analysis of the independent intellectuals seemed questionable for the late 1920s, it is downright impossible for the late 1990's. Intellectuals seem increasingly 'attached' or affiliated or institutionalised. In this perspective, Mannheim can be seen as the last theorist of the independent intellectuals, not the first. After Mannheim, the classic vision of intellectuals as independent and rootless makes way for a view of intellectuals as dependent and anchored.* (Jacoby, 1997, p.64)

The significance of this institutionalisation of the intellectual directly relates to their position within the knowledge discourse. In particular, the 'rooted' intellectual cannot be the detached and reflective individual or at least there cannot be the same expectation that this function can be seen as the primary function of such individuals – there is a contradiction here.

This contradiction appears to emerge in the critique of postmodernity where the plurality inherent within postmodernity is itself perceived to be a positional statement which it is rejecting:

> *Postmodernist strategies can only consistently sustain their critical charge by surreptitiously invoking the foundationalist positions in social theory which they have explicitly rejected; in other words , that they are covert or shame-faced realists who ought to acknowledge the ultimate dependency of their critique on value commitments which are actually in alliance with the theoretical perspectives they wish to disown.* (Soper, 1997, p.45)

This apparent contradiction rests upon the acceptance of postmodernity's positional relationship to modernity, specifically, where postmodernity represents a linear progression from a state of modernity based on an Enlightenment concept of truth to a postmodern rejection of this truth and an embracing of many legitimate truths, such as feminism, that previously had been excluded from the dominant discourse within modernity.

However, this might be seen to be a flawed view of the nature of postmodernity. Rather than it representing a stage beyond and where it merely represents a state within the contested nature of, in this case, the knowledge discourse, then modernity simple appears as a less fluid or more stable point within the discourse and postmodernity a more fluid point. Such fluidity and its existence or non-existence is discernible and it can be argued, therefore that the fluidity within the knowledge discourse that led up to the establishment of Enlightenment forms of knowledge were themselves periods that we would recognise as postmodern. That is, periods where there is a breakdown in the

consensus within the knowledge discourse. Knowledge, in this sense is becoming less knowable.

> *The university has derived its legitimacy from a project built around knowledge, around knowing the world. But the modern world is unknowable – not only epistemologically, socially and culturally, but in terms of our personal identities.* (Coffield & Williamson, 1997, p.43)

This environment that is characterised by change emerges from this less knowable world and the need to respond to change in turn emerges as the most valid response. From an educational perspective this would initially appear to sustain the position of the university as an important element within the knowledge discourse as learning is often presented as a means of meeting the challenges inherent within change. Indeed learning is change, but the important distinction that is now being presented is again related to the question of legitimacy. Knowledge becomes legitimate through the knowledge discourse and it is necessary to view the role of the university in relation to this discourse.

> *We need, therefore, to do nothing short of jettisoning the whole way we have construed higher education for one thousand years and, instead work out a new conception of education which starts with the understanding that the world is unknowable in any real sense*. (Coffield & Williamson, 1997, p.43)

This position appears to offer an opportunity or a challenge to us to meet postmodernity and to re-align the university within a context of change, dynamism and fluidity. However, this position can be challenged itself and it can be argued that we are not looking to identify how the university is positioned within a context of change but how we can foster the emergence of a less contested view of knowledge. If the consensus in relation to the knowledge discourse is breaking down, as the concept of postmodernity is suggesting, this is not a crisis for knowledge but an issue in relation to the contested nature of knowledge.

The knowledge discourse, in addressing the issue of a more contested knowledge discourse appears to be at once embracing postmodernity and sustaining a view of knowledge that can be associated with modernity. This is at the heart of the paradox that universities appear to be operating within, the supercomplexity that Barnett has considered.

> *Our especial postmodern difficulty is in choosing between metanarratives, or large stories of the world. Do we embrace science or do we mistrust it? Do we hang on to the welfare state or, instead, look to individuals to take responsibility for themselves? Do we abandon religion or seek to welcome new religions? Is it important, in managing our public institutions – such as universities – to ensure that decisions are made and that things get done or to find ways of encouraging the members of those institutions genuinely to engage with and to come to new understandings of each other? How do we apportion*

> *relative priorities between freedom, justice, responsibility and equality? Does social change spell social progress?* (Barnett, 2000b, p.75)

These questions epitomise the characteristics that can be associated with the contested nature of the knowledge discourse. It expresses fundamental uncertainties, a lack of cohesion and sense of almost panic at the loss of certainty and the fear of the relativistic elements that can be seen to be embedded within the super-complex.

The university's purpose has largely been to reflect legitimate knowledge and to produce this knowledge.

> *The university still has much to offer; it remains, even amid myriad knowledge producers, a major knowledge producer (and even if the clients are looking for knowledge services that the university seems unable or unwilling to provide).* (Barnett, 2003, p.70)

The university has largely done this through the construction of discrete disciplines that in turn have reflected the perceived elements within the grand narrative that was the Enlightenment view. However, this process of construction is less applicable within a postmodern context where legitimate knowledge emerges from local narratives. In attempting to do what it has always done the university is faced with the prospect of operating within an environment where organizational knowledge now imposes itself largely at the expense of the scientific knowledge associated with traditional university

disciplines. The characteristics of organizational knowledge, as we have seen, themselves reflect the socially constituted nature of knowledge within a more contested knowledge environment.

