Creativity in (and out of) the workplace

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Previous degrees: MA Human Resource & Knowledge Management
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I declare that this thesis is my own work and has not been submitted in substantially the same form for the award of a higher degree elsewhere.

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Abstract

Creativity is argued to be essential to the long term survival of organisations, institutions and even nations. Understanding how to enhance and utilise human creativity has become an important goal for academics, governments and practitioners, consultants, trade unionists and managers. Critical to this goal is the ability to recognise creative contributions, actualise creative potential and enable people who are creative in one context to perform creatively in another. However these goals are arguably beyond existing creativity research. The existing conceptual framework for creativity studies, and the conventional definition of creativity advocated within it, serve to check the realisation of these goals. This is because creativity is commonly defined through the recognition of produced and valued novelty. This definition obscures all that is unrecognised, un-actualised, unexercised and currently in potential from being considered creativity. This research is an attempt to resolve this paradox and enable the goals of understanding and enhancing creativity to be achieved. The thesis proceeds in two parts. First, the problems within the existing conceptual framework and its conventional definition will be located, reflected upon and then, through meta-theoretical development, a resolution to the paradox will be proposed. The result is presented as a critical realist inspired ontology of creativity, which includes an augmented framework and definition of creativity along with a more nuanced understanding of the following categories: *unrecognised creativity*, *un-actualised creativity*, *cross-contextual creativity*, *creative potential* and a solution to the problem of *ex nihilo creativity*. Secondly, the validity of these categories will tested through an empirical investigation into the nature of in-work and out-of-work creativity and how a person's creative potential can move between these contexts. It is concluded that, unless and until the meta-theoretical fog that blinds creativity research is cleared, the understanding of human creativity will remain impoverished.

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1. Introduction

It is increasingly argued that, in order to face the challenges of globalisation, managers need to facilitate innovation by encouraging and utilising the human capacity for creativity. A seductive rhetoric promoting the importance of creativity in the workplace is ever growing (e.g. Dewitt 2003, Bommer and Jalajas 2002; Mumford 2000; Williams & Yang 1999; Amabile 1997; Cummings and Oldham 1997; Proctor 1991) and has, arguably, led to an increase in interest in creativity research. At the same time, there is a long tradition of Humanist thought that has always placed the issue of creativity, and its absence, close to the centre of its analysis. Humanists of various shades have long enquired into why, if to be a human being is to engage in creative work, human creativity is rarely manifest in the workplace (e.g. Ollman 1976; Mészáros 1975). There are, therefore, new and old traditions placing, and keeping, creativity on the intellectual radar screen, reasons that drew me to research this important topic.

The initial focus of this research was empirical. I intended to identify people who were creative outside their workplace and ascertain whether this creativity can cross the workplace boundary by considering if they were also creative in their workplace. I quickly realised that this project would be far from straightforward. This was largely because of what I term the *existing conceptual framework* and its *conventional definition of creativity,* which had serious shortcomings, making it virtually impossible to use existing theoretical apparatus as a basis to conduct empirical research. Closer inspection revealed that the existing conceptual framework and definition of creativity made several crucial presuppositions which, once uncovered and clarified, I started to doubt.

They presupposed that for an act to be classed as creative, it had to be *recognised* as creative, a corollary of which is that creativity cannot exist *unrecognised.* It presupposed that for an act to be classed as creative, it had to be *actualised,* a corollary of which is that creativity could not exist in an *un-actualised* state. It presupposed that, to the extent that creativity was considered to exist as a *potential* (and this was an ambiguous consideration at best), it could only be inferred through its manifestation in creative performance. It presupposed that creativity in one context (say out-of-work) cannot be taken to indicate the existence of creative potential in another context (say in-work), thereby denying the possibility of *cross-contextual* creativity.

I began to suspect that creativity could exist *unrecognised, un-actualised*, as a *potential* and could indeed cross the in-work out-of-work boundary. It seemed, then, that if any headway was to be made researching in-work and out-of-work creativity, the categories of *unrecognised creativity*, *un-actualised creativity, cross-contextual creativity* and *creative potential* would have to be addressed first.

Whilst clarifying the nature of these categories grew in importance, there was yet one more problem that would have to be dealt with, a problem arising from the idea of novelty. Existing creativity research recognised two inherent difficulties relating to novelty: (i) How do we separate what we might call 'everyday' novelty from what we might call 'creative' novelty? (ii) How do we explain the existence of a truly novel act without presupposing that the act comes into existence *ex nihilo* (or from nothing)? Unable to deal (adequately) with this problem, existing researchers proceeded on the assumption that creativity was what creativity researchers recognised it to be, and conducted research with a degree of, perhaps misplaced, confidence that they were, in fact, studying creativity.

In sum, then, the primary areas of research interest grew from an empirical focus upon in-work and out-of-work creativity, to the development of an alternative or *augmented conceptual framework* and definition, and to the establishment of the categories of unrecognised creativity, un-actualised creativity, cross-contextual creativity, and creative potential. This augmented definition of creativity and associated conceptual framework, and these categories, along with others necessary to gain a more sophisticated understanding of creativity, are developed in eight chapters. The rest of this introduction briefly sketches their content. All the terms and categories sketched here will be defined and elaborated upon in the appropriate chapters below.

Chapter Two explores the existing conceptual framework and conventional definition of creativity, uncovering problems relating to the categories of unrecognised creativity, un-actualised creativity, cross contextual creativity, creative potential, *ex nihilo* and valued creativity. It argues that the problems we face in defining creativity, far from being solved via the conventional definition, actually mean the nature of creativity is obscured from research. It concludes that the reasons these problems remain unsolved is because they cannot be located at the level of theory or definition, but have deeper, meta-theoretical roots. The shortcomings of the existing conventional definition and conceptual framework mean there are few answers to the questions posed through these areas of research interest, and those that are offered are saddled with contradictions.

Chapter Three proceeds by exploring the meta-theoretical presuppositions contained in the existing framework for studying creativity, revealing how they have influenced definitions of creativity *and* blocked research into creativity. At first glance, the reason why research has been blocked seems to lie within the conventional definition of creativity. This is, however, a mistake. The reasons these problems continue to plague creativity research are deeper than the theoretical and definitional issues within the existing conceptual framework; the problems lie with meta-theory. Meta-theoretical problems, exacerbated by a lack of reflection by creativity researchers, mean the shortcomings in meta-theory have generally gone unnoticed.

Chapter Four engages in a process of meta-theoretical under-labouring, making use of critical realism. It locates the conceptual shortcomings of the creativity paradigm in existing meta-theory, especially ontology. It argues that the origin of the problems identified in Chapters Two and Three lie either in the positivist, or as I will call it, scientistic perspective, with its empirical (or naïve) realist ontology (i.e. an ontology exhausted by the observable), or in some form of postmodern/pragmatic perspective with a strong social constructionist ontology (i.e. an ontology exhausted by, in this context, the values or discourses of those who judge creative phenomena). Using the alternative meta-theory offered by critical realism, the production of an appropriately augmented definition and ontological model for researching creativity is presented. Arguably, critical realism provides the meta-theoretical tools to solve many of the problems creativity research has faced. Specifically the ontological commitments to causal powers, stratification, emergence, agency-structure relations and absence or negation can be fruitfully applied to the creativity paradigm.

The net result enables the resolution of the problems raised previously, especially in relation to creative potential, unrecognised and un-actualised creativity and cross-contextual creativity. The *ex-nihilo* paradox is also addressed and a solution to it is proposed which hopes to rid creativity research of this worrisome issue. In doing so, it will be argued that the solution clarifies similar issues within critical realist meta-theory hinted at by Bhaskar (1993).

In Chapter Five, the definition and augmented ontological model of creativity is presented and the argument that it enables theory to offer *further* explanation of fields considered only partially open to investigation (such as creative potential), as well as opening up new fields for investigation in the form of unrecognised and un-actualised creativity, is detailed. Empirical research into creative potential, unrecognised creativity and un-actualised creativity via exploring creativity in-work and out-of-work is argued to be able to continue unabated by meta-theoretical difficulties and future theoretical development becomes possible.

In Chapter Six, the objectives of the empirical research into creativity in organisations, and the research techniques consistent both with the critical realist meta-theory and appropriate to the object of investigation, are presented. Four overarching questions about the nature of creativity in organisations are provided:

- To what extent *can* creativity exist unrecognised in an organisation?
- To what extent *can* creativity exist un-actualised in an organisation?
- What do employees believe happens to their creative potential in the organisation?
- How similar is creativity in and out of work? This is, of course, derived from the questions of cross-contextual creativity.

Chapter Seven presents my empirical findings. It should be noted that this research does not aim to *explain* the *causes* of creative potential, unrecognised creativity, un-actualised creativity and cross contextual creativity as they arise (or not) within organisations. Rather it aims to provide empirical evidence, via a sample of workers, in support of the existence of creative potential, unrecognised creativity, un-actualised creativity and cross contextual creativity. That is to say, although theoretical and meta-theoretical reflection threw up these ontological categories, the categories themselves need validating before any further research can use them as a basis. Whilst these aims are more limited, they are consciously so. This research, then, aims to test ontological claims about creativity. It can be considered, effectively, an exercise in *the ontology of creativity*. The empirical findings do indeed support the ontological claims made and therefore offer evidence that establishes the existence of creative potential, unrecognised and un-actualised creativity, and the ability of a person's creativity to move between contexts.

This thesis has two 'sides' as it were. One 'side' is devoted to theoretical and meta-theoretical clarification and development, resulting in a new definition and model of creativity which establishes a set of ontological categories, namely creative potential, unrecognised creativity, un-actualised creativity and cross-contextual creativity. The existence of these categories is not, however, taken for granted because the other 'side' is devoted to empirically validating the existence of these categories. It is, then, a serious attempt to combine theoretical, meta-theoretical and empirical research. It is concluded that the meta-theoretical fog, that blinds creativity research, means understanding of human creativity not only remains impoverished but that this has significant political consequences.

2. The existing definition and conceptual framework of creativity studies

'Creativity is, in my view, something that is impossible to define in words'
(David Bohm 1998:1)

Introduction

This chapter defines and elaborates upon, the *existing conceptual framework*[1], its *conventional definition of creativity* and a series of problems, tensions and contradictions relating to *unrecognised creativity*, *un-actualised creativity*, *cross-contextual creativity*, *creative potential* and *ex nihilo creativity*. It argues that the problems we face in defining creativity, far from being solved via the conventional definition, actually mean the nature of creativity is obscured from research. It concludes that the reasons these problems remain unsolved is because they cannot be located at the level of theory or definition, but have deeper, meta-theoretical roots. The shortcomings of the conventional definition and existing conceptual framework mean there are few answers to the tensions that will be identified and those answers that are offered are often saddled with problems and contradictions.

Within the management and organisational fields, creativity research has been informed, largely, through an established conceptual framework developed mainly within the field of psychology. A definition of creativity often found within the established conceptual framework, or a conventional definition of creativity, can be summarised as the recognised production of something useful, appropriate and novel.[2] Whilst the existing conceptual framework and its conventional definition have advanced our understanding of creativity, they contain within them a paradox for both practitioners of human resource management and scholars alike. Simply put, if creativity is defined through the *recognition* of something produced that is both useful and novel, then how can we conceive of creativity before it is recognised as such? This paradox becomes clear if one considers the objectives of human

[1] With this phrase I refer to the dominant definitions, theories and methods found in the study of creativity. For avoidance of doubt, the academic work referred to in *The Encyclopedia of Creativity* Vol. I & II (1999) can be considered a good summary of what is included in the framework. Typically, most of the research published in journals that focus entirely on creativity, as well as those within the specialist areas of organisation, psychology, management and human resource management can be seen as included in this definition. There are some exceptions. It does not include philosophical accounts of creativity such as Bhaskar's; although his work will be shown to suffer one of the problems the *existing conceptual framework* contains. All work that refers to creativity within this thesis, unless otherwise stated can be considered part of the existing conceptual framework and should be regarded as typical of the assumptions contained within it.

[2] There are many terms used inter-changeably, each with similar meaning; for example: valued novelty, appropriate novelty, recognised and valued novelty, adaptive novelty and so on. It must also be noted that some definitions drop recognition and just use production of appropriate novelty or something similar, but this too contains an implicit assumption that the product needs to be recognised, as judgement is often described as being essential to ascertaining appropriateness. This is elaborated on shortly.

resource management, for how are we to develop an employee's creativity if we cannot conceive of creativity in potential - i.e. prior to its recognition?

The issues this paradox raises can be seen within a recent *Working Nation* (2005) report into creativity and innovation in the UK workplace. It found that 54% of respondents were not encouraged to come up with new ideas. In other words, assuming these respondents have creative ideas, the latter are not called upon or actualised due to a lack of perceived encouragement; therefore any creativity they may have, would have to be classified as *potential* creativity. In addition to this, the report showed that 42% of respondents said their ideas are likely to go nowhere, which could indicate their ideas had remained unrecognised by their organisation[3]. Finally, the report showed that 24% of respondents said they never even bother to tell anyone about their bright ideas, implying that potentially large numbers of people may have creative ideas, but often do not see them implemented; their ideas, therefore, remain *un-actualised.*

It is within these three important categories of creative potential, unrecognised creativity and un-actualised creativity that the paradox reveals itself further. For how can we conceive of creative potential, unrecognised creativity and un-actualised creativity if creativity is defined as dependent upon the *production* of something novel and useful as *recognised* by a group of people? The *Working Nation (2005)* report provides some evidence to suggest that organisations could do more to encourage and engage employees creative potential, to recognise creative effort and to actualise or engage with those who are currently choosing (or otherwise) not to share their creativity. However, these aims are incompatible with the conventional definition.

How might we go about exploring creative potential within the existing framework? One possible technique might be to look at those people who are recognised as creative in one context and to ask what has happened to their creative potential if they are not recognised as such in another. For example, if a person's creativity is not recognised within the organisation, then one possible method for exploring empirically whether they do have creative potential would be to ascertain whether they have been recognised as creative in another context, say outside of the organisation or in a previous organisation.[4]

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[3] This could indicate they fit one of two broad categories: Either they judged their own ideas as creative incorrectly, in which case the ideas 'going nowhere' could be deemed appropriate; or they were creative ideas which remained unrecognised by their organisational colleagues. Either way an investigation is required into how this occurs.

[4] This is the basis of so called 'talent' acquisition and development objectives where previous demonstrable acts of creativity can be used as a barometer of future acts or of ones creative potential (e.g. Cummings and Oldham 1997).

However, this method for conducting research also leads to problems within the existing conceptual framework, because the assumption that demonstrable acts of creativity in one context can be used to infer a potential in another, runs into further debate within the existing framework. This debate turns on whether creativity should be regarded as domain general or domain specific[5]. The debate suggests that if creativity is a general ability, we can research across these contexts and claim a degree of validity. However, if creativity is domain specific, then no amount of demonstrable creativity in one context can be used to infer a potential in another. The existing conceptual framework presents an issue which this technique cannot overcome. Creative potential cannot, therefore, be explored easily within the existing conceptual framework.

Before unpicking the conventional definition, a detour into the nature of the issues it contains and the limitations it has placed on research, needs to be explained. A brief description of the concepts of unrecognised, un-actualised creativity as well as a look into claims made about creative potential is necessary. It is hoped this will provide a useful starting point for exploring the limitations of the existing conceptual framework and the conventional definition of creativity.

Unrecognised creativity

Studying unrecognised creativity instantly brings one into conflict with the conventional definition, because it suggests that recognition or judgement of the creative act is a necessary condition of the label 'creative'. However, one can think of theoretical instances, and draw on empirical examples, of how creativity can exist unrecognised (e.g. the importance of hand-washing before surgery and the efficacy of hypnosis discovered by Mesmer, are both regarded as creative discoveries and yet both were rejected by contemporaries (Koestler 1964: 240)). Indeed, unless the belief that creativity is magically produced in the moment of recognition is held, then one can plausibly assume that something classifiable as creativity exists prior to recognition.

For example, if an employee has an idea no one else has had previously, and it leads to a new product being successfully launched, it would meet the criteria of creativity within the existing framework as something has been produced that is novel and has value[6]. However, two other possibilities are entirely plausible for this same idea. First, after developing the idea the employee keeps it to herself; and secondly, after its development she communicates the idea to colleagues, but she is either ignored, dismissed or denied resources to develop the idea.

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[5] I have used the terms domain and context interchangeably here. I will explore these terms and explain their use later in this thesis.

[6] It gains recognition from the market if the product launch is successful.

Sustaining the first hypothetical example is not a problem within the existing conceptual framework, sustaining the last two however, are a problem. Taking, once again, the situation of colleagues who either ignore, or fail to appreciate, the importance of an idea, such an example meets all the criteria of the conventional definition other than that of judged appropriateness or recognition. Human resource manager practitioners may agree that tapping into this unrecognised creativity would be important for their organisation, but scholars run into difficulties assisting them whilst remaining consistent with the conventional definition.

Currently, research questions that can be posed on this subject can only seek to explore personal experience of organisational life and uncover the prevalence of instances where people felt they had been creative but were ignored. It will be shown that such research into creativity cannot be conducted with confidence because of the limitations of the conventional definition.

The *Working Nation* report *(2005)* suggested that two further closely related, but distinct, categories of creativity are also worthy of research, namely creative potential and un-actualised creativity. Using the previous example, three distinct phases of creativity can be seen: (i) prior to the idea; (ii) having the idea; and (iii) attempting to communicate the idea. It is in these phases that the distinction between creative potential, un-actualised creativity and unrecognised creativity can be drawn. Phase one implies creativity in potential; the employee has yet to have a creative idea but we can retroduce that they must have the potential to do so. Phase two implies un-actualised creativity; the idea has been developed but not communicated to the organisation[7]. Finally, the example moves into the communication phase when they communicate their idea but it is ignored[8]. Definitions of creativity that are to be commended for having recognition as a necessary condition unfortunately do not have the sophistication to differentiate these stages of creativity.

Creative potential

It is recognised within creativity studies that discussing potential is difficult. Indeed some argue that we should hesitate and, perhaps, not even include it within the definition of creativity (e.g. Mumford 2003a:149). Potential has been inferred to exist within the existing conceptual framework and references to having a creative personality or thinking style can often be found within the literature. Such inferences include, but are not restricted to, skills such as: problem solving (e.g. Metcalf 1986) and problem finding skills (e.g. Rothenberg

[7] The *Working Nation* report (2005) highlighted that 24% of employees do not share their ideas and as such this category has validity.

[8] This could also be a jump to into recognised creativity, a jump through unrecognised creativity, and then finally into recognised creativity should the circumstances of the example be different.

1995), ideation (e.g. Guildford 1950), association (e.g. Mendick 1962), intuitive skills, (e.g. Bowers et al 1990), insight (e.g. Kaplan & Simon 1990; Metcalfe 1987), lateral thinking (e.g. De Bono 1971, 1992), and combinational skills (e.g. Baughman & Mumford 1995; Molbey et al 1992).

Yet these descriptions, and the associated research, still face the problem of the conventional definition of creativity being inconsistent with the idea of creativity existing prior to its recognition. Research could, perhaps, be conducted by asking for employees' opinions of their creative potential. It might, for example enquire into what employees believe happens to their creative potential in the organisation; or into their beliefs that their potential is constrained in some way. By way of comparison one could explore whether their creative potential is utilised outside of the organisation and if so, did they believe this could transfer in and be of benefit to the organisation. Yet the answers to questions such as these, struggle for validity within the existing framework as they also run into the domain general, domain specific debate.

Un-actualised creativity

The difference between un-actualised creativity and creative potential is important[9]. Having ability and not using it (through choice or force), is distinct from having an idea and not sharing it. This means that examples of creative potential can include the ability to deal with a known problem but not actually doing so, whereas actually having an idea but not sharing it can be categorised as a form of un-actualised creativity. This is because whilst the idea may exist and be classed as actual at the level of psychology, by it not being shared, it cannot yet be considered actual at the level of the social; therefore it is an un-actualised social idea. There are many examples of this: A person may not share an idea with the organisation because they want to use it to start their own business, or because they believe sharing it may lead to redundancies or even increased workload. Exploring this empirically could be tackled by asking: 'To what extent can/does creativity exist un-actualised in an organisation?' Through exploring questions and answers like these, one might gain an understanding of the causal mechanisms at work in organisations that have enabling or constraining effects on the sharing of creative ideas, or that actively lead to, and foster, un-actualised creativity. It is clear there is a need to explore these questions empirically, but to do so is inconsistent with the conventional definition which requires creativity to be recognised.

To conduct research into unrecognised creativity, un-actualised creativity and creative potential, especially if seeking to explore these across and between the boundaries of the workplace, runs into conflict with the existing conceptual framework and its conventional

[9] In fact in Chapter Five I show that whilst there are distinct categories they also inherently over-lap

definition of creativity. This conflict requires resolution. Unfortunately, where once the conventional definition was seen as an operational definition, a stop-gap or work in progress definition until creativity was better understood (e.g. Amabile 1996: 20), it has become the standard form of definition, and the paradox it contains has been largely lost to academic reflection. In order to explore creative potential, unrecognised and un-actualised creativity through exploring how creative potential moves between the boundary of in-work and out-of-work, it is necessary to unpick the roots of the paradox, therefore the components of the conventional definition need unpacking.

2.1 The conventional definition of creativity

The first step in this unpicking is to explore the concept of novelty, central to the conventional definition. The history, reasoning and importance of the use of novelty, valued novelty, and recognition of novel production will be detailed and the problems within these concepts revealed. The starting point for this is Amabile's (1996) work, which helps to explain why the conventional definition developed and subsequently became popular.

In her book *Creativity in Context* (1996), Amabile argued that whilst there was no widely agreed definition of creativity, this should not necessarily prevent research into the topic, or a working definition being proposed. She therefore proposed a working definition that, she argued, was operational and moreover, she inferred that this was temporary. However, twenty five years after her operational definition was proposed, a worryingly large number of articles have been published which do not reflect on definitional problems and are derived in some way from Amabile's temporary operational definition. (Baer *et al* 2004; Choi 2004; Wright & Walton 2003; Zhou & George 2001; Richards & Moger 2000; Zuo, L. 1998; Lubart & Getz 1997). In a sense, how we define creativity has been hijacked by what appears to be a 'fit for purpose' definition.

Creativity is a complex phenomenon, and Amabile recognises that 'creativity researchers are often accused of not knowing what they are talking about' *(Ibid: 19)* when considering the problem of definition. She explains that some researchers focus on the creative processes of the individual, others on the end product of creativity and yet others on the creative person.[10] All acknowledge the complexity of the phenomenon but choose to focus on one particular aspect of it. In discussing the difficulties of definition, Amabile (1996) suggests that it is still possible to be scientific whilst studying creativity but that previous researchers have been too quick in attempting to objectify the creativity criterion, (that is to say attempts to develop a

[10] The terms creative person, product and process are defined and explored later in this chapter.

taxonomy of creative behaviour have been premature due to the definition problems) and in doing so their attempts lack validity *(Ibid: 20).*

Amabile argues that defining creativity requires a degree of pragmatism, hence her suggestion for a temporary operational definition with which to conduct research. She argues the question of what is considered creativity is best solved through focusing on the end result, namely the product, thus her definition of creativity becomes:

> A product or response is creative to the extent that appropriate observers independently agree it is creative. Appropriate observers are those familiar with the domain in which the product was created and the response articulated. Thus creativity can be regarded as the quality of products or responses judged to be creative by appropriate observers, and it can also be regarded as the process by which something so judged is produced. *(Ibid: 33)*

This type of product definition has its origins in the work of Stein (1974), whose definition Amabile regards as having been universally incorporated into creativity research:

> Creativity is a process that results in a novel work that is accepted as useful, tenable or satisfying by a significant group of people at some point in time *(Ibid: 15).*

Such a definition has enabled Amabile and other social psychologists to research the social conditions relating to creativity such as reward (Amabile et al 1986), encouragement (Amabile et al 1990; 1994) expectation and instruction (Shalley 1995; Baer 1994). It is argued that through this definition one can at least be sure that creativity is being studied. Such a definition may not be controversial when considering widely recognised creative people such as Einstein or Darwin, but when one tries to study day-to-day creativity, the boundaries of what is, and is not classed as creative, become blurred. In order to demonstrate this, one must return to the issues that led Amabile, and others, to suggest a pragmatic and product-based approach to defining creativity.

2.1.1 Valued novelty

To claim that in order to conduct valid, reliable and scientific research, one must turn to pragmatism, would suggest that the problems of defining creativity are deep seated. Arguably, at the root of this pragmatism, is the need for creativity researchers to explain just how something can be considered novel *and* creative. Most definitions of creativity have at their

heart the concept of novelty but the explanation of exactly what can be regarded as novel is not straight forward. The first port of call for uncovering the problems creativity researchers have faced through attempting to define novelty is to address two important and widely agreed problems. The first is where does novelty come from? The second is how to assess whether something is creative novelty as opposed to mundane novelty once it has come into existence?

In terms of the first question, if novelty has a history then it begs the question what is new in novelty. If all things are in some way predicated upon their history, and things that we call new, are merely reproductions and combinations of what already existed, can they really be considered new, original or novel?. Barron (1968) claims that the so called 'divinity explanation', which involves creating something out of nothing, is not feasible for human creativity. He goes on to say the human act of creation always involves making something old into something new, yet he also tries to maintain a definition of creativity predicated upon novelty. Supposing we *can* show how some things are genuinely novel, we run into a second problem, ensuring our definition does not contain an implicit presupposition of creation from nothing, or *ex nihilo* creation.

Creativity researchers using the conventional definition presuppose the existence of novelty and attempt to distinguish between what is considered *important* novelty and what is considered *irrelevant* novelty. In other words how to distinguish Rousseau's contribution to philosophy from David Ike's claims about the nature of humankind's relationship to God. Before tackling the question of where novelty comes from, and whether it is *ex nihilo*, it is this second issue that requires a deeper look. If a definition of novelty is successfully maintained without presupposing *ex nihilo* creation, it still prevents classification of that novelty as creativity, without also having reference to what can be considered important and irrelevant. If creativity becomes solely that which is judged as important, then it becomes relative to those who are judging and to the values of the society in which it occurs.

Runco (2006: 21) argued that originality[1] is widely agreed to be fundamental in defining creativity, and as such, original behaviour has value. Barron (1968) also claimed that the original can be defined in relation to the common and therefore the degree of originality must be specified statistically in terms of incidence of occurrence *(Ibid: 25)*. That is to say, an original response will be uncommon in the group within which it is studied. However, he also argues that statistical rareness is not enough for originality to be considered creative as well.

[1] The terms originality and novelty are often used interchangeably in the literature. I use them as such from here unless otherwise stated.

The originality produced must also be *adaptive* to reality. The term 'adaptive' is used to signify that something has value or a purpose within a context, or is regarded as a useful production, not merely an oddity. By adding the criterion of adaptive-ness to statistical originality, it becomes possible to identify Rousseau's contribution whilst untangling him from other originalities that may arise from the ramblings of the deluded.

For Barron, novelty and subsequently creativity is both statistically rare and adaptive to the environment. He therefore claims that creativity researchers should focus their attention on researching such deliberate acts of adaptive novelty. Thus, he expands the definition of creativity from novelty, and then on to novelty that is adaptive. It is a small step for creativity researchers to then regard adaptation as something of value, so creativity being considered the production of valued and adaptive novelty seems uncomplicated. It is in this movement from novelty to adaptive novelty that the origins of the conventional definition can be identified and the beginnings of the conceptual confusion take its form.

Runco also argues that originality aids definition because it *can* be defined statistically *(Ibid: 22)*. He claims this originality can be objectively determined because, if only one person in a thousand produces a particular solution to a problem, that person can be seen as relatively unique and therefore also relatively original. He goes on to claim that this means everyone is in some sense creative and so there should be identifiable universals. However, without having objective criteria for adaptive novelty, researchers have been forced to define it through how we come to know it - i.e. through the recognition of adaptive novelty rather than through a criterion of adaptive novelty. More than this, the terms adaptive and valued, when applied to novelty are taken to mean that the novelty needs to be judged as such in relation to the social conditions of the time. Hence whether the production of adaptive novelty or the recognised production of valued novelty is used to define creativity, there is an implicit presupposition that creativity needs to be judged as creative (by suitable judges). Boden (2004) highlights the issues within this when she claims:

> Because creativity *by definition* involves not only novelty but value, and because values are highly variable, it follows that many arguments about creativity are rooted in disagreements about value. *(Ibid: 10)*

Researchers refer to adaptive novelty to clarify the object of enquiry and provide a way of classifying creativity. However, it is not clear that the criterion of adaptive novelty is sufficient to enable the concept of novelty to be sustainable. Epstein (1991), writing indirectly about creativity, had this to say about the concept central to all creativity definitions:

> The behaviour of organisms has many firsts, so many in fact, that it's not clear that there are any seconds. We continually do new things, some profound, some trivial. We 'solve problems' which by definition means we're doing new things in situations we've never faced before. We write poems and improvise on the piano and devise scientific theories. We speak new utterances all the time.....When you look closely enough, behaviour that appears to be repeated proves to be novel in some fashion.....Even if you managed to repeat the same response precisely, it would still be novel in the sense that each occurrence is the product of a changed organism. *(Ibid: 362)*

Epstein reveals the problem at the heart of all creativity research: If all things can in some way be considered novel, and novelty is synonymous with creativity, then everything is also creativity. Clearly, there are some things we would like to classify as novel or new to human history. The motor car, for example, existed as an idea and then in practice for the first time at a point in history, and we currently refer to such events as examples of novelty and creativity. The problem is how we differentiate these novel moments from all other novel moments. The conventional definition provides a pragmatic answer to this criteria problem by arguing we can label something creative and novel by classing it as adaptive to its environment, and we can identify this through the recognition of others within the appropriate field. The consequence of this is what we regard as creative is collapsed into what is novel and adaptive, what is novel and adaptive is collapsed into what is valued, and what is valued is collapsed into what is recognised to be novel and adaptive. Through these collapses, our entire method of defining creativity becomes dependant upon the recognition of, or judgement by, others.