Knowledge within this context is more explicitly fluid and dynamic itself reflecting the local diversity from which it emerges. What this inevitably moves the university towards is knowledge that is based upon practice. The university at once sustains itself through operating at the edge of the complexity inherent within the postmodern, increasingly contested knowledge context and the wider social implications of this more contested environment. This is as true of engineering and science as it is of management and the arts. Essentially, where there emerges a relativist agenda, a Hegelian style anti-relativist agenda allows the predominant elements within the knowledge discourse to focus upon the key issue of continual change in order to, ironically, sustain the equilibrium. Change becomes the ideological focus of the post-capitalist information/knowledge age or the knowledge-economy. Organizational knowledge emerges as the embodiment of change and the representative of the only legitimate knowledge form. The university in aligning itself with this emerges as the Entrepreneurial University.

> *Entrepreneurialism is, firstly, an ideology that comes from outwith the university, but it is one that is being increasingly accepted and endorsed by the university, at least in its managerial domains. What began as an external*

> *ideology is being internalised: an ideology* for *the university is becoming an ideology* of *the university.* (Barnett, 2003, p.71)

Legitimacy can now be said to have passed to organizational knowledge. The implication of this, again for the university, is obviously embedded within the characteristics of organizational knowledge. This knowledge is essentially the knowledge of practice. It seeks to displace scientific knowledge with organizational knowledge and inevitably moves the university towards practice. Here, the university seeks to place itself close to the emerging and growing legitimacy of organizational knowledge. Context over content is now the focus within the knowledge discourse and the university must engage with PKT.

> *There was a time when Australian governments regarded universities as separate, sovereign institutions seeking and sharing a common public purpose in higher education. This time has passed. The paradox of the present period is that the more governments encourage the deregulation and privitisation of higher education, the less autonomous do the institutions of higher education become.* (Marginson & Considine, 2000, p.20)

PKT reflects the purpose of the Enterprise University as it engages with organizational knowledge. This engagement has emphasised very clearly the economic orientation of universities and for many has epitomised the crisis of higher education and even the end of knowledge. The Enterprise University appears to lose its position in relation to

the ‘common good’ by its increased separation from the state. As an institution now placed in opposition to the state and aligned with increasingly globalised market forces the university carves out a niche for itself, opens up new opportunities to deliver its product, but shifts its position in relation to the legitimacy of this product and engages with a knowledge discourse where its ‘traditional’ position becomes less relevant, increasingly marginalized and constantly challenged. The university begins to adapt to the requirements of this altered position and not surprisingly adopts the rhetoric of those organizations more familiar with the market place. Readings has identified this with the use of the term, ‘excellence’:

> *The notion of excellence, functioning less to permit visual observation than to permit exhaustive accounting, works to tie the University into a similar net of bureaucratic institutions. ‘Excellence,’ that is, functions to allow the University to understand itself solely in terms of the structure of corporate administration* (Readings, 1996, p.29)

This engagement is being presented here as PKT which has its roots in the wider knowledge discourse. Specifically, it has emerged as much from the andragogical debate as from the OL and KM disciplines. Adult learning has emphasised the need to encourage a pedagogical approach that supports and sustains characteristics associated with Self-Directed Learning, student autonomy and the accommodation of diverse learning styles and preferences.

Allen Tough, Stephen Brookfield and Malcolm Knowles, amongst many, have driven forward the ideas associated with self-direction and autonomy within learning.

> *Modularisation and workplace learning projects are symptoms of the powerful trends towards individualised learning, as are the reflective learning processes now almost universal in professional education and training.* (Jarvis, Holford & Griffin, 1998, p.77)

Also, the massification of Higher Education following the Second World War has been presented within a discourse of empowerment and an egalitarian agenda of inclusiveness and democracy. What appears to be breaking down is the perception of learning as being an activity primarily and exclusively focused upon the young. Andragogy, rather than pedagogy recognises that adults learn, and that learning is embedded within social activities beyond formal or traditional educational institutions. Rather than being a threat to these institutions this appears to be an opportunity to engage with a potentially more diverse student body. Widening access programmes and two major rounds of university creation in Scotland since the Second World War (1960's and 1990's) has reflected what appears to be a positive period of growth and growing relevance for universities as they respond to the changes inherent in the development of adult education. Part time programmes of study have allowed the combination of study and work and latterly the deployment of virtual learning initiatives have sustained a global reach for academic institutions as they seek more diverse student bodies and markets.

However, andragogy has not simply been concerned with increasing student numbers and opening up new potential markets for universities. It primarily recognises more independent learning characteristics and to an extent these have emerged as a direct result of shifts within the knowledge discourse. Where knowledge is seen to be more fully embedded within practice, the key characteristic of organizational knowledge, there is an inevitable shift towards learner autonomy. This crucial element of autonomy has allowed the emergence of a pedagogy that has a practical focus, this would include Experiential Learning and Lifelong Learning.

These types of development are indicative of the crucial shift being considered here in relation to the knowledge discourse. In considering knowledge, therefore, we are inevitably considering the perception of intellectual value. This perception is dependent upon factors that themselves are fluid and dynamic. The university, associated as it is with knowledge, its creation and transfer, through pedagogical techniques associated with teaching, is an element within this dynamic discourse of knowledge. This, to an extent, has supported the perception of the value of the university, as a source of knowledge and the inherent virtue that is embedded within knowledge.