The examples of unrecognised and un-actualised creativity show that people have the potential to be creative outside of our recognition of it, and herein lies the first paradox in the conventional definition. To progress our understanding, and enable research into unrecognised and un-actualised creativity as well as creative potential and the ability of someone to be creative in more than one context, we must either develop a criteria of novelty not reliant upon values or its recognition, or accept that Epstein was correct to argue that novelty is a nonsense term which presents insurmountable problems for researchers attempting to use it to define creativity.

A recent (and relatively rare) review of the term novelty, within the journal *Creativity and Innovation Management,* attempted to dissect the meta-theoretical presuppositions of novelty and many of the articles in the special issues agreed that the concept of novelty is problematic.

Styhre (2006) used a Deleuzian framework to suggest that creativity is a continuous feature of the social world. Using this approach he argues that we should focus on the combinations and connections that make up an act rather than merely consider what is new or novel. However, Jeanes (2006), using the same theoretical framework, reveals the knots in which this perspective can tie us when she claims:

> In essence by focusing less on the obsession with trying to be creative, the act of creation (as defined and identified) we have a greater chance of being truly creative through the more humble act of thinking through problems and thinking differently. The real 'new' is the creation of *new concepts*, new ways of thinking..... about real problems. *(Ibid: 133)*

What this fails to do is suggest exactly how a *'new concept'* is different from a novel concept, and how we can define the *'new ways'* she refers to, without reference to a form of novelty. Whilst rejecting novelty, this interpretation of Deleuze still requires the use of it when referring to creativity. Sustaining the concept of novelty is clearly problematic, even though we all seem to have an intuitive sense of what it refers to. Supposing that we can sustain a definition of novelty, and identify some acts as being truly novel, we would run into another problem novelty contains - the question of where it comes from.

2.1.2 Ex nihilo novelty

Novelty, as a form of creation, contains the presupposition of *ex nihilo* creation. That is to say, for a thing to come into existence and be truly classed as novel it must, in some sense, not have any previous existence. Perkins (1988) addresses this claim and argues that in order for us to understand creativity we must offer an explanation of how creativity can indeed be novelty from nothing. He argues *ex nihilo* creation *is* possible, as we know that such moments of novelty do occur and therefore they must be possible. However his argument stands as a tautology. It doesn't offer explanation of *ex nihilo* novelty, merely stating that because new things happen *ex nihilo* is possible. What is missing is a non-contradictory commentary on *how* it is possible[12].

Boden (2004: 12) has noted that creativity researchers have inherited the *ex nihilo* problem from the mystical history of the word creativity and its theological roots. If one assumes that *ex nihilo* is possible for humans, and not only for deities, then a definition of creativity would need to explain how it is possible for humans to create something from nothing. We saw

[12] He argues that it is through the processes of individual creativity that we can understand how *ex nihilo* creation occurs but this argument is not sufficient. I will argue in Chapter Four that such an argument is difficult to sustain.

above that Barron argued that this is not possible. Whilst Barron rejected this notion of *ex nihilo* creation, Boden and Perkins both argue that as long as we define creativity with novelty, it must in some way contain this notion. If Barron were to truly reject *ex nihilo* creation, he would also need to reject novelty in his own definition of creativity, something he did not do.

In order to examine this issue, the question of what is new in novelty needs answering. That is to say, we need to consider how something that had no previous history can come to exist. The previous section presented the argument that novelty may be a meaningless term without reference to values. In our post-chaos theory world, to say that no two events are identical, or that all events are novel at some level of analysis, requires the word to be defined further in order for it to have meaning. If one re-reads this page, it would be easy to think one is doing the same thing over. However each time it is read the light conditions would change, attention would change, the distance between the page and the eyes would change and the reader would change. In short, it would be no more likely this page be read twice in an identical way than it would be to win the lottery. When Stein claims that certain types of novelty are more valuable, he is inferring that novelty is common to all events.

Boden (*pace* Perkins 1994) argues that we believe creativity is real because we experience it in practise, although theoretically and conceptually it seems impossible. A definition of creativity containing the term novelty must also explain this impossibility. She asks how creativity is possible and argues that genuine originality (or novelty) must be a form of *ex nihilo* creation, that is to say it must come from nothing. She claims the task for creativity researchers therefore is to explain novelty without referring to miracles, and in doing so, the explanation must solve the *ex nihilo* problem (Boden 2004*: 40).*

Unfortunately, Boden's solution to this problem is similar to that of other researchers, that is, claiming creativity is novelty that is valued and useful. She differs in her explanation and definition by saying that genuine creativity has to be in some way previously impossible (paying due credit to the *ex nihilo* problem). She proposes that a new idea must have been *incapable* of being produced before it happened, that it quite simply could not have occurred. She explains how this can happen through claiming that a merely novel idea is one which is produced by the same set of generative rules as are other, familiar ideas. A radically original idea, or in her definition a creative one, is one that could not be and it would be considered surprising or even shocking to those who recognise it. She calls the first 'exploring a conceptual space' and the second 'going beyond the conceptual space'.

But does she solve the *ex nihilo* paradox? Regrettably, it appears to be a conceptual fudge. If an idea genuinely *could not* have been produced it would have to be deemed impossible. If it subsequently does happen, then it could not have been considered truly impossible in the first place; therefore it *could* have happened. The fact that it surprises or shocks the recipients of the idea,[13] or that it goes beyond the conceptual space she described, does not overcome this. The idea could not be considered impossible. Neither does this offer a solution to the *ex nihilo* problem. Christensen (2002:49) regards the form of impossibility that Boden's solution refers to as psychological impossibility; it seemed to be conceptually impossible. He argues her work ignores the fact that there are many other forms of impossibility which this definition does not resolve.[14] However, his acceptance of Boden's argument as an example of psychological impossibility also seems misguided for the reasons outlined above.

Christensen (2002) agrees that concepts such as novelty, usefulness and recognition are difficult to sustain within a definition of creativity. His own definition and approach attempts to resolve these issues and, indeed, he offers partial solutions through a sophisticated analysis of the issues. His main contribution is the recognition that creativity involves bringing something into being which must have been previously possible and as such he rejects *ex nihilo* creation. He argues, like Perkins, that the *actual* presupposes the previous possibility of the actual, and as such, novel things do not come from nowhere. He offers the following definition of creativity:

> Creativity occurs when someone brings a product with generalisable originality and the potential for adaptive spread into being *(Ibid: 10).*

At first glance this would enable the studying of unrecognised and perhaps un-actualised creativity, as it is not based on the recognition of products, and he speaks of *potential* for adaptive spread rather than actual spread of such products. He uses the term 'originality' to refer to the first instance of a new category previously not in existence, which he sees as different to statistical novelty as something can be a singularity such as the uniqueness of each human being, but not creative. Thus he uses the term *'generalisable originality'* to represent things that are the beginning of a new category not previously in existence *and* not similar to other types of singularity. He claims that the potential for something to exist is part of

[13] There is a *reductio ad absurdum* in her logic which reads the more surprised we are by creativity the more creative it is. The less intelligent we are, the more likely we are to be surprised, therefore the less intelligent we all become, the more creativity is possible.

[14] He uses the term 'logically impossible' to mean something is logically inconsistent, nomological impossibility – something violates the laws of nature and historical impossibility – something has already been done *(Ibid*: 49).

objective reality, and as such, when we talk of *generalisable novelty,* we are not saying it comes from nowhere but we are saying it comes from a potential *(Ibid: 65).*

He adds to this, the claim that adaptive spread is a preferable form of measuring the usefulness of creativity as it avoids the collapsing of creativity into its recognition. This is not without its problems, as understanding potential for adaptive spread also requires human judgement. He argues this is a more inclusive term for studying creativity whilst recognising that choosing any measure of value is always a compromise. *(ibid: 66)* So, even this definition of creativity implicitly requires an act of human judgement for it to be sustainable as it depends on the measure of the value of the act. Whilst his definition appears to offer a solution to the *ex nihilo* problem and offer a way to study the unrecognised, it still contains terms such as originality which, whilst differently defined, still contains a moment of bringing into being and the definition still requires a notion of value to sustain it. This attempt at a solution to the *ex nihilo* problem takes the creativity paradigm further than previous researchers but the popularity of the conventional definition requires the remaining issues be dealt with comprehensively.

The inability to define creativity via the use of the term novelty without reference to values, and without solving the *ex nihilo* problem, is fundamentally why researchers have accepted Amabile's pragmatic approach and adopted the conventional definition. Defining creativity through the way in which we come to know it, through its recognition, partially solves these issues for researchers and has enabled us to carry out some studies of creativity. Stein's (1974) work demonstrates the all-pervasive nature of this recognition and the inter-relationship it has with an existing culture. He claims that statements of what is novel are culturally bound, and the kind of people who are valued for creating novelty also vary as a function of cultural characteristics *(Ibid:35).* In exploration of this cultural binding he discusses what he calls the 'significant others', claiming that just because an individual has completed his work does not mean the creative process is finished. For completion, the final product must be presented to, and accepted by, a group of significant others as tenable, useful or satisfying.

The significant others will have the expertise and ability to evaluate developments in their own field. *(Ibid: 35).* The definition of creativity is therefore necessarily collapsed into one of recognition of creativity. This means what is creative can only be considered relative to any given culture and can have no inherent meaning or quality itself, even though he recognises that the act of novelty will pre-exist its recognition. That is to say, he claims that the creative

work is not done until it is recognised, which does indeed infer that there was something to be recognised.

He cites the work of Galton when exploring such effects, considering whether there is some kind of bias operating, and accepting that having unbiased raters are not always possible. He quotes Galton when dealing with the scepticism of such a method:

> I feel convinced that no man can achieve a very high reputation without being gifted with very high abilities; and I trust that reason has been given for the belief, that few who possess these very high abilities can fail in achieving eminence (Stein 1974: 46).

Thus, essentially, he argues that we can trust the expert judges, because they are likely to be of high ability and, therefore, their judgement should be sound. The 'cream will rise to the top' as the saying goes, and the act of creativity will be assessed according to the judgement of the elite.

The widespread use of this definition is, according to Amabile (1996), necessary, as we do not yet have valid criterion for the definition of creativity. The question of how we define creativity has been replaced with a 'fit for purpose' definition, driven, perhaps, by the desire for empirical research. The ontology of creativity has, in effect, been replaced with an epistemology of creativity, which leaves the question of whether assessment of creativity should indeed be left to the judgement of elites. The instructions Baer *et al* (2004) gave to those asked to rate participant creativity in his research seems to highlight the issues this causes:

> I ask you to rate the stories solely on your thoughtful but subjective opinions of their creativity. The point is, you are the expert and you needn't defend your choices or articulate a definition of creativity. What creativity means to you can remain a mystery – what I want you to do is use that mysterious expert sense to rate the stories for creativity. *(Ibid: 113)*

2.1.3 Historical creativity: Distinct moment or part of a continuum?

This need to focus on recognised creativity has led to a tendency to research only those who can be indisputably regarded as creative. References to Einstein, Darwin and Mozart are often used within such research and it is claimed that by studying their characteristics we can begin to understand 'the creative person'. However, this has led to debate in the field regarding

whether *eminent* creative people can be considered the same as *everyday* creative people. In other words, are these groups qualitatively different to each other, and if so, should we only study these eminent creators (e.g. Simonton 1999 & 1988; Csikszentmihalyi 1996; Gruber 1989;). This is an important issue when studying creativity in organisations, because if creativity is only considered in the domain of the few, there is no need to study the creativity of the many.

Boden (2004) explores this by asking whether or not *personal* and *historical* creativity are part of the same continuum of skills.[15] Through the use of P creativity and H creativity, (where P creativity refers to something new to oneself and H creativity refers to something being new to history) she argues that we can distinguish between the two instances and show how they are similar. She claims that in principle, H creative ideas can only be assigned provisionally as it is an historical category. There can be no ultimate explanation of it as the long term survival of an idea is dependant upon, amongst other things, shared knowledge and shifting intellectual fashions, politics, power. Because of this, she claims no single criterion could pick out H creative ideas. She also argues that this does not matter as originality is what is important, and part of H creativity is also P creativity. As we have seen, however, determining originality is not without issue *(Ibid: 44)*.

The unintended consequence of this approach is that all creative acts can only be considered as such if they are, once again, *judged* to be creative. Originality, whilst part of all creativity definitions, is not enough to satisfy a label of creativity. The important and arguably only potential defining criteria for creativity within the conventional approach is the *judgement of the act* as creative. I have already suggested that this argument detailing the problems of understanding historical creativity may also extend to Christensen's work. Whilst he tries to avoid this particular issue by introducing *potential for adaptive spread* as his defining criteria for the value of an idea, it is no more possible to suppose what might be valued in future, as to suppose what was valued in the past. In both cases, changing human fashions will determine whether what is regarded as generalisable originality (in his terms) is sustainable, and as such, the problem of definition remains, and the ability to study the unrecognised and un-actualised is impeded.

Unless, and until, we can define and explain creativity without relying on the judgement of others as a necessary part, it will be impossible to separate the creativity that occurs on an everyday level from the historical forms of creativity. Worse still, ways of fostering everyday

[15] This issue of whether creativity can be regarded as a continuum of skills from personal creativity to historically important creativity will be dealt with later in the chapter.

creativity to develop higher levels of historically important products will be impeded. If this is so it will then render attempts to foster everyday creativity much the same. Indeed research (e.g. Baer 1994: 41) has shown that existing training designed to enhance creativity can be seen as having a debatable impact on actual creative performance.

2.1.4 Context general or context specific?

A further issue thrown up by the conventional definition follows on from the 'distinct or continuum' debate. Whether creativity can be considered a general ability applicable in many situations and contexts, or a specific skill, applicable within narrow contexts, depends on this definition. Within the organisational setting the distinction is crucial, because if creativity is a specific skill, then much of the general creativity training that occurs could be ineffective (e.g. Baer 2004). Creative performance in one context (say outside of work) will have no bearing on creative performance in another (say in-work). By studying only those historically recognised as creative, it becomes difficult to demonstrate creative potential in more than one context, because few, if any, people are recognised as creative in more than one domain.

At the start of the chapter it was proposed that studying in-work and out-of-work creativity may reveal elements of creative potential, unrecognised and un-actualised creativity. However, this debate would render such an approach problematic unless the nature of how creativity can, and cannot, transfer between contexts is resolved. Tackling this issue also requires a resolution to the definitional problems we have encountered as, until we develop a criterion for creative behaviour (and therefore creative potential), we are reliant on recognised acts. Empirical data we derive from such definitions will inevitably skew theory and explanation.