This identification of the university with intellectual value placed it in a privileged position, it was, largely, the basis of the legitimacy of the university within the knowledge discourse, but the positioning of knowledge in close proximity to practice is drawing off the intellectual value embedded in the university and placing it within a

more diverse learning environment. The sense or view of the university pursuing knowledge for the 'common good' is being subjected to considerable pressures within the post-industrial society; Information Age; knowledge-economy. These pressures, to a large extent, have developed due to, ironically, a greater sense of the value of knowledge as commercially virtuous. They impact upon, amongst other things the autonomy of the university and subject it to the regulation imposed within this expanding market of learning.

> *The academic autonomy of universities consists in their rights as institutions to regulate their own affairs. Academic freedom is something much bigger, encompassing freedoms to teach and to engage in research and scholarship which may stretch far beyond a single institution.* (Evans, 2002, p.92)

These freedoms are clearly impacted upon where education is life long and individuals are being asked to learn within a variety of different contexts. This has manifested itself in a number of policy initiatives, for example, as has been seen, those around the promotion of LL. It has particularly manifested itself in a growing interest in learning that is occurring outwith traditional educational environments, in particular, through experience and the workplace.

> *To the extent that work-based learning programmes are instrumentally-driven, questions arise about the place of theory and critical reflection in such programmes. Related to this are questions about the maintenance of academic*

> *standards and the future of the university in a context where the majority of the students pursue work-based learning. But even for its avid enthusiasts, there are daunting conceptual and practical complexities involved in converting work into learning.* (Solomon & McIntyre, 2000, p.96)

Such pedagogical reservations concerning the embedding of organizational knowledge rely upon the legitimacy of the institution of the university to operate as an effective element within the knowledge discourse and to a large extent it is this that is being undermined and which represents the greatest challenge for the institution of the university as it has existed within the relative stability during the period of consensual breakdown in the knowledge discourse. The organization has recognized, partly through KM that a key component in the exploitation of the Intellectual and Human Capital of an organization is the effective generation of knowledge. Learning is seen to be a key to this and OL and the concept of the LO have arisen as expressions of learning within general organizational contexts, as opposed to traditional learning environments. This has its significance in the impact that it makes upon a discourse that has effectively passed a point of critical contestation, where the structures of legitimacy have or are beginning to significantly break down.

At this point the knowledge discourse enters a period of residual reflection where there are both positive and negative pressures, and it is this period that represents the current paradox within the knowledge discourse. For the university this means the re-

positioning of itself in relation to the shifting knowledge discourse and they would appear to be doing so as less significant institutions.

> *What universities have experienced is a gradual loss of their status as primary producers of a particular kind of knowledge and, correspondingly, their monopoly position as certifiers of competence in knowledge production.* (Usher, 2000, p.105)

As universities enter this period of residual reflection two pressures are placed upon them. The first is to fulfil the more traditional aspect of their social remit and this is centred on the continued critical engagement with knowledge production. This is largely to reconcile the instability within the discourse that is associated with the postmodern and to push this agenda ahead with a view to assisting in the re-formation of an understanding of knowledge up to the point of reconciliation. At this point there is more clarity within the discourse and to an extent to re-formation of what might be regarded as a meta-narrative. The second pressure relates to the reluctance to critically engage with knowledge production largely because of the uncertainty and pressures that can be associated with the passing of the point of critical contestation. Rather than looking ahead there is a tendency to look back and to draw on the established legitimacy that remains embedded within the previous period of consensual breakdown. It is this second pressure that has manifested itself in the emergence of KM and OL within the knowledge discourse and the 'new-vocationalism' that is emerging within higher education.

> *In the 1980s and 1990s the patterns of human capitalism, which underpin the principles of labour regeneration through education, have assumed a new form. Once again the impetus stems from economic change, from the emergence of new modes of production that are more specialised and depend on continuous innovation, research and development….This has at its heart a type of 'instrumental progressivism', which stresses a student-centred style of education that is individualised and flexible, and is designed to enhance the individual's opportunities for employment.* (Syme & McIntyre, 2000, pp.2-3)

Within this more contested environment and where the focus of this contestation is upon knowledge production itself then the position of the university is particularly challenged.

> *As more and more actors are being drawn into the field of knowledge production, the self-legitimation of the older knowledge elites becomes less certain. In the context of the risk society, the culture of expertise enters into crisis, with the widespread loss of scientific legitimacy and growing public calls for the accountablility of science and technology.* (Delanty, 2001, p.5)

Within the period of residual reflection there is a loss of consensus that inevitably seeks to draw on the sources of legitimacy as they are currently recognised, rather than forming the legitimacy appropriate to the emerging discourse, this can be recognised as the attempts to acquire the educational legitimacy of universities.

> *The disciplinary structure of knowledge and the nation state no longer totally define the cognitive field of knowledge. Consensus on what constitutes knowledge has been replaced by dissensus and culture, once preserved and reproduced in the university, is more contested than ever before. If the university is not to de-generate into technocratic consumerism by which students become mere consumers of knowledge and the university a transnational bureaucratic corporation legitimating itself by the technocratic discourse of 'excellence', it will have to discover another role.* (Delanty, 2001, p.6)

The 'other role' that the university might adopt within this context of super-complexity is often presented as one based upon the uniqueness of its position, the reflective and critical capacities of the individuals who make up these institutions, the autonomous nature of its own position and its association with a lack of a self-serving agenda and a will to support and sustain a sense of the 'common good'. In the face of an unprecedented crisis for the university it is required to draw on its own inherent strengths to re-form it crucial position.

> *We are witnessing a loss of confidence in the set of beliefs that have underpinned the university, beliefs which have clustered around ideas of reason, knowledge, progress, universality and enlightenment.* (Barnett, 1997a, p.167)

To re-form its position the university appears to face a rather contradictory context. On the one hand postmodernity raises the issue of relativism, the breakdown of the Enlightenment ideal of human progress and presents scientism as the corruption of the scientific and rational agenda. On the other hand there is the practical expediency that can be associated with the epistemological re-positioning of knowledge as organizational knowledge. Here, the legitimacy of the Enlightenment ideals and of the rational scientific methodologies is applied within a more fluid educational environment. Having passed the point of critical contestation in the knowledge discourse it is now possible to sustain this contradictory phenomenon where previous legitimacy can be acquired and applied prior to the point of reconciliation. This can be seen to offer an explanation for some contradictory behaviour.

> *The terms – competence, operationalism, performativity – seem to apply equally to postmodernism and to the NCVQ; but this is a mirage. It cannot be the case. The one is playful, egalitarian, disavowing general principles; and the other is stern, domineering, hierarchical, and contains its own prescriptions as principles having general application*. (Barnett, 1997a, p.169)

Rather than a mirage we are simply passing through the period of residual reflection where the lack of consensus within the discourse sustains elements of the previous consensus by identifying and acquiring the legitimacy of the elements that sustained that consensus. Epistemologically it is organizational knowledge and the development

of PKT, through the emergence of such diverse elements as KM and the LO within Management Science and forms of Experiential or Work-Based Learning within the discipline of Education, which can be seen to represent the efforts to acquire the legitimacy of 'traditional' educational institutions such as universities. The back door, here, is, ironically, these institutions engagement with the implications of postmodernity.

> *The university is not free to determine the nature of the knowledge projects in which it is engaged.* (Barnett, 1997a, p.169)

The weight of legitimacy being acquired by organizations external to the university has put substantial pressure on the university to align its considerable traditional legitimacy with this new epistemological position.

> *No longer are the academies in the position of near-monopoly that they have long held (for the past 100 years) in defining what is to count as worthwhile knowledge. Now, industrial corporations, finance houses, consultancies and professional bodies are all involved in quite formal ways in producing knowledge and in defining the key problems*. (Barnett, 1997a, p.170)

In organizational knowledge there is embedded the dominant epistemological elements of PKT and it is this pedagogy that is coming to represent the dominant form within the knowledge discourse. It is a form, as we have seen, that it based upon, ironically, the

postmodern concept of fluidity. For organizations the ability to problem solve is seen as the most pertinent focus for and learning or educational agenda. The need to sustain a position within an increasingly competitive context is at the heart of the problems that these organizations face and, therefore, knowledge is required to help understand how one might operate within this fluid and dynamic, postmodern context.

> *Now, the underlying theory of truth takes on a pragmatic edge: does this idea inform our practices in the world? Does this proposed set of practices, systems or technologies actually work? Is this finding usable? The pragmatic mode of thought works in subtle ways. It is not just that questions of this kind are increasingly raised, such that findings, ideas and intellectual products are assessed, are considered valid, only insofar as they come up to muster on pragmatic considerations. It is a much more circular state of affairs in which relevant issues for inquiry are set by emerging problems in the world, in which the techniques and strategies are geared towards the presenting problems, and in which the validity criteria of the findings are those of effectiveness, which is itself subject to ideological, political and organizational presupposition.* (Barnett, 1997a, p.171)

Organizational knowledge is a great deal more than an epistemological positioning. Inherent within this is a more substantial claim to legitimacy within the wider knowledge discourse and it is this claim that is impacting upon the university and its position within the discourse. To a large extent there appears to be an alignment

between organizational knowledge and the university, as has been outlined above, and the implications of this more fully rest with the social agenda of organizations than the educational remit of the university.

Essentially, as Foucault has highlighted for us, the agenda of any social formation cannot be detached from inherent power dynamics. Power dynamics within the context of commercial, market-led organizations can largely be equated with forms of management control for efficiency – hence the emergence of 'excellence' with accountancy and the professionalisation of the workforce. The university commodifies its product and the student becomes a consumer.

> *With knowledge goods and services having become commodities, exchanged for a price, it is the commodities that move in this pedagogical relationship (from supplier to consumer). The consumer, especially in a unitised modular programme, is not fundamentally transformed but, instead, rakes up the credits for each unit that is banked. Commodification means inertness: personal transformation is precluded. The student no longer gives of herself but expects that the commodity will already be of a high quality; its assimilation can then safely be banked.* (Barnett, 1997a, p.173)

Organizational knowledge is the manifestation of the commodification of knowledge and PKT is the educational context within which this knowledge sits. As has been seen, this is a pedagogy that is not only driven by a technological infrastructure but has

developed or is developing an epistemological perspective that engages with transparency, collaboration, co-operation and trust to construct a social learning programme that can service the learning requirements of the collective rather than the individual. In order to ensure this, it has been recognised that individual intellectual engagement is required and that in order to exploit the experiential knowledge that individuals acquire from social contexts there is as much a need to emphasise this engagement, as there is to consider the content of the knowledge being created.