2.1.5 Discovery and creativity

A final issue at the heart of defining creativity, less recognised by the field but still providing issues, is exactly how creativity and discovery are related. Goswami (1996) reviewed theories of creativity and proposed that it is important to include discovery and invention within our definitions and he does so. The conceptual relationship between creativity and discovery is longstanding with Koestler's seminal book *The Act of Creation*, which includes sections on the art of discovery. Richards (1996) reviewed definitions of creativity and again discussed the long history of creativity being seen as some form of discovery. Indeed, when we speak of creative scientists we are in fact referring to the great discoveries they made: Einstein's discovery of relativity theory, Newton's discovery of the law of gravity and so on. Yet when describing these events we often slip between the terms creativity and discovery (e.g. Gooding 1996; Rothenberg 1995, 1996).

Tweney (1996) provides a robust example of the problem of their relationship when he asks whether the term 'scientific creativity' is in fact an oxymoron. He claims surely a scientist is discovering reality rather than creating it but then concedes that this debate is where the modernist and postmodern views collide. He argues that there is a strong constructionist traditional in science studies and few would argue against the notion that science itself is a creative practise, creating the concepts with which we mediate our access to the world *(Ibid: 163).* Indeed, when Einstein proposed his theory of relativity he both discovered a nature of reality and created a theory to explain it.

This means definitions of creativity need to show how discovery is a form of creativity, how it is distinct from creativity or how it is identical to creativity. Without a criterion of creativity these questions about the nature of discovery cannot be answered. In Chapters Four and Five the role of discovery in creativity will be argued to be crucial to developing a criterion of creativity that solves the paradoxes identified. This will enable a definition of creativity to be proposed that does not require reference to cultural values in order for it to be sustained, or contain the notion of *ex nihilo* production[16].

2.2 Pragmatic findings: people, processes, products and systems

There are four broad categories applicable to creativity research: research which has as its focus the ***creative person*** (e.g. Burch *et al* 2006; Francis *et al* 2003; James & Asmus 2001; Runco et al 2001; Feist 1998 & 1999; Plucker 1998; Eysenck 1995 & 1993; Weisberg 1994; Albert 1983; Guildford, J. P. 1967;); the ***creative product*** (Hennessey & Amabile 1999; Amabile 1996 & 1982; Hargreaves *et al* 1996); the ***creative process*** (Boden 2004, 2000 & 1999; Ormerod et al 2004; Vartanian *et al* 2003; Christensen 2002; Lubart 2001; Ward et al 1999; Rudowicz *et al* 1995; Perkins 1994; Finke *et al* 1992) and ***creative systems***[17] (e.g. Yeh 2004; Brower 2003; Gruber & Wallace 1999; Csikszentmihalyi 1999; Gruber 1996; Woodman 1993; Wallace and Gruber 1989). Whilst each of these areas have progressed our understanding of creativity in important ways, they all have also met some significant problems. It is in these problems that we can uncover more of these issues at the heart of creativity research.

[16] Naturally there are more issues identified within the field than set out here. These have been chosen as they exemplify the issues researchers face using the conventional definition.
[17] Which will include holistic approaches such as described by Policastro & Gardner (1999).

2.2.1 Creative person

The first of these broad categories concerns the understanding of creative people. Person or ability theories of creativity ask whether the creative person is in some way different from the non-creative person, and whether these differences can be measured and explained. In order to establish this, several types of test have been created which attempt to measure either personality traits or abilities associated with creativity. Such tests tend to be developed by assessing the personality and the ability of the unambiguously creative, referred to earlier as historical creative people, and comparing their results with the general population. Ability tests purport to measure skills and abilities essential to creating but are developed, theoretically, as representational of the key ingredients in the creative process. Personality tests purport to measure traits that have been identified to be common in creative people. This research subsequently guides research into general populations, and people are assessed for their likelihood of being creative, through their similarity in either personality or performance on these tests (e.g. Shaughnessey *et al* 2004; Sternberg 2003; Zhang & Huang 2001; Shapiro & Weisberg 1999; Eysenck 1995, 1993).

Person definitions stem from the belief that the creative person is, in some way, different from the non-creative person. Typical of person theories is the psychometric approach, which literally means the measurement of the individual. Plucker and Renzulli highlight a complexity to psychometric techniques that critics may not realise (1999: 35). This includes the expansion of the definition to cover environmental and product, as well as more traditional measures of personality and thinking type. However, the principle behind these techniques is that instruments can be designed to measure personality correlates of creative behaviour. This is done through studying highly creative people (either historically recognised or latterly those who perform well on tests of creativity), measuring and determining their personality traits, and then correlating these with results from tests of creativity. Traits of people seen as highly creative on such tests are used as indicators of creativity. Other groups can then be tested against these indicator groups to see who may also have these personality characteristics *(Ibid: 42).*

The psychometric approach attempts to objectify our understanding of creativity and provides a battery of tests with which to identify those with creative potential. It is in the measurement of potential that the psychometric approach has become most popular. Various tools are used including self-reporting, teacher/external ratings of past behaviour and tests of personality and attainment. The assumption here is that anyone who compares favourably to the correlates will be predisposed towards creativity or have creative potential. Subsequently, these tests have come into wide use, particularly in educational settings.

Another variant of the ability tests used to measure and understand creative people is the test of insight, regarded as part of the phenomena of creativity since De Bono's (1971) work (e.g. Ormerod *et al* 2004). The reliability of these tests has, however, been brought into question due to the dissemination of the insight problems used into popular culture but this has not prevented their widespread use. What these tests show is that, whilst this approach to research attempts to understand and measure the creative *person,* they also require reference to creative processes in order to do this.

Psychometric research contains within it two specific assumptions: that the individual is identifiable as a unique entity, and that this entity is open to observation and measurement. These assumptions are followed by the related assumptions that these measurements are comparable across populations, and that generalisations can be made about these comparisons. However, when it comes to understanding creative people these generalisations rely on tests of creative process. Person theories can, therefore, be seen to develop from two types of evidence: the personality characteristics of the eminently creative and those that perform well on tests of creative ability. Studying the eminently creative suffers from the same problem highlighted earlier in that as values change, so does what we view as creative. Therefore knowing about the personality of previously eminent creators will not necessarily mean anything can be generalised to changed cultural conditions. The only available evidence that can be considered safe for these person theories then, are tests of creative ability, or tests of creative process. However, these too collapse what we consider creative into that which cultural conditions judge to be creative.

2.2.2: Creative process

Process theories of creativity stem from the assumption that the human mind conceives of the world in unique ways, and that these conceptions are open to investigation. This has given rise to a body of research that claims to identify the mental processes of creative performance, and as such can define, and help understand, the phenomenon through these processes. Finke, Ward and Smith (1992)[18] provide an overview of these processes and they claim the objective of such research is:

> To identify the specific cognitive processes and structures that contribute to creative acts and products and to develop novel techniques for studying creativity within the context of controlled scientific experiments *(Ibid: 1).*

[18] There are many other approaches to studying creative processes in existence, I use this one as it exemplifies the issues these approaches all face. For an overview of other approaches see Christensen (2002)

In dealing with the complexity of issues surrounding defining and explaining creativity this approach is seen to simplify the task by focusing on one aspect of it: thought process. They choose to separate the creative idea from the processes that give rise to it, in order to solve the issue of how to differentiate singularities (in the statistical sense described earlier) from creative novelty. This, they claim, is because two people can arrive at a creative idea, one by accident, and the other by design, making it necessary to focus only on the design of mental processes in order for research and theory to be of use. Building on these assumptions, and the research they conducted, concepts such as pre-inventive processes and exploratory processes are used to develop a theory of creative processes called *Geneplore*, the merging of generative and exploratory functions *(Ibid: 23-24)*. Their goal of studying creativity becomes to identify creative cognitive processes, establish general principles, anticipate creative discoveries, and avoid circularity in defining creativity.

Ward and Smith's work covers creative visualisation, creative invention, conceptual synthesis, structured imagination, fixation incubation and insight, creative strategies for solving problems and general applications of this type of work *(Ibid: 15-16)*. They claim the value the approach has brought to understanding creativity is to have identified the 'hallmark of human cognition as its generative capacity to move beyond discrete stored experiences....that creative accomplishments whether mundane or extraordinary are based on these processes' *(Ibid: 189)*.

They discuss their model and its methodological implications in depth, covering the theoretical underpinnings of the model, and some of the issues that affect experimental work, such as avoiding demand characteristics, constraining opportunities, experimental control as well as problems of assessing the creative outcomes. They claim that by using the techniques of experimental science to control complexity, research can focus on a small aspect of the creative system with validity *(Ibid: 17-43)*.

Like Perkins and Christensen, the problem of defining novelty is recognised, and so the process by which something is produced, becomes the defining feature of creativity. It is recognised that creativity, as far as humans are concerned, is something to do with mental processes, but this does not successfully separate *creative* mental processes from other such processes. In order to do this, reference to the creative product is often invoked. Therefore the creative product, and its subsequent value, also underpins many process definitions, these in turn underpin person theories (as they are based on tests of ability, or process) and so the creative product, and its value, can be seen as common to all definitions and theories of

creativity. As Boden suggested, a psychological account of both historical and personal creativity may indeed be incompatible with our notions of creativity if this definition is maintained.

Stein's (1974) work offers, perhaps, the best viewpoint for assessing the limitations of process theories that use the conventional definition as their starting point. Stein argues that creativity is a process. He separates the processes as intrapersonal (in oneself) and interpersonal (in the environment), and cites Wallas (1926) and his notions of preparation, incubation, illumination and verification as parts of the creative process. He largely agrees with Wallas (1926) and Kris (1952) who proposed similar models but he argues that the stages of the creative process Wallas details do not necessarily occur in a systematic and orderly manner, different parts becoming salient at different times *(Ibid: 13-14)*.

Importantly, he details some questions common to creativity research, and in doing so, demonstrates the importance of recognition to creativity definitions. Two of these questions reveal some of the conflict in the definition he proposes and theories which develop from it: (i) Have works originally called creative been reinterpreted as uncreative? (ii) Are there works that were not recognised as creative but were later thought to be so? He refers to his definition 'creative work is a novel work that is accepted as tenable or useful by a group of people at some point in time' to answer the questions claiming that recognition is a key part of creativity and that this is scientific. He claims there are no absolutes when dealing with a work of creativity *(Ibid: 16)*. Thus his process definition (and others based on it) relies on the recognition of the creative act as most other definitions and theories of creativity have been shown to do. Studying the unrecognised creative would certainly seem to be incompatible with the existing conceptual framework. The issue of definition has moved from being a temporary epistemological definition to enable research into one that is proposed to fully explain the phenomena.

2.2.3 Creative products

The end result of these issues leads us back to Amabile (1996:19) who explains that some researchers focus on the creative *processes* of the individual, others on the end *product* of creativity and yet others on the creative *person*. All acknowledge the complexity of the phenomenon but choose to focus on one particular aspect of it. In discussing the difficulties of definition, Amabile (1996) suggests that it is still possible to be scientific, in the sense advanced by *person* and *process* researchers, whilst studying creativity. She notes that definitions are important to any research project and summarises three clear issues that need addressing. First, what are we talking about? Second, how can we study it? Third, how does it

work? Accepting problems in both the *person* and *process* definitions for research, Amabile argues that solving the criterion problem requires pragmatism at the current state of knowledge and as such, creativity should be defined and explained through reference to creative products. Such a definition has enabled Amabile and other social psychologists to research the social conditions relating to creativity such as reward, encouragement, and instruction, but she openly admits to this being a temporary solution to a deep seated problem.

Plucker and Renzulli (1999) state the importance of understanding creative products to both creativity overall and the psychometric and process approaches, because it is a method for establishing the validity of creativity research. They detail the agreement that studying creative products is important and also show that there is, in fact, little theory and less research into their nature at present. So whilst creativity is defined through the recognition of a creative product, there is little empirical work to inform how one is to make that judgement other than through the reliance on subjective expertise suggested by Baer (2004) and Amabile's (1982) Conceptual Assessment Technique. The latter was proposed to enable products to be evaluated but as its title suggests, it proposes that a product is creative if appropriate judges agree that it is; and so the problems are merely engulfed by the approach rather than dismissed.

2.2.4 Creative systems

The final category of creativity theory can be loosely described as an amalgamation of all the previous categories. For Csikszentmihalyi (1996: 23): 'Creativity happens in the interaction between a persons thoughts and a socio-cultural context; it is a systematic rather than individual phenomenon.' This approach claims that creativity is a complex interplay of individual and societal factors, with the boundaries between these factors difficult to determine. He unravels this complexity not by asking *what* creativity is, but by asking *where* creativity is *(Ibid: 27, emphasis added).* He argues that creativity only makes sense when viewed as 'the interrelations of a system made up of three main parts' *with* these parts defined as the *domain*, the *field* and the *person*. The domain is described as a set of symbolic rules and symbols such as mathematics; the field consists of all individuals who act as gatekeepers to the domain; finally, he sees the person as the last part of this system *(Ibid: 27).*

Csikszentmihalyi also assumes that what is considered creative is transient, that is to say the creative product is liable to change its value to society over time. Furthermore, he claims that it is easier to study creativity in well defined domains such as maths, where rules and symbols are easily comparable. In a domain such as the organisation, where the rules of operation are

hotly contested, the notion of what can be considered creative becomes almost entirely open to interpretation according to this view.

Howard Gruber (1989) and his proposed *Evolving Systems Approach* to creative work, detail these issues further. In this work, Gruber asks what may we ask of a theory of creativity? He claims that an account of the processes of creativity is not sufficient, because it must deal with the 'unique and unrepeatable through looking at how processes organised in new ways bring about the great marvels of human thought and invention'. Hence, he recognises the issues of understanding and explaining novelty. He argues there are two failed approaches to explaining creativity: 'the path of the holy cow and the path of the nothing but'. The first looks for a special trait or ability, the second reduces creativity to the ordinary. He claims neither can grasp creativity as they either don't offer an explanation of such novelty or they deny its specialness. *(Ibid: 3-24)*

He claims that the third path, the *Evolving Systems Approach*, is to focus attention on the way the creative person is organised as a unique system for recognising, embracing and doing the job at hand. It is a systemic approach to understanding creativity. Gruber (1989) therefore focuses his interest on extraordinary individuals and uses the case study method to research creativity. In doing so he claims that some human acts are creative and others are not, and some people lead creative lives and others do not *(Ibid: 4)*. He avoids any debate over the nature of what constitutes a creative act and what does not through his focus on eminent creative people. But the possibility that there may be more creativity than that recognised as creative, cannot be judged through his or other similar approaches.