The unique element here, from the university's perspective, is not the need to engage with changing epistemologies, because this was largely their purpose, but the very absorption of this engagement within organizations external to the university. The university's role is less certain within this context, it may be forming part of a richer epistemological context or it may be being marginalized and ultimately excluded.

> *If we are in the presence of substitution rather than inclusion, then we can justifiably talk of a crisis. That would be tantamount to the fundamental shift in the way in which we construe the world and the criteria which inform what we take to be legitimate claims about the world.* (Barnett, 1997a, p.174)

The position of the university can appear to be precarious within this shifting discourse and the attempts to present a more substantial and appropriate role for the university almost exclusively draw upon the university legitimacy within the discourse.

> *The decline of modernity – in its institutional and cognitive structures – is most visibly represented in the declining significance of the university as the site of knowledge.* (Delanty, 2001, p.142)

The opportunity for the university to expect to make a significant contribution to the developing epistemological context appears to be eroding. The role that the university played in relation to the wider social understanding of the emerging characteristics of late modernity is also being eroded and being replaced by an expediency founded upon the ideology of the market. For Delanty (2001) there is a position for the university that reconciles the paradox of the university within postmodernity, struggling to come to terms with instrumentality.

> *The university must find ways to go beyond both relativism and instrumentality.* (Delanty, 2001, p.151)

Both Barnett and Delanty present a role for the university around its ability to form a point of reconciliation based upon its unique position as an arbiter and communicator.

> *The role of the university must be to make sense of this situation of endless change and, secondly, it must enable people to live more effectively in this chaotic world.* (Delanty, 2001, p.155)

The sense of the world being chaotic sustains organizational knowledge through the need to operate largely at a point of crisis where there is an emphasis on collective responsibility. The need to sustain this element of near crisis and constant change is a key to the engagement required with the context of both OL and EL. The need to integrate personal knowledge, to reflect and consider one's own contribution and position lends a transparency to the relationship between the organization and the individual. That it is becoming embedded within the language of critical educationalists is evidence of how embedded this notion of change has become. Organizational knowledge is directly related to this sense of change, the need for transparency and ultimately the ability to apply ICT to the countering of this context of constant change.

Similarly, Barnett's notion of super-complexity attempts to present this view of a context that will inevitably require a degree of engagement that can be equated with organizational knowledge and PKT.

> *We are in a situation of supercomplexity when our very frameworks for making the world intelligible are in dispute. The resulting fragility that confronts us is not that our frameworks are dissolving as such; rather, it is that for any one framework that appears to be promising, there are any number of rival frameworks which could contend against it and which could legitimately gain our allegiance.* (Barnett, 2000b, p.75)

There can be no disputing that there are rival claimants to our allegiance and that this has come to be seen as one of the founding principles of the postmodern condition. However, rather than this being a question of complexity, it is, rather, one of contestation. The uncertainty expresses a high degree of contestation within the discourse, following the point of critical contestation where previous systems begin to breakdown in a significance sense. However, the process that emerges from this is one that works towards the point of reconciliation where there is re-established a less contested view of knowledge, there is more stability within the knowledge discourse.

Presented in this way the university's response can be seen in a dual light. There is a need to press forward with the postmodern agenda, to seek consensus within the knowledge discourse; and the university might play a uniquely important part in this. However, it must also play a part in responding to the presentation of knowledge as organizational knowledge. Again, if this is seen as a residual reflection within the knowledge discourse; if it seen as, essentially, an expression of power dynamics that use rhetorical mechanisms to feed upon the lack of consensus in order to acquire legitimacy within the discourse, then the role of the university is to offer some reflections and thoughts on the efficacy of this action.

Both of these, press upon the universities remit and are requiring a vigorous response.

> *The challenge facing the university today is to link cultural reproduction and technological production. In the university as in the wider society these two*

> *forces are disengaged. On the one side are battles of cultural identity and on the other a market-driven capitalism is pervading the university, shaping the university in the image of technoscience. In a way this conflict encapsulates the broader conflict of modernity between life-world and system, between culture and power. Against the postmodern interpretation, there is enough evidence to justify the view that the university is able to retain a post-metaphysical principle of unity. I am arguing that this relates to its ability to establish zones of interconnectivity between the opposing domains of technology and culture. In this regard the cosmopolitan faces of citizenship, that is, cultural and technological citizenship, are central to its mission.* (Delanty, 2001, p.157)

In this view the university continues to have a role to play in the unfolding knowledge discourse, despite the dominance of instrumentality and the pressures inherent within the embedding of organizational knowledge within this discourse. The Habermasian communicative role envisaged by both Barnett and Delanty inevitably is dependent upon the continued legitimacy of the university within the discourse.

> *Perhaps something approximating to a democratic speech situation can be obtained by creating discursive spaces within the university.* (Barnett, 1997a, p.176)

This 'forum for dialogue' is the university response to both postmodernity and marketisation and their impact upon higher education.