The assumption that he seems to make is that creative people are as they are because they have been recognised as such by history. In a sense then, he also assumes that creativity requires recognition. He differs from other approaches because he argues that the position rejects the idea that there exists one grand theory that can account for all creativity, and suggests that each case of creativity needs an individual theory of the individual creative. His definition reflects these assumptions when he claims creative work is:

> (1) Original; (2) purposeful on the part of the creative person (3) harmonious or compatible with other human purposes, needs and values *(Ibid: 4)*.

So whilst the approach recognises creativity as an evolving system, it still requires reference to novelty, values and recognition in order to sustain itself. He claims the approach is constructionist, as 'the creator participates in choosing and shaping the surroundings within

which the work proceeds; the skills needed for the work and the definition of the ensemble of tasks. Little is given and nothing that is taken is accepted as is'. Finally, he claims the approach is experientially sensitive with the creator considered a person in the world *(Ibid: 5).*

He argues the task of understanding creative work requires a conception of the creative person as an evolving system, in an evolving milieu. Each system is comprised of three sub systems: *organisations of knowledge, purpose* and *affect.* Each system has a dual effect, in one sense it has a life of its own, in another it contributes to the internal milieu of the others. He claims these systems are loosely coupled and therefore cause and effect doesn't work in the way one might think; the creative person is never at rest *(Ibid: 5).* Whilst such an approach demonstrates that we cannot be overly simplistic in our explanations of creativity, that we must recognise the interplay between creative people, processes, products, fields, domains and cultures, importantly, such an approach does not overcome the reliance on recognition of creative products.

Rathunde (1999) neatly sums up the approach and the problems we face studying the unrecognised and un-actualised creative person when he states that:

> A systems approach changes the way creativity is defined and recognised. Creativity cannot be defined fully by references to personal qualities.....Who is deemed creative is largely a matter of faith in the experts that comprise a field, and the possibility exists that attributions of creativity can be influenced by political ideology, power and the capricious tastes of informed critics. *(Ibid: 608)*

With the system approach also unable to overcome the problems of definition outlined at the start of the chapter, it seems we have exhausted all the theoretical approaches to explaining creativity, and none appear to provide a solid base to help with the study of the unrecognised or the un-actualised, let alone creative potential and how it moves between contexts.

Conclusion

This chapter has argued that in order to understand, and engage with, creativity it is necessary to explore, and understand, categories hitherto either largely ignored, or poorly conceptualised within the existing conceptual framework. The concepts of creative potential, unrecognised creativity and un-actualised creativity certainly seem to lack substantive explanation. Worse, techniques that might help uncover some of their properties are prevented from use as

attempts to understand how creativity moves between contexts is hindered by the lack of a concept of potential and the inability to conceive of creativity beyond its recognition.

The root of these difficulties, it seems, are problems with the conventional definition of creativity which informs so much of the research and theoretical development. The concept of novelty this definition contains has been shown to be riddled with contradiction. The inability to define novelty without reference to *ex nihilo* creation means researchers are required to differentiate creative novel acts from all the other novel acts through societal values and group recognition. The status of creativity is subsequently impoverished to an act judged to be so by a group of experts or elites.

Whether creativity exists in all people or only in the realm of the few, and what role discovery plays in creativity, are problematic questions to researchers within the existing conceptual framework. The fact that such issues have existed for so long within creativity theory without resolution indicates that the problems are deep seated. In fact, it will be proposed in Chapter Three that the ability to identify, and solve, these issues does not originate at the level of theory (and definition) but at the level of meta-theory. It is to these, deeper meta-theoretical issues, that we now need to turn in order to reveal exactly how they affect research into the three chosen concepts. It is imperative that the lost paradox of creativity research can be found once more.

3. The misadventures of scientism and postmodernism in creativity research

'That all our knowledge begins with experience there can be no doubt.....it by no means follows that all arises out of experience' (Immanuel Kant)

Introduction

Researching unrecognised and un-actualised creativity, as well as creative potential and how creativity moves between contexts, rather than being facilitated by the existing conceptual framework has been blocked by it, and the reason, at first glance, seems to lie within the conventional definition of creativity. Reliance on the recognition of a produced novel and appropriate product, or one that is regarded as valuable, and the inability of the existing conceptual framework to move beyond this definition, means there are few answers to be had to these areas of research interest within this framework. Those that are offered are saddled with contradictions.

However, it would be a mistake to assume that the problems therefore lie at the level of theory and definition. The reasons these problems continue to plague creativity research are deeper than the theoretical and definitional issues within the existing conceptual framework; the problems lie with meta-theory. To uncover these deeper issues an exploration of the meta-theory within the existing conceptual framework is necessary. This chapter will go on to explore the meta-theoretical presuppositions contained in the existing framework for studying creativity, before revealing how they have influenced definitions of creativity *and* blocked research into the chosen areas of interest.

It will be argued that a failure to offer sufficient explanation of the areas of research, combined with an inability to resolve the domain general - domain specific debate means the existing meta-theoretical presuppositions of the existing conceptual framework are inadequate for tackling all of the areas of interest when studying creativity in organisations. This inadequacy, along with a lack of reflection on these issues, means the shortcomings in meta-theory have generally gone unnoticed. The time has arguably arrived for meta-theoretical reflection and development in the study of creativity.

3.1 Meta-theory underpinning the existing conceptual framework

Successful research requires the application of appropriate research techniques and an appropriate underlying theory. These both require suitable and consistent methodology,

epistemology, ontology, and philosophy of science. It is these concepts combined that can be referred to as meta-theory. Fleetwood and Hesketh (*In Press*) succinctly refer to meta-theory as:

> A portmanteau term to refer, generally, to philosophy of science, ontology, epistemology, methodology, aetiology, research techniques, prediction, explanation and the way all this relates to theory..... *(Ibid: 2)*

Researching creativity in the workplace is, of course, no different; an appropriate meta-theory is required as a necessary (but insufficient) condition for success. However, research conducted within the existing conceptual framework has carried out little[19], if any meta-theoretical reflection. This state of affairs may not be a problem if the meta-theoretical presuppositions used (if not reflected upon) are appropriate, but they may not be. Chapter Two not only reveals problems within the existing conceptual framework vis-à-vis the conventional definition of creativity which is unable to deal adequately with un-actualised and unrecognised creativity and creative potential. It also hints that these may have their roots in inconsistent meta-theoretical presuppositions. If creativity research is underpinned by inconsistent meta-theory the latter is likely to influence more than just these areas of research interest, and is likely to extend to all areas of creativity research. It is incumbent, therefore, on anyone who intends to carry out empirical and theoretical work on creativity to first gain meta-theoretical clarity.

The journey through the meta-theory of creativity studies starts with an evaluation of whether or not those operating within the existing paradigm conduct sufficient meta-theoretical review. Recent reviews of creativity research suggest deeper meta-theoretical review is lacking. Whilst on the one hand researchers understand the need to reflect on creativity *definitions* with several articles doing so, few reflect on the meta-theory (E.g. El-Murad & West 2004; Kaufmann 2003; Russ 2003; Goldenberg & Mazursky 2000; MacFadzean 1998; Magyari-Beck 1998; Feldhusen & Goh 1995). Sternberg, and Lubart (1999), in summarising the history of creativity research, claim there are a number of blocks that need to be dealt with, and see 'problems with the definition or criteria for creativity which seem to render the phenomenon either elusive or trivial' as the most important of these *(Ibid: 3-15)*. Yet despite their call at the turn of this century, the clarity to be gained from meta-theoretical reflection is still lacking.

[19] Since this was first written a meta-theoretical review of novelty was conducted within the *Journal of Creativity and Innovation Management* (June 2006). However, it failed to progress the issues as was demonstrated in the last chapter.

Plucker and Beghetto's (2004) work into domain specificity includes a review of creativity definitions which confirm this state of affairs is worse than simply lack of reflection; researchers often do not take the opportunity to reflect at all. They observe that rarely in the literature are the definitions of creativity and the reasons for it made explicit, with only 40% of articles in the *Creativity Research Journal* and in the *Journal of Creative Behaviour* defining creativity explicitly. In out-of-field journals this dropped to 33%. They regard the explication of a definition as crucial for the discipline, enabling it to grow, thrive and produce meaningful understanding amongst academics *(Ibid: 155)*. But they fall short of calling for definitional problems to be resolved through resolution of meta-theoretical ambiguity. Reflecting on definitions is only one part of the process to gain meta-theoretical clarity but even this seems worryingly absent from most research in this area.

Becker (1995), in examining the 19th Century foundations of creativity research, discovered that much the same questions were being asked then as are being dealt with by the field today, including just what creativity is. Edwards (2001: 222) claims that 'there exists (today) no consensus as to what the term creative or creativity means, what a creative act entails or how creativity is recognised'. This makes it apparent, he argues, that creativity is not yet adequately defined. More optimistically, Mumford (2003a) comments that whilst there is general agreement that creativity represents the production of novel useful products, and that this represents progress, definitional issues should still not be put aside. Given the difficulties identified in Chapter Two of sustaining the definition he proposes, perhaps Mumford's optimism is misplaced.

In spite of this lack of reflection, a huge amount of research has been conducted into creativity over the last fifty years. Albert & Runco (1999) identify a watershed in creativity research as being Guildford's (1950) presidential address to the American Psychological Association. They produce evidence that prior to this, of the 121,000 abstracts contained in psychological journals between 1920 and 1950, only 186 dealt with creativity and after his address until 1991, 9000 articles were added *(Ibid: 17)*. One does need to be sympathetic towards creativity researchers as these contradictions within the literature derive from long recognised problems with defining (and therefore explaining) creativity. As Csikszentmihalyi (1996: 23) argued, creativity is complex: 'the interaction between a person's thoughts and a socio-cultural context. It is a systemic rather than individual phenomenon'. This complexity presents organisational researchers and management practitioners with unique problems.

Whilst creativity might be complex, just what makes up the elements of that complexity is far from being agreed upon. Amabile's operational and pragmatic definition has led to a

worryingly large number of articles published in the organisational literature which do not reflect on these definitional issues and in some way mirror Amabile's definition, or are derived from it. How we define creativity has taken backstage in the literature to the findings that have been uncovered with this 'fit for purpose' definition.

The pragmatic approach advanced by Amabile, rather than being a facilitator of research, seems now to have become a barrier to gaining further understanding of creativity. Comprehensive meta-theoretical reflection may not be a substitute for empirical and theoretical work but it can help highlight the tensions, inconsistencies and confusions within theoretical and empirical claims that may otherwise remain embedded within a research discipline. The problems identified in Chapter Two demand reflection on the meta-theory of the existing conceptual framework. It is to that reflection we now turn in earnest and it will be argued that two distinct and problematic meta-theories seem to be at play within the existing conceptual framework; a form of *scientism* and a form of *postmodernism.* An exploration of these meta-theories will therefore follow.

3.1.1 Postmodernism

The form of pragmatic[20] approach utilised within conventional definition of creativity appears to be derived from a generic school of thought about the nature of science popularly classified as postmodernism. Alvesson (2002) has shown this term can be misleading as it is used to represent a diverse array of philosophical, artistic and social thoughts that are not easily classified under any label. He highlights that whilst many authors concerned may reject the label of postmodernism, there are similarities between the work of several of them[21] *(Ibid: 2002: 10).* He draws on the commentary of Smart (2000) to highlight the key contributions of this field to social research:

> ...Critical concern with a number of issues (1) the crisis of representation and associated instability of meaning; (2) the absence of secure foundations for knowledge; (3) the analytical centrality of language, discourses and texts (4) the inappropriateness of the Enlightenment assumption of the rational autonomous subject and a contrasting concentration on the ways in which individuals are constituted as subjects *(Ibid: 11).*

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[20] I use this word in its everyday sense, not in reference to traditional American pragmatism à la James/Pierce et al.
[21] The authors he describes (Derrida, Levinas, Foucault) come from a broadly defined post-structuralist perspective which he chooses to include within this post-modern label. He emphatically states the label post-modern/post-structuralist is for ease of categorisation only and that the authors concerned tend to reject such labels.

Points 1-3 offer insight into the difficulties that exist when studying creativity, as much of the research is dependant upon the recognition of a product of creativity. Such products, this perspective would argue, are seen as social constructions, language or discourse dependant, which gives instability to the meaning of creativity.

Although there are a couple of exceptions, most of those who operate from this broadly defined postmodern perspective tend to prioritise *epistemology*. Whilst considering epistemology is, of course, perfectly acceptable, there is a tendency within these perspectives to commit what Bhaskar (1998) describes as an *epistemic fallacy*. There seems to be a chain of argument that runs as follows: We start off asking: 'What exists?' We then recognise that to gain knowledge of whatever exists we have to access it via our linguistic or discursive apparatus. The next step, however, seems unwarranted. The conclusion is drawn that because whatever exists is mediated by our linguistic or discursive practises, then by this unwarranted step, reality becomes something that is entirely socially constructed through such linguistic and discursive practises.

For Cruickshank (2002: 57) the postmodern (which includes pragmatic approaches to studying creativity) perspectives are certainly guilty of this. He argues that they deal with questions about the nature of reality through reference to questions about how we can know reality, rather than what reality actually is. Accordingly, they collapse ontological questions into epistemological ones. The argument put forward by Cruickshank is that all social research contains within it ontological assumptions and as such, reflection on those ontological bases can bring the reward of a consistent meta-theory of reality that can *then* guide the epistemological, methodological, theoretical and practical aspects of research.

Alvesson & Sköldberg (2002) provide a critical review of the broadly defined postmodern position and draw attention to these inconsistent assumptions, highlighting the 'parasitical and destructive' ontological claims and the 'self-defeating elements' contained within them (*Ibid: 18-46).* They however argue these inconsistencies are insurmountable and in doing so propose a reflexive methodology for conducting social research. Such reflection, we have seen, is largely absent from creativity research and this has caused problems. In Chapter Four it will be argued that there is no need to accept these inconsistencies as Alvesson & Skoldberg suggest, but for now it is important to note that the conventional definition of creativity, with its roots in pragmatism, seems to contain such inconsistencies and yet little reflection has occurred.

Fleetwood *(In press)* claims postmodernism, including the forms of pragmatism advanced within the conventional definition, have deeper issues for researchers than may be apparent. He uses Hancock to demonstrate the problems that can be created for researchers:

> [A] range of discourses...serve to limit the speaking and knowing about reality and as such...constitute the limits of reality itself *(Hancock c.f. Fleetwood: 7)*

He claims that 'comments like these, at best encourage, and at worst do nothing to discourage, the belief that language or discourse, quite literally, makes, constructs, creates, produces, generates, constitutes, orders (and so on) entities'. He argues that to suggest that 'discourse, quite literally, *makes* entities' is to ontologically exaggerate and this is a mistake which gives power to discourse that it does not have *(Ibid: 7)*.

The meta-theory of postmodernism, implicit in a great deal of creativity research, especially that which makes use of Amabile's pragmatism, therefore contains a major problem for researchers of creativity. This combination of epistemic fallacy and pragmatism, leads, via the idea that reality is entirely socially constructed through linguistic and discursive practices, to the idea that creativity is similarly socially constructed. In the genre, this is expressed in the idea that creativity only exists at the moment of its recognition. The moment of recognition is the moment of linguistic and discursive practice. This problem does not affect creativity research alone; there's evidence to suggest that these meta-theoretical issues affect theoretical development in other research areas, such as understanding organisations, management and information systems (e.g. Mutch 2002; 2005).

3.1.2 Scientism

For Andrew Sayer (1992) the broadly defined postmodern schools of thought are correct in pointing out that conducting research in the social sciences always has an element of uncertainty and instability to it; recognising that social scientists are deeply divided as to 'what constitutes a proper approach to social research' *(Ibid: 1)*. However, he also claims that empirical researchers also often mistakenly believe that philosophical debate is not their concern and in doing so fail to realise that all empirical research and theorising is making some kind of ontological claim about the nature of the world; even if it is implicit and unconscious, it therefore becomes open to philosophical consideration.

Such mistaken beliefs are symptomatic of the second problematic meta-theory underpinning the existing conceptual framework, those that could be broadly categorised as including

positivism, logical positivism, hypothetico-deductivism and scientific realism informed through a form of naïve or empirical realism. Henceforth, the term *scientism* will be used to refer to these meta-theoretical positions. In defining scientism, Fleetwood (2007) refers to the *Collins Dictionary of Sociology* (1995) which views scientism as 'any doctrine or approach held to involve oversimplified conceptions and unreal expectations of science, and to misapply 'natural science' methods to the social sciences'. It is not controversial to argue that the methods of experimental science are used heavily within creativity research. However, if these methods are misused or used without reflection then this is a problem.

Fleetwood and Hesketh (2007) not only claim that the methods of natural science are misapplied and inappropriate to the social sciences, (which would seem to include creativity studies) but that they are a bastardised form of science. Their position is best described in their own words and so I will quote from them at length as this point strikes at the heart of creativity research:

> Refer(ing) to the meta-theory presupposed in empirical research.... most of these researchers would quite readily accept that what they do is 'scientific'. Critics, like us, however, argue that this research is spurious science, and more accurately defined by terms like 'scientistic' and 'scientism'. Whilst the more obvious term to use to describe this meta-theory is 'positivism' we decline to use it.
>
> In the hands of its initial advocates in the Vienna Circle, positivism was a carefully worked out, sophisticated meta-theory[22].....During the last half century, however, sophisticated meta-theoretical discussion and reflection by those who operate in the shadow of positivism has almost disappeared. Most universities have now replaced *Philosophy of Science* courses, with courses on *Research Methods*, consisting largely of how to collect data and process it with a heavy, and sometimes exclusive, emphasis on statistical techniques. Most contemporary empirical researchers end up just applying the statistical techniques they have learned with little or no understanding of the meta-theory underpinning what they do. The result is that what passes for contemporary positivism has evolved over half a century into a rather ill conceived and *ad hoc* jumble of quasi-positivist ideas. *(Ibid: 2)*

[22] Fleetwood and Hesketh (2007) reject positivism but recognise its contribution. In Chapter Four the argument for its rejection will be detailed.

This *ad hoc* jumble of quasi-positivist ideas, they argue, is better described as 'scientism'. I follow their usage. Fleetwood and Hesketh's argument, that in human resource management and organisational research a form of scientism is negatively affecting theory, is an important one, and it begs the question: Is a similar misconception of positivism at work within creativity studies?

Scientism contains presuppositions about conducting research which guide the researcher in their empirical endeavours and theory building. It is not necessary, at this point, to detail the nature of the critique of the meta-theory, although the basis of this critique can be found within Bhaskar (1978). Perhaps a defining feature of this meta-theory is the necessity of empirical research for theory to develop. There is a logic contained within it which roughly runs as follows. There are many competing knowledge claims and they all have uncertain premises. In order for a knowledge claim to be accepted we must seek proof. This proof is best provided via empirical observation and measurement which seeks to determine causality through the regular conjunction of events. Whilst there is nothing inherently wrong with conducting empirical research to judge between competing knowledge claims, scientism advocates a very extreme set of steps to do so. Only observable phenomena are permissible for scientism, and even these must be quantifiable, so that the usual battery of statistical techniques can be applied to test hypotheses. Other forms of assessing knowledge claims are regarded as 'unscientific'.

This presupposition, contained within scientism, leads to an epistemology which can lead researchers to commit a form of the *epistemic fallacy* described earlier[23]. That is to say, ontological questions about the nature of reality are only answered through a restricted notion of that reality determined by a prescribed epistemology; in this case only the observable can be considered for research and so only the observable can be considered within theory. Without reflecting on their own meta-theoretical presuppositions creativity researchers have been liable to make claims about creativity which also restrict theory and explanation only to that which can be observed and quantified.

The form of pragmatism described earlier, and its associated problems, has already been shown to influence definitions and theory building. Scientism also seems to be operating within this framework (as you would expect), but worryingly a strange hybrid of the two also seems to exist whereby creativity is defined by drawing on postmodern presuppositions yet

[23] The reasons this commits a form of the fallacy is detailed in Chapter Four.

researched through a form of scientism. This is a curious combination of meta-theories not often found in other areas of research.

3.2 Existing meta-theory and creativity theory building

Before exploring whether these meta-theories are sustainable for conducting research within the social sciences (in Chapter Four) the rest of this chapter will explore the effect of some of the presuppositions of postmodernism and scientism on theory building within the existing conceptual framework. It will be argued there are two importance consequences for creativity theory: (i) an understanding of creative potential, unrecognised and un-actualised creativity (all currently regarded as unobservable) is inevitably restricted (ii) an understanding of emergence[24] is lacking, leading to issues dealing with the complexity of cross-contextual research. The emphasis on empirical data for theory building necessarily leads to limited conceptions of potential and difficulties explaining emergence. The areas of research interest and the proposed method of enquiry have already been shown to be incompatible with the existing conceptual framework and the conventional definition and this means they offer the perfect starting point for exploring these issues. By examining existing theory of creative potential, unrecognised creativity and un-actualised creativity, the limitations of the meta-theoretical presuppositions can be identified.

3.2.1 Creative potential

A potential is defined by the Universal Dictionary as something that is 'possible but not yet realised, or capable of being, but not yet in existence', The concept of creative potential has a long history in creativity research. For example, Stein (1974: 5) asked 'Can a person who has never manifested creativity be taught or stimulated to be creative?' Cummings and Oldham (1997) offered advice for people in organisations on how to enhance innovation through tapping into creative potential. Mumford (2003b) argued that discussing creative potential is necessary for an overall definition of creativity. Therefore, understanding how creative potential develops into creative performance, and is subsequently utilised by an individual or organisation, is perhaps one of the most important objectives for researchers of creativity. However, attempts to understand and utilise creative potential are blocked because the meta-theoretical presuppositions of the existing conceptual framework appear to be inconsistent with the very notion of *potential.* Put simply, a potential *can* exist without manifesting itself, and exist without manifesting itself as something observable.

[24] Further explanation of this will follow in Chapter Four where its importance to theory building will be developed.

Mumford (2003b: 110) notes the existence of this problem when studying creative potential. He argues that researchers should concern themselves with performance and seek to explore performance empirically. He claims it would be difficult to study potential, and have validity and reliability, as the phenomena is unobservable and therefore the methods of empirical science which enable validity and reliability to be assessed cannot be used. He recognises that researchers normally circumvent this problem by studying people who are doing creative work already and inferring from them what a potential must look like, but his argument shows that this approach, with its emphasis on the empirical, can lead to an inability to conceive of creative potential.

He sees understanding potential as one of the emerging issues of creativity research, so recognises the need for understanding creative potential. Yet absent from previous and current research is a consistent and sustainable definition of creative potential. This suggests there are limits to what can be researched, theorised and explained about creative potential within the existing conceptual framework. Mumford's (2003a) view is also that we can study potential but only when we are sure we have adequate *markers*. By this he means there is a need to identify what skills and abilities 'already creative' people have in order to infer what is necessary for creativity to occur, and argues markers gained from the already creative can also be regarded as markers for creative potential in others. However, by limiting the conception of potential to that of the skills and abilities of already creative people, one is actually emphasising the centrality of the empirical when the object of enquiry is not always capable of empirical existence, as it is with potential.

In spite of this, plenty of research has been conducted that infers the existence of creative potential. For example, Moger and Richards (1999) examined structural barriers to creativity in teams and proposed that creative teams need to go through development phases in order to perform. They asked the question what differentiates a *normally* performing team from a creatively performing team and argued that leadership plays a role. Underlying this claim is the notion that a team has to go through a development phase to reach creative performance. This means creative performance, in their model, begins in a latent or potential phase and moves through subsequent phases until 'peak performance' is reached.

They conclude that training can help teams pass through constraining structures, preventing performance peaking, and leads therefore to increased creativity. They do not discuss the concept of creative potential within their work, although it is implicit. Their argument contains two ontological presuppositions: that potential exists in both individuals and teams; and that training can help potential to be realised. Such claims are not considered

controversial and indeed much of the human resource management project is predicated upon such presuppositions. The controversy therefore remains hidden as there is little recognition that the meta-theoretical presuppositions used to inform research, which is inconsistent with the notion of a potential, lay behind the inability to develop sustainable theory. That is to say, their research which stresses the importance of the empirical and observable does not facilitate theorising about potentials, as potentials are often not observable.

Cummings and Oldham's (1997) argument that organisations need to innovate in order to survive the additional competition arising from increased globalisation provides further evidence of the limitations of the meta-theoretical constructs held within the existing conceptual paradigm. When discussing how to improve innovation in organisations they suggest that managers 'must hire people with the *potential* for creativity, and then they must structure the employee's environment in order to bring out this creativity' *(Ibid: 22, emphasis added).* They therefore argue that some people have characteristics that make them more likely to be creative (they have potential), and the environment must be suitable for them to succeed (inferring environments have potential also). Yet their argument contains no *sufficient* explanation of how to define or identify creative potential.

Runco (2005: 22) explores these issues in more detail. He claims if everyone is creative there should be 'identifiable universals'. He recognises that some of the issues discussed in Chapter Two[25] might cause problems when attempting to explain potential, as the conventional definition starts with the already produced creative product and works backwards to infer potential in others. This he maintains cannot tell us much about people with current potential as 'products are not psychological and psychology is merely inferred from the study of products'. His position is to accept that creative potential exists but that it is only after it is manifest that we can discover whether the potential existed in the first place. Whilst this may or may not be plausible[26] when considering how we come to *know* potential, his statement is in contradiction with his meta-theory which dictates he can only theorise about the observable. He recognises these tensions when writing specifically on the problems of potential:

> I am fully aware that my position on potential does not lend itself to an entirely objective science. However, it may be that we have to modify out methods such that they aren't maximally objective but are as objective as possible and still cover the topic at hand, namely, creativity. *(Runco 2003: 138)*

[25] He specifically refers to the reliance of creativity definitions on the recognised production of appropriate novelty.
[26] Some potentials can be known to exist without them becoming manifest; examples will be given in Chapter Five.

Whilst he may recognise the tension, he does not deal with it. The form of science his research is informed by is not called for review; he merely accepts that we have to 'temporarily' suspend objectivity in order to understand the nature of the world, namely creativity. The emphasis on empirical data and the lack of a conception of potential within his meta-theory to research and theorise about creativity has left him in a position whereby he recognises the importance of potential but his attempts to explain it are obstructed by the assumptions held about how we come to know it. How we come to theorise creative potential is therefore restricted when theory is informed through scientism.

Here we can also see how the problems of pragmatism and scientism collide within the existing conceptual framework. On the one hand creativity is defined pragmatically and the consequence of this is that only the recognised production of novel and appropriate things can be classed as creative. This seems to be an example of the epistemic fallacy contained within postmodern meta-theory, as it means what we want to say about reality (creativity) is restricted to how we come to know it (recognise it). On the other hand, the meta-theory of positivism or scientism is at work restricting what can be researched to the level of the empirical. It is unsurprising therefore that creativity research struggles to explain potential with such contradictory presuppositions colliding to inform research practise in this area.

In Runco (2003) the consequences of this confusion can be revealed further. He argues that studying the actual performance of creativity helps keep science empirically objective and reliable. He argues that potential is 'by definition, incomplete, immature or in need of fulfilment' *(Ibid: 138)* and that potential and performance are therefore mutually exclusive states, you either have potential or you are performing. However, to argue that potential and performance are mutually exclusive states reveals the limitations placed on researchers by the meta-theory of the existing paradigm. Such an argument is in danger of inadvertently assuming the natural world exists *only* at the level of performance, the manifest or the empirical. Mumford's claim that potential and performance are incompatible does not fit with everyday experience of the world around us. We can see around us (through many examples) that potential does not evaporate once it turns into performance. Whilst the potential must pre-exist the performance, it will continue to exist post-performance. To argue anything but this is tantamount to arguing that individuals lose the potential to be creative (and all the associated skills, experiences, talents and processes) at the moment of performance.

Runco's juxtaposition of potential and performance appears as an illicit account of the relationship between the two. Take for instance a motor car. It has the potential to perform as defined by Runco and it has within its existence the power to move along the (roughly)

horizontal plane. If one takes Runco's stance then when it is stationary it has the potential to move but when it is moving its potential to move becomes performance and the potential can no longer exist as 'potential and manifest are mutually exclusive states' *(Ibid: 138)*. This seems to be incompatible with the principles of physics as the car contains *potential energy*[27] even when it moves. One could argue that *potential energy* is transferred into *kinetic energy* but the *potential energy* also still exists within the car. That it contains the potential to travel faster *and* it is already moving is still *just* sustainable within Runco's definition[28] if one adds a few qualifications (potential only exists in the petrol, ability of the accelerator pedal to move when instructed by human foot). However, what Runco misses is that the potential to travel *must* exist the entire time it *is* moving otherwise, by definition, it would be unable to move. It seems mistaken then to assume a juxtaposition between potential and performance. What's lacking then, is the meta-theory to enable a distinction to be drawn.

We can see then that the meta-theoretical presuppositions can encourage researchers to adopt a position where they make misguided ontological claims which, on the surface, appear inconsistent with the everyday experience we have of the nature of the world. The emphasis on empirical data and the subsequent lack of sophistication surrounding the term potential has seemingly hindered investigations into, and explanations of, creative potential. Whilst the need to study potential may be recognised, the meta-theory of the existing conceptual framework implicitly hinders the investigation of creative potential (e.g. Kaufman & Baer 2006; Mumford 2003a; Mumford 2003b; McCoy & Evans 2002; Ekvall 2000). Restricting what is researched to demonstrated acts of creativity and then inferring the existence of potential means far more than the problem of selection bias identified by Runco (2006) exists.