> *In a world in which everyone is a knower, academics can only secure legitimacy by fully engaging with the world and by demonstrating their capacity to handle multiple knowing activities as such.* (Barnett, 1997a, p.177)

Active engagement will allow for the confrontation of the issues inherent within a more contested knowledge discourse. However, the dual nature of the challenge for universities should not be underestimated. On the one hand the uncertainty within the discourse, presented as the postmodern condition, not only creates the need to explore the epistemological arena for future consensus, but also appears to have created a reactionary response, referred to here as the period of residual reflection. Here the characteristics of perceived legitimacy are contested and have largely been acquired by organizations external to the university. This has resulted in the emergence of a pedagogy based upon the principles of knowledge practice. This pedagogy is firmly rooted in instrumentality and can be presented as a mechanism for managerial control and for the exertion of power within this epistemological context. The university's participation within this period of residual reflection with this epistemological development will not only hold back engagement within the wider social remit outlined above, but will progressively disperse the legitimacy that the university has held within the knowledge discourse, potentially rendering it incapable of meaningfully engaging with this wider social remit.

The dangers for the university are clear. It is facing a challenge to its legitimacy within the knowledge discourse. The development of KM and the creation of the concept of the LO have established, more effectively than had previously been the case, the educational basis of actions outwith 'traditional' academic institutions. This has been reinforced outwith the discipline of Management Science, by developments in EL and LL. These developments have driven ahead the epistemological shift that has been associated here with PKT. This, relying as it does on a technological infrastructure and a culture of transparency, has supported the positioning of performative and instrumental forms of knowledge that support a context characterised by constant change and the need, within a commercial sense, to sustain competitiveness. This need can largely be seen to be based upon a postmodern perspective, where there is no certainty and where fluidity and change are the dominant characteristics. This residual reflection within the knowledge discourse draws, therefore, not just on the usurping of existing legitimacy but also on those elements which are beginning to challenge this legitimacy, and are associated with the postmodern.

The university's participation with the establishment of organizational knowledge will fundamentally alter its position within the knowledge discourse, it will inevitably lose legitimacy and in losing this legitimacy will not be as prominent a player in the type of social engagement that both Barnett and Delanty propose. The evidence would appear to point towards an increasing engagement with organizational knowledge on the part of the university. As a consequence there would emerge a university that is dominated by the accountant, measured by the statistician, engaging students as customers who

seek only to pass and not learn and where there is an increasing inability to conceive of the role and function of the university teaching beyond an economic imperative and the gaining of employment by its customers, where research is first and foremost about quantity.

> *Collections of academic work are under threat as young academics shun editing roles in favour of publishing papers because of pressures generated by the 2008 research assessment exercise.* (Times Higher Educational Supplement, 17 March 2006, p.56)

KM and EL have their part to play in this emerging educational environment. This thesis has attempted to illustrate how KM and EL can be seen as related elements within the knowledge discourse and how they can be seen to be contributing to the situation above, namely the shunning of editorial roles. These consequences are far reaching for the future of the university and in highlighting the relationship between the elements considered here and placing them within the wider sociological context, this dissertation has attempted to highlight the precarious position of the university at this point within the ongoing discourse of knowledge.

5. CONCLUDING REMARKS

The knowledge discourse is a permanently contested environment shifting in response to different elements, influences and pressures. Organizational knowledge is now part of this contested environment and this thesis has sought to identify the nature of organizational knowledge and the way in which it manifests itself within the wider knowledge discourse. Lyotard's view of performative knowledge has been aligned with organizational knowledge and the importance associated with ICT has been emphasised. However, the KM movement within the discipline of Management Science and the emergence of both OL and the concept of LO have enhanced Lyotard's view of performative knowledge and presented a powerful and influential element within this discourse. Drawing as it does on the perception of a fluid and dynamic environment, emphasising the intellectual engagement of the individual within social contexts, this has brought learning to centre stage and presented a pedagogy that is more aligned with these perceived changes – this is PKT.

The influence of these perceived pressures within the discourse is such that they can be mirrored within other disciplines that have had a prominent position within the knowledge discourse, namely Education. This can be identified in the presentation of EL and LL. Both attempt to align themselves with organizational knowledge by accepting the context of constant change, by identifying and emphasising the value of experience and by appreciating the value of a proximity to practice. In doing so they are participating in a situation that is fundamentally a paradox – on the one hand seeking a

unity (presenting a pedagogy that can be aligned to modernity) within a context of disunity (the lack of contextual harmony aligned to postmodernity).

The university, within this shifting discourse is participating in this paradoxical context where it aligns its own purpose with that of practice. This is reflected both in the practical expediency associated with the development of online distance learning, supported as it is by ICT, and where the lead is taken by the external organizational context to form and determine the curriculum. There is evidence of both of these phenomena occurring and rather than this being evidence of a university adapting to a changing context it is evidence that the legitimacy within the knowledge discourse is being eroded and that this legitimacy is being embedded elsewhere. The implications of this are that the university is closer to ruin than it has previously been, as Bauman is suggesting. Its current position is eroded and elements of its response will ultimately erode this further. The role that Delanty highlights is a necessary one but the university, devoid of legitimacy within the discourse, will be increasingly unable to fulfil this role, even if it wanted to and recognised the need!

What this thesis has attempted to highlight is the importance of understanding our engagement with knowledge. Universities are intimately linked with knowledge production and their practices can be seen to reflect and respond to different stimuli and shifts within what has been referred to here as the knowledge discourse. What has also been presented is the view, the opinion, that knowledge is socially constructed and that the processes of both legitimacy and contestation define the nature of the knowledge

asset at any given time. Within what is referred to as the postmodern, legitimacy is highly contested and therefore knowledge is contested - it is being argued here. If we accept this then we can begin to present a view of how universities and the professionals embedded within these institutions act and, hopefully understand these actions more fully.

Within the profession of librarianship there has been a move away from the role of the librarian as the intermediary in relation to information sources. The interrogation of databases, now technically able to be performed beyond the physical boundaries of any particular library places the emphasis upon information searching skills and information literacy. Individuals now need to be able to act independently and to develop their own understanding of their information need. This technologically driven development appears on the one hand to empower through independence and the development of specific skills and it can be aligned with the principles often associated with adult learning, such as self-directed learning. For the librarian the role becomes one of a facilitator, or a guide through published literature and these skills are more akin to teaching than they are to traditional library skill of cataloguing, classification, indexing and the construction of taxonomies.

However, if we can identify and recognise this shift, if we can look at such projects as the recent eLib (Elib Project, 2008.) project which developed a range of different responses to the emergence of the Information Society, including EduLib (Edulib Project, 2008) a project that specifically looked at the development of teaching skills

for library professionals, we can more critically review how this shift might be seen to be impacting upon the profession. Specifically, the identification of academic subject areas (not least through modularisation) can be seen to be presenting knowledge as discrete and definable. On top of this technology can offer, through increased independence and information literacy, an enhanced access to this knowledge.

This can have one of two outcomes, I would suggest. First, it can enrich the experience of individuals and it can offer a level of engagement that would previously have been considered unrealistic. However, second, it might be seen to encourage institutions to align themselves with what might be referred to as more pragmatic or strategic practices. In relation to this latter response institutions align themselves with performative characteristics, they look to define, they look to classify and ironically they begin to view the process of education as more akin to traditional library processes. The emphasis here is on definition, define learning outcomes of individual modules within any given undergraduate or postgraduate programme; assess and evaluate the work of the members of university staff through the emergence of various tools for visibility. For example, many institutions have now instigated review processes for academic staff which essentially claims to help identify professional development opportunities. However, this is a process of externalisation that can be seen to not only empower the individual but also to control them.

This process of externalisation can be aligned with the developments that have been considered here in relation to the Information Society. Specifically, the contested nature of knowledge, the absence of a clearly defined legitimacy in relation to knowledge statements has potentially allowed the emergence of a process that can either be

regarded as one of care or one of control. However, in the type of practices described, knowledge itself is more aligned to the principles of modernity, but it is the characteristics associated with postmodernity that have ultimately allowed the current situation to emerge. This is based on the concept of residual reflection where actors previously without legitimacy within the discourse have an opportunity to acquire legitimacy and do so, but draw on characteristics of knowledge that existed within the previous context where knowledge was less contested. The fact that it is no longer uncontested produces the paradox that has been considered here.

This leaves the librarian and the academic, as two key professional bodies within academic institutions, with quite complex and often conflicting roles. The Information Society loosens access to information. It thus impacts upon the role of the mediators within the process of knowledge transfer – teaching and learning. For the librarian it appears in the first instance to open up opportunities to act as a more positive facilitator, to move from a rather static role relating to the organization of knowledge to one more intimately associated with the guide to knowledge. The librarian no longer receives requests for information, but instructs on how to acquire that information. This sounds more like the role of the academic, guiding the student through a discipline and encouraging their engagement with it, encouraging them to form their own position in relation to the discipline.

However, where there is evidence that the merging of the traditional librarian's role and that of the academic then there appears to be a real issue for academic institutions.

Primarily, if they align this with a view of performative knowledge then we will potentially create institutions that recognise the possibility of defining the knowledge base in such a way as to reduce the process of education down to a clearly defined series of steps through which students can be guided via teaching that is fundamentally a process of facilitation. This process might be carried out by a librarian and there is evidence to suggest both that academic institutions are aligning themselves with performative knowledge and that as a consequence teaching and learning process are going through a series of externalisation exercises that will allow ultimately for greater visibility, less flexibility, more control and more facilitation of learning rather than teaching.

Academic institutions can look for these externalisation exercises and given what has been said above can understand these in a particular way. This thesis has not sought to present a negative view of academic organizational practices but substantiate a particular view of these practices. Where universities are looking to embed more elaborate, formal processes of staff development, where they invest in technological infrastructures to facilitate distance and virtual learning, where they progress modularisation, where they enhance the student voice through feedback questionnaires on the student experience, where they develop the sense of the student as a customer, then this can be regarded as part of this externalisation process. It can be seen that the university is aligning itself with this residual reflection within the knowledge discourse and this does have a considerable impact for the professional practice within these institutions. For example, in relation to many distance or virtual learning contexts the

content of a particular module is reduced to a text made up of discrete topics supported by documentation and fora that seek to enhance communication and replicate the dialogue associated with academic engagement. This process of reduction can be seen as itself a process of externalisation, as can the discussions through and during the delivery of these modules. Whether or not the explicit intention here is to define and through this enhance control, through increased visibility is a question raised through this thesis. This thesis has sought to present and substantiate a view that impacts directly on professional practices within universities. Therefore, this thesis offers a view of academic practices at a time where there appears to be a great deal of fluidity and dynamism within practice. Even questioning this perception of a context of fluidity is possible. Its presentation might be regarded as a rhetorical element aimed at ensuring that the processes of externalisation discussed within this thesis are justified.