3.2.2 Un-actualised creativity

Un-actualised creativity, which I referred to in Chapter Two, includes the capacity, disposition, power or ability to perform creatively whilst, in some way, either choosing not to or being prevented from performance. This means that un-actualised creative people ***can*** perform creative acts but ***do not*** do so. There is a theoretical tradition within the organisational and management literature which suggests the category of un-actualised creativity may represent some of the behaviour previously observed in organisations (Hesketh & Brown 2004; Lawson 2004; Taylor & Bain 2004; Ollman 1976). Within the creativity literature, by contrast, theoretical frameworks are thin on the ground. There are some related theoretical and empirical analyses which hint at the category but few explicitly refer to it (e.g. Sternberg *et al* 1997).

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[27] I am borrowing these terms from the realm of basic physics.
[28] Although problematic.

Clark and James (1999) and James *et al* (1999) examined examples of positive and negative creativity[29] in organisations. They discovered that when people sensed they were being treated justly they would channel their creative powers into positive means and the opposite when they felt they were being unjustly treated. They note that virtually all the literature has focused on positive creativity and has neglected those whose creative powers can be used for negative ends. This suggests that if employees are unjustly treated, or fear being treated as such, as well as channelling their energy into negative creativity, they may also decide not to use their energy at all, that is, to stop all creative effort. This means, contained within their research is an implicit notion of un-actualised creativity because, if these people are channelling their creative efforts into negative outcomes, their positive creativity remains un-actualised[30]. This would also be the case if they choose not to use their creative ability at all.

Jose Fonseca's (2002) research also implicitly reveals the category of the un-actualised material idea[31]. He conducted a case study into the invention of subterranean distribution systems (underground sewage and communication pipes), and found the successful use of these innovations in the market place was blocked and hindered by factors unforeseen by the inventor. These included power and political factors, vested interest in the inventions failure, corruption, fear of the unknown and structural difficulties within the banking system *(Ibid: 34-43)*. This suggests that injustices do occur within organisations, making Clarke and James's point all the more relevant. It also suggests that when dealing with new ideas, organisational structures may actually prevent creative performance. The category of the un-actualised creative seems to be implicit within these works and yet an explanation of it is lacking within the existing conceptual framework and as such represents another example of the limitations of existing meta-theoretical presuppositions.

3.2.3 Unrecognised creativity

Unrecognised creativity can include creativity that has been ignored, unrecognised, suppressed or otherwise hidden. Such a category comes into conflict with the conventional definition. It was argued in Chapter Two that accepting the existence of unrecognised creativity would involve a clash with the dominant method of defining creativity. Yet, creativity researchers are aware that unrecognised creativity is entirely plausible – they just do

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[29] They define these terms in relation to the outcomes of creativity; positive creativity refers to favourable outcomes, negative to unfavourable ones. What is not discussed is who these outcomes might favour?

[30] This is based on the assumption that if they are capable of negative creativity they will also be capable of positive creativity.

[31] The case study begins by exploring how an actualised creative idea failed to gain the necessary funding to see it implemented. The idea was therefore actual at the level of the psychological but not, at the level of the material, it was an un-actualised piece of technology. These levels of existence will be defined and explored further in chapter five.

not know how to deal with it. There are numerous examples of scientists who have produced something which is initially ignored, only later to be regarded as highly creative (e.g. Koestler 1964: 240). Therefore, in organisations it is entirely plausible that an individual may be performing creatively but that their creativity remains unrecognised, either by the group, or by themselves, or both.

Runco (1999) criticises Amabile for suggesting that there could be 'no creativity whatsoever.....without appreciation' and argues that she probably means there would be no impact, or change in history without appreciation. To suggest there is not creation, discovery or insight without recognition is to misunderstand the nature of the phenomena. He claims when defining creativity, that appropriateness and value are critical but social recognition may not be. Runco makes clear that we must not assume creativity depends on recognition but current definitions (including Runco's) fail to escape from the need for recognition. Recognition is implied either directly or indirectly through referral to the need for a product to be useful, appropriate, or valuable to a group. The goal of tapping into unrecognised creativity is therefore made problematic by the way in which the field defines the phenomena. However, those wishing to discuss unrecognised creativity (e.g. Nickerson 1999) who are informed by the existing conceptual framework do not ignore this definition and suggest another; neither do they identify its problems, unless of course they reject the ontological assumptions contained within their meta-theory.

In summary, then, research within the existing conceptual framework implies that creative potential, un-actualised creativity and unrecognised creativity are possible, even if the implication is oblique. However, they lack the meta-theoretical consistency to deal with these phenomena. This is in part because they lack the meta-theoretical concepts (such as concepts of potential) necessary to give these phenomena some grounding (especially in their ontological commitments); in part because empirical research tends to privilege the observable (and the un-actualised is unobservable); and in part because current definitions focus on produced and actualised creativity, which implicitly denies the existence of creativity in an un-produced, unrecognised or un-actualised sense. It is clear then that to conduct research into these phenomena requires the meta-theoretical issues to be resolved.

Before attempting resolution it is necessary to reflect on one more issue the field contains. It was suggested that it might be possible to explore creative potential within the existing conceptual framework through looking at creative performance in one context and asking what happens to that performance in another context (for example in-work and out-of-work). To ask what happens as a person moves between the two contexts has a track record in the

existing conceptual framework. For example Mumford (2003a) referred to markers for potential being identified via this method. However, it was also shown in chapter two that such research would run into another debate, whether creativity could be considered domain general or specific. In order to conduct research into the identified areas of research interest, through the exploration of in-work and out-of-work creativity as was originally proposed for this research, it is necessary to understand the parameters of this debate before attempting to resolve the meta-theoretical issues identified so far. It will be shown that doing so reveals more of the effects of existing meta-theory on understanding creativity.

3.3 The difficulties of cross-contextual research into creativity

Whether creativity can be considered domain general or domain specific refers to a selection of issues which combine to suggest one of two positions (i) creativity is a general ability possessed by human beings involving largely the same set of skills and thinking processes (ii) creativity is domain specific and each domain has its own unique requirements which determine the skills required to be creative - as each domain changes, so do the necessary skills. In each of these positions, presuppositions about the nature of creative potential and its relationship to performance exist and bias findings. In order for the debate to progress, a clear understanding of just how notions of creative potential and performance are used to inform the debate, and whether they are sufficient to do what is expected of them, is required.

Before exploring how creative potential is thought to influence the debate, it is necessary to distinguish between a domain and a context. A domain, in this sense, refers to a realm within which creativity can occur, for example maths is considered a domain as is art. A context however, refers to all the things that combine to influence a particular situation. Work, can be seen as a context as it potentially contains many domains (maths, language, art) as well as people, processes, structures, and so on. Out-of-work is also considered a context which could include multiple domains. An example of the nature of context comes from Choi (2004). Commenting on factors that mediate the individual and contextual influences on creative performance, she details contextual factors such as challenging work, encouraging organisational environment, work group support and absence of organisational impediments.[32]

Baer (1999) provides a good summary of the distinction within the existing conceptual framework. He claims that theories of domain specificity hold that there are several domains of knowledge, each located as a human ability, and that cognitive development in each of

[32] It is not necessary to this argument to develop and explain all of the different ways in which we can classify domains and contexts. For a review of these terms I refer the reader to Sternberg (2006).

them can be seen as proceeding independently. This means creativity should not be regarded as a general skill and that creative performance in one of these domains of mind do not necessarily mean there is the ability for creative performance in another. This position however, is hotly contested. Plucker (1998) argues that content specific theories are, in part based upon theories of situated cognition and that these theories are problematic. He claims research supporting context specificity is not producing sustainable conclusions due to theoretical and methodological problems.

Unfortunately, the terms of this debate are often confused and this leads to claims that creativity is entirely context specific (e.g. Abuhamdeh & Csikszentmihalyi 2006). So whereas theories refer to domains of mind, studies explore creativity within very specific *contexts* and argue that generalisations are not possible. What this means is performing creatively in one *context* does not necessarily mean the *potential* to perform in another exists. Clearly, crucial to this debate (and therefore the ability to conduct cross-contextual research) is a sophisticated understanding of creative potential. This includes a sustainable definition, consistent with the meta-theoretical presuppositions used to conduct research. Without such clarity, the ability to explore how creative potential develops and moves between domains and contexts may well remain elusive. Regrettably, as we have already seen, such a definition is lacking.

This has not prevented research. Baer (1994) infers potential within his research, even if he does not develop a full definition. He claims the influence of any skill on actual performance involves at least two conceptually distinct factors: *availability* and *production*. Suggesting that one must *have* a skill for that skill to be produced but that it is also possible not to produce the skill in a given situation, even though that skill is available, he claims this could lead to the skill falsely being assumed to be lacking. *(Ibid: 16)* He uses the example of divergent thinking and divergent thinking training to exemplify his point. He claims that in the case of divergent thinking, just because subjects are trained in the use of divergent thinking, may not mean they can apply these 'thinking skills' in the relevant situations as they might not recognise the need for them to be used.

In arguing this, Baer recognises the difference between a possessed skill and a performed one, and this implicitly presupposes a form of creative potential. However, there is also a requirement within his reasoning to rely only on empirical data in developing this argument because the existence of the potential is inferred from the subject's participation in divergent thinking training. A further category, that of the potential to possess a skill, exists in addition to the presupposition he holds, but is ignored. Three levels to creative performance are therefore suggested as possible through this reasoning: (i) the potential to possess skill (ii)

possessed skill and (iii) performed skill. In order to understand how potential can move between these levels, and therefore between domains and contexts, an explanation of (i) and (ii) need to be included in any explanation of (iii). Unfortunately, as (i) and (ii) are not always available to empirical research and (iii) is, there is a dearth of explanations of (i) and (ii) especially when compared to (iii). Conceptions of creative potential within the existing conceptual framework therefore range from no conception whatsoever, through conceptions that are only implicit, to explicit conceptions that rely entirely on empirical performance for their justification.

For Kaufman and Baer (2006) the generality of creativity potential remains difficult to prove, as they claim it is difficult to assess whether one's skills, successfully creative in one context, would be equally successful in another context. They use genius level[33] creativity as their barometer of the ability for creativity in more than one domain and argue that genius level creativity appears to be domain specific, and that the evidence seems to support this. Therefore, unless one can prove that everyday creativity is different to genius level, then everyday creativity must also be assumed to be domain specific.

However, the actual performance of genius level creative people and their potential for performance have been collapsed as one, into empirical evidence, and as such serves as another example of how the existing meta-theory obstructs understanding. Strangely, in arguing this they also seem to ignore other empirical evidence available to them which suggests that a 'ten year rule' is in operation with regards to historical contributions to a domain (e.g. Hayes 1989). For example, in mathematics it would take ten years of post-graduate study, on average, for someone to make a contribution that is regarded as historically important. With this in mind to dismiss the creative potential in other domains (say music) of someone that achieved a historical contribution in mathematics, solely because this is not observed in genius level creative people seems folly, as this observation says nothing of what might be for that person with ten years of work.

The issue of cross-contextual research and understanding creative potential are inextricably linked and both currently suffer from a lack of meta-theoretical clarity. To argue that creativity is domain specific is to argue that the ***potential*** for creativity is also domain specific. If one argues that creativity is domain general, then one can also argue that the potential for creativity is domain general[34].

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[33] This is defined in a similar way to the historical creativity Boden proposes in Chapter Two.

[34] The debate in the existing conceptual framework is significantly more sophisticated and complex than this, focusing on specific skills in specific contexts with generalisations such as these avoided. However, underlying the

Feist (2006) presents the case for the domain specific nature of creativity *and* creative potential. He examines the biological underpinning of human creativity and suggests that there are distinct domains of the mind and that these form the basis of skills in different disciplines. He also claims that these domains are in some way related to our genetic inheritance, and that this inheritance is what determines our potential in any one of these domains *(Ibid: 58).* He uses a form of genetic or evolutionary reductionism to advocate that specific skills, functions and mechanisms have been given priority in human nature and that these mechanisms have a degree of physical reality but that they are also conceptual and heuristic in nature[35].

There have been many suggestions as to what these domains are but he claims it may be possible to distinguish seven distinct domains. The first of these is the social, which is described as the ability to form relationships, sexual behaviour, child rearing, friendship alliances, facial recognition, theory of mind, emotional intelligence and so on. These he claims are based on biological drives such as facial recognition. He describes the others as implicit physics, or knowledge of the inanimate world; implicit biology; knowledge of animals; maths; music; language; and art. He argues that creative talent is unique to each implicit domain and therefore is specific in nature rather than general. He maintains that it is rare for a person to have skill in more than one domain and certainly no more than two. What he argues, therefore, is that because it is rare for a person to have more than one skill, the potential for more than one skill does not exist, or as he claims, specificity becomes fact.

To suggest that potentials exist because it cannot be proved otherwise would be a fallacious form of argument. Likewise, to say they do not exist also requires proof. Feist takes the lack of creative performance of a skill as proof that the potential for it does not exist. However, this is a similar form of fallacious argument, which reads that these potentials do not exist because there is no evidence to suggest otherwise. Absence of evidence is not, however, evidence of absence. Ignoring the difficulties his theory faces through being a reductionist account of the complexity of human performance and potential, what he does, in essence, is fail to take into account the relationship between potential, practise and performance. In the western world, time to develop oneself is not easily affordable or afforded to the general population, so to

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debate are the simple principles I describe, hence the presentation in this format. For more detail on the complexity of this debate I refer the reader to Baer (1995) and Sternberg (2006).

[35] There exists a vast amount of research into the nature of human skill and human potential. Whilst I address these issues within creativity, they equally apply to other fields where the described meta-theory is in operation. I therefore ignore the other fields (such as Intelligence) because, unless the issues are resolvable within creativity studies, it is unlikely they can be resolved elsewhere. I refer the reader to Cianciolo & Sternberg (2004) for a review of these issues in the domain of intelligence and Bennett and Hacker (2003) for how philosophy has addressed them within neuroscience.

draw conclusions about the genetic nature of human skill and potential and ignore the social conditions of human existence seems a premature position to take.

Whilst he emphasises the empirical in his presuppositions and lacks a sustainable notion of potential, his theorising typifies another of the difficulties faced within the existing conceptual framework, namely, a lack of the concept of emergence[36]. A further consequence of meta-theory that emphasises the empirical is that theory developed tends only to account for the things that are available to be observed. In this instance the creativity skills in potential are seemingly reduced to exist only at the genetic level and the complex interaction between human beings and the natural world, and the subsequent effects of that, are ignored. It may be that human beings on the whole contain the potential to excel in all domains but whether they do or not is environmentally determined. What cannot be decided without further research is which position is accurate. Crucial to that research will be the concept of potential, how it develops and the interaction between human potential and environmental influences.

Having explored the case for and against domain specific creativity skills, the case it makes against domain general creativity skills can also be examined. Baer (1994) offers insight into the criticisms of viewing creativity as a general skill when he examines the evidence for such a position. He begins by explaining the fascination with general theories of anything. He argues that a grand theory needs to ask how much it can profitably include within its account, and what its limits are. Within the creativity field he sees several domain general theories of creativity, which note the specific skills required within a domain but see them as part of a larger picture. He argues that the most influential of these theories have been the so called 'divergent thinking theories' *(Ibid: 43-44).*

His argument is that if (a) general purpose, domain transcending creative thinking processes (such as divergent thinking) make substantial contributions to creative performance on different tasks, and if (b) there are individual differences in these thinking skills, then individuals who are creative on one task should on average and all other things being equal, be creative in other tasks in different domains, and that the converse should also occur *(Ibid: 46).*

The evidence Baer reviews, suggests the case for specificity is strong, as there is weak evidence of creative performance on more than one type of domain task. This does not necessarily mean creativity can not be considered task-general as his claims contain two presuppositions: (i) that creative thinking processes all resemble divergent thinking (which he has not explained or defined) and (ii) performance is all that matters when considering creativity and creative potential. Thus, he expects us to take on faith that divergent thinking is

[36] The effect of this lack of the concept of emergence is dealt with in Chapter Four.

the only form of general creativity skill and therefore this research is exhaustive, and that potentials can only be considered to have existence after they have been performed.

In summary, the consequence of the presuppositions that inform the research that these theories of domain specificity are built upon is that explanations of creativity become dependent upon empirical data for theory building. They require a conception of potential but are unable to explore it, because it contains an ontological presupposition that is inconsistent with their epistemological commitments and therefore conceptions of the emergence of potential are limited. Richards (1998: 370), after briefly summarising the history and difficulties of creativity research, notes that the contextualist's seem to be winning the day over the generalists when it comes to explanations of creativity in organisations. Researching such creativity therefore requires meta-theoretical clarity in order to overcome these issues and for the creative contribution of employees to be fully recognised and developed.

Conclusion

This chapter demonstrates that the existing conceptual framework is failing to offer a sophisticated understanding of creative potential, unrecognised creativity and un-actualised creativity. This failure has led to research which has ignored the full range of creativity that potentially exists in organisations. In addition, the debate over whether creativity is domain specific or domain general lacks resolution and requires a consistent concept of potential in order to proceed. This debate prevents research into the areas of interest as conclusions cannot be drawn about the nature of creative potential in one context from the performance of creativity in another, neither can it be inferred that just because someone is recognised as creative in one context it means their creativity might be unrecognised in another.

Moreover, this debate has begun to come down on the side of context specific creativity, which seems to be to the detriment of those in organisations not performing to 'genius level' recognised creativity but who might just be able to. Whilst this conceptual framework suffers from serious shortcomings, these shortcomings tend to go un-noticed because they are located not at the level of theory, but at the level of meta-theory and there is little or no meta-theoretical reflection in the creativity paradigm. If this is correct, then we need to take meta-theory seriously. This will be the subject of the next chapter.

4. Critical Realism and Creativity

'Sorcerers who conjure brooms and buckets out of thin air do so not by any intelligible means, but by occult wizardry.' (Boden 2004)

Introduction

Having established that the meta-theoretical issues within the existing conceptual framework have prevented a definition of creativity without paradox or reliance on recognition from being developed, which has led to difficulties with theorising the many elements that make up creativity (not least creative potential, un-recognised creativity and un-actualised creativity), it is now possible to tackle these issues directly. In doing so, an engagement in meta-theoretical under-labouring making use of critical realism, will occur. This will do four things. First, it will locate the conceptual shortcomings of the existing creativity paradigm in existing meta-theory, especially ontology. This is because the origin of the identified issues, arguably, lie either in the scientism perspective with its empirical (or naïve) realist ontology (i.e. an ontology exhausted by the observable), or in some form of postmodern/pragmatic perspective with a strong social constructionist ontology (i.e. an ontology exhausted by, in this context, the values or discourses of those who judge creative phenomena).

Second, using the alternative meta-theory offered by critical realism, the production of an appropriately augmented conceptual framework for researching creativity will be presented. The efficacy of critical realism will be established for such research by demonstrating that it provides the meta-theoretical tools to solve many of the issues creativity research has faced. In doing so, it will be shown that the ontological commitments to causal powers, stratification, emergence, agency-structure relations and absence or negation can be fruitfully applied to the creativity paradigm. The net result is to enable the resolution of several of the problems raised previously, especially in relation to creative potential, unrecognised and un-actualised creativity. This will pave the way for a new definition of creativity in Chapter Five.

Third, the *ex-nihilo* paradox will be addressed and a solution to it will be proposed to rid definitions of creativity of this niggling issue. In doing so, the presuppositions of critical realism will be used and it will be argued that the solution to the *ex nihilo* problem clarifies issues within critical realism hinted at by Bhaskar. Finally, the social ontology developed by critical realists, along with the causal-explanatory method they advocate will be described and its appropriateness to this research elaborated.

4.1 A deeper look at problems with existing meta-theory

In chapter three it was argued that the philosophies of postmodernism and scientism have informed research within the creativity paradigm and that these philosophies contain presuppositions which cause problems for research and theory building. The scientistic perspective, presupposing an ontology exhausted by the observable, and a form of postmodernism/pragmatism containing strong social constructionist ontology i.e. an ontology exhausted by, in this context, the values or discourses of those who judge creative phenomena were detrimentally influencing research. These will now be explored in depth.

4.1.1 Scientism

Scientism presupposes a notion of causality, derived from the British philosopher Hume. Harré & Madden (1975) argue his view of causality presumes our universe contingent and therefore claims everything in our universe must also be considered contingent. Harré and Madden believe this is a mistake. Indeed, they state: '(from) the fact that our universe is not a necessary one in that sense, it does not follow that, given our universe, what happens within it is not necessary'. If something else could happen within our universe then it would be constituted differently and if something other than what must happen could happen, no explanation would ever be possible of the occurrence of one event over the other *(Ibid: 39).*

Harré & Madden argue the consequence of Hume's position is that researchers cannot take nature for granted as 'a change in the course of nature is not self-contradictory' *(Ibid: 44-47).* This means that for Hume, understanding causality can only be achieved through the seeking of event regularities, rooted in the ontology of atomistic events. They argue his position means that the way in which we come to know the world (the seeking of event regularities), dictates what we can say about the world. In this sense, the epistemological instructions of Hume dictate the ontological claims one can make. Hume has, therefore, no option but to dismiss the idea that things can have essential properties, and argue that all relations between events are contingent, not necessary.

For Harré and Madden this is neither consistent with our everyday experience of the world, nor appropriate to describe the nature of scientific enquiry. They argue that 'The physical connection between the nature of something and the way it acts and reacts; and the conceptual connection between the concept of its nature and the specification of its reactive properties are, both in their proper mode necessary' *(Ibid: 45).* If something behaves differently to what was expected, scientists can rightly assume it may have changed its nature. The example of acid and litmus paper is used to demonstrate the difference between Humean conceptions of ontology and what scientists actually do and think. They argue that acid that no longer turns

litmus paper red is likely to no longer be acid; it is unlikely that the nature of the relationship between acid and litmus paper had changed. It is the essential properties of acid and litmus paper that produce the resultant change in the colour of litmus paper under certain conditions. For Harré & Madden this means that any notion of causality which doesn't contain a notion of essentialism is mistaken. They regard the essential properties of a thing as its causal power, that is, its power to act in this universe. With scientism rooted in this Humean conception of causality and epistemology, it can also be regarded as mistaken.

4.1.2 Postmodernism/pragmatism

In chapter three it was shown that the postmodern perspective contains within it a focus on epistemology, about how we come to know the world, and that this can mean researchers fail to distinguish the independence of entities from their discursive or linguistic constructions. The end result of both the empirical realist and many forms of post-structural, postmodern and pragmatic perspectives is that their positions commit (different versions of) what Bhaskar coined as, an epistemic fallacy. That is to say, what we say about the world (our ontological commitments) are determined by how we come to know the world (our epistemological commitments) and it is argued that this type of philosophical thinking is an error or fallacy.

For Fleetwood (2005: 30) this means that 'what exists' disappears from analysis as it is collapsed into 'knowledge of what exists'. This collapsing of epistemology into ontology is common place within organisational studies and within the social sciences generally, according to Fleetwood (2005), and can lead not only to confused research but misguided explanation of phenomena. To progress our understanding of creativity it will be argued that an alternative meta-theory is required.

4.2 Critical realism

Research consistent with a critical realist philosophy of science is having an increasing impact in other social sciences yet remains relatively under-used within psychology[37] and specifically within the field of creativity. Those that conduct research informed through critical realism may refer to creativity (e.g. Mutch 1996) but there seems little active research. Fleetwood (2005) recently called for ontological clarity in organisational studies because as he puts it, ontology matters. He claims ontology provides the basis for what we believe we can know about the world, the way we believe we can investigate it, the kinds of theories we think can be constructed out of it and the policy stances we are prepared to take *(2005:1).* He argues that in organisational studies the ontological underpinnings of theory and research are, at best

[37] With some notable exceptions (e.g. Moll 2004; Nellhaus 2004).

ambiguous and at worst lead to inappropriate presuppositions about the nature of social reality. So far, my exploration of creativity definitions and theories within psychological theory seem consistent with his analysis.

Critical realism is 'critical' as it provides a critique of both the so-called naïve realism of empiricism and of the strong social constructionist positions of some post-structural and postmodern thinkers; and it is 'realist' in the sense that it maintains, at its core, the idea that things can exist outside our recognition of them. For Cruickshank (2002) the principles of critical realism can be summarised as:

I. A critical philosophical approach, accepting meta-physical realism over idealism.
II. An anti-foundational approach to knowledge as it accepts that our knowledge is conceptually mediated.
III. This concept dependency means it is necessary to critically examine the concepts we use to understand the world.
IV. Asking second order questions about first order knowledge practises gives us the ability to ask transcendental questions about the possibilities of science.
V. Answers are sought through engaging in an internal critique of the existing terms of reference, rather than through foundational principles.
VI. Critical realism considers itself fallible, it is a meta-theory not a prescription.

(Ibid: 56-57)

Cruickshank therefore sees critical realism as 'a meta-theory that informs the construction of specific theories in the course of social research' and regards the most important of the assumptions within the meta-theory as ontological. This means, he argues, researchers need to be explicit about their ontology *(Ibid: 49)*.

Critical realism contains a belief in the possibility of naturalism which Bhaskar (1998a) argues is the position that there can be a unity of method between the natural and social sciences. His argument is for a 'qualified anti-positivist naturalism based on an essentially realist view of science' *(Ibid: 3)*. He explores the history of naturalism and claims it is typified by notions of Humean law and then claims anti-naturalism is typified by hermeneutical thinking and the philosophies of Kant, Aristotle, and Herder.

He argues that the ontological, epistemological and relational considerations of these philosophies all place limits on the possibility of naturalism and these therefore affect methods in social sciences. The alternative is to ask whether we can make assumptions about the objects of social enquiry before we have detailed knowledge of them. Thus he argues the question of defining a form of naturalism is 'what properties do societies and people possess that might make them possible objects of knowledge for us?' In using this dialectical reasoning he built a philosophy of science that is both naturalist, realist and critical of other philosophies. This philosophy takes the indubitable starting points of the competing philosophies and uses them as a starting point of agreement upon which to build his analysis, done in the form of these questions. It is therefore accepted that critical realism is seen as fallible and always as a work in progress that could be wrong. In this sense it avoids accusations of philosophical imperialism, or claiming to be the one way to conduct satisfactory science.

Margaret Archer (1998) provides a useful summary of the way Bhaskar answered these questions. She notes that moving from realism in the natural sciences to realism in the social sciences is not straight forward. There are many philosophical claims that state the ontology of the natural world is different to that of the physical world, thus defying any unity of method. She argues that realism denies that the observation + correlations = explanation + prediction *(Ibid: 190)* in both the natural and social sciences. Realism replaces this with the belief that *generative mechanisms* and *causal powers*[38] offer a more appropriate ontology of the natural and social world. This in turn means that the essence of phenomena can, and should, determine the method of study, hence the unity of belief in the possibility of naturalism and the pluralism of methodological enquiry.

She argues a naturalist and realist method is possible because of some basic principles accepted by critical realists. These being (i) the intransitive nature of world, (things exist independent of our knowledge of them); (ii) these things are trans-factual in that they are relatively enduring (across space and time); (iii) they have powers that determine what they are (despite outcome variability in open-systems); and (iv) that reality is stratified into the *real*, *actual* and *empirical*. These distinctions identified in the nature of reality mark a significant point of departure between critical realism and other philosophical positions.

To say that something is *real* is to refer to all the things that exist in the world. This however does not mean that things that are real can also be considered *actual*. Language use provides a

[38] Both of these terms will be defined further in the next section.

good example of these distinctions. When I speak, my ability to speak becomes observable and audible and therefore enters the *empirical* level of reality Archer refers to. When I am not speaking, my ability to speak is still actual, but it is actual at the level of neuroscience and psychology, it is therefore an actual but un-used ability at the level of the empirical. This level is not capable of being referred to if one's ontological commitments are exhausted at the level of empirical, as per scientism. The potential for human beings to learn language represents the final category as this is a *real* potential which the majority of new born infants contain, but at birth the ability to use language has not reached the level of the actual or the empirical[39]. Archer argues that other philosophies collapse these ontological categories into just one category: what is observable, and that this is an error which has become known as the epistemic fallacy.

4.3 Critical realist meta-theory

As an alternative to the mistaken positions of scientism and postmodernism, it is argued that critical realism offers researchers ontological commitments that are consistent with both the natural and social world. With appropriate and consistent ontology it is argued appropriate epistemology, method and theory can follow. This does not, of course, mean that they will necessarily follow. In creativity research, with the complexity of the subject matter and the deep rooted contradictions within existing theory, such consistent meta-theory may at best help resolve, and at worst help clarify, the issues faced. Certainly without such clarity of meta-theory the task is made difficult and perhaps impossible.

The next step in achieving clarity is to explore the ontological commitments of critical realism and identify which of them may be helpful in our quest to understand creativity. The rest of this section will therefore explore the notions of causal powers, stratification, emergence and agency–structure relations. Having established the efficacy of these commitments the analysis will turn towards the ex-nihilo problem and consider whether or not realist concepts of absence and negation can help with solving the paradox that exists within creativity studies. It will be argued that Bhaskar's notion of absence and negation, whilst an advance on positivism, contains an assumption inconsistent with critical realist meta-theory, specifically the notion of causal powers and potentials. An attempt at resolving this inconsistency will be presented and a solution will subsequently be offered to the ex-nihilo paradox which plagues creativity studies.

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[39] I recognise that language use involves an interaction with social structures in order to develop and that this cannot be considered inevitable. So something *real* will not necessarily become *actual* or *empirical.* This however does not preclude the example from being an appropriate one.

4.3.1 Causal powers

Bhaskar (1998b) discusses the concept of causal powers and argues that, from the assumption of essentialism, it can be 'granted that mechanisms and structures can be said to be real, we can provide an interpretation of causal laws from the pattern of events and *a fortiori