The broader implications of this re-alignment of the role of the university and the professional impact of these relate to the position of the intellectual within society. As Coser has pointed out:

> *When intellectual autonomy is relinquished and the constraints on inquiry imposed by policy-makers are accepted, when no independent basis of power is available, the intellectual becomes an expert.* (Coser, 1997, pp.140-141)

This loss of autonomy, this alignment of knowledge with performativity and the wider social acceptance of this, is essentially what this thesis has been highlighting. For the

university the embedding of the expert and the supplanting of the intellectual with the expert can be presented as the position currently being experienced by the university academic.

This is a question of legitimizing power, in particular, the legitimizing of knowledge statements as a means of acquiring power and influence. Through the creation, acquisition, transfer and sharing of knowledge via Knowledge-based Information Systems we are engaging with more than a functional electronic environment, but with an ontological statement of intent. By buying into the notion of organizational knowledge we shift the emphasis of knowledge statements themselves from one based upon epistemological expediency to one based on the very nature of being, the ontology of knowledge, where our very lives and actions are defined by our engagement with the knowledge discourse.

The ability to re-engage with the contested nature of knowledge, therefore, is not as dependent upon the role and function of the university as independent intellectual arbiter, as might be expected or assumed. This function is losing its potency given the nature of the developments and the response to these developments that have been considered here.

The primary task would appear to be to engage with the reactionary tendencies inherent within residual reflection. To move into a more contested knowledge environment, a re-evaluation of the legitimising elements within the discourse as it previously presented

itself needs to be undertaken. To move from a point of critical contestation to the point of reconciliation, is to move through this period of residual reflection. The nature of the reconciliation remains to be seen, it is often presented in terms of the postmodern and the struggle with relativism, but here it is merely a matter of contestation, reconciliation and re-formation.

The crucial evidence for the knowledge discourse currently experiencing this notion of a residual reflection (which prevents a full engagement with the implications inherent within the postmodern) is based upon an analysis of the nature of organizational knowledge supported by Lyotard's presentation of performative knowledge and the Postmodern Condition. This dissertation present a Postmodern Paradox, rather than a condition, in that the nature of contestation is key to understanding the limitations of performative knowledge identified by Lyotard and how these fail to align themselves with the perception of the super-complexity within the emerging environment.

The university currently is struggling with the inevitable loss of legitimacy brought about by the reaching and passing of the point of critical contestation. KM is acquiring this legitimacy and using it to support a particular view of knowledge, presented here as organizational knowledge. That this knowledge is based upon a legitimacy that was within the previous period of consensual breakdown is the very nature of the paradox that is central to understanding the residual reflection as the wider discourse seeks the point of reconciliation and to enter into the period of active reformation of the consensus. What the university is engaged with, within this analysis, is a challenge to

operate within a period of greater contestation. This ironically and paradoxically presents the university as an active and flexible element within a fluid and dynamic context, while at the same time contributing to its own inability to operate within the discourse of knowledge. It is, essentially, writing itself out of this discourse as an active element, precisely because it is participating in its own loss of legitimacy.

> *Everything the universities have been doing for the last nine hundred years made sense inside either the time of eternity or the time of progress; if modernity disposed of the first, post-modernity put paid to the second.* (Bauman, 1997. p.21)

The university may have linked itself with both the mythological knowledge of religion and the scientific knowledge of progress and industry but it is now facing a challenge in terms of where it might now position itself within the emerging knowledge context. It appears to be aligning itself with performative or organizational knowledge. This is a knowledge that draws on the context associated with progress and with modernity and is presented here as a residual reflection within the knowledge discourse. As such it is a form of knowledge that looks back more than forward. It draws on an explicit organizational imperative to support an emerging pedagogy, the aim of which is primarily to make socially transparent individual understanding. This pedagogy marries individual empowerment with sustainability, self-direction with innovativeness and autonomy with competitiveness but largely does not present or sustain mechanisms for critical self-evaluation, based as it is upon this economic imperative.

The university in aligning itself with PKT is not only disengaging itself from the challenge of greater contestation within the knowledge discourse and by so doing losing its opportunity to retain legitimacy within this discourse, it is also actively supporting this disengagement. In doing so it can either be the end of the university as a legitimate voice within the emerging knowledge discourse or the end of the university as a legitimate voice within a dispersed and dissipated knowledge discourse where knowledge itself has come to an end and been replaced by a series of rhetorical and performative statements.

To extend Bauman's claim above, the university can only make sense within periods where there is little or no contestation within the knowledge discourse. The choice of the university is either to engage with the contestation associated with postmodernity or to append itself to the efforts to sustain a view of knowledge within modernity. That the university is attempting the latter has been illustrated here and if this is the case then it can play no part in reconciling this current contestation and can claim no legitimacy in relation to its knowledge statements as a consequence, once this period of contestation has been superseded at the point of reconciliation.

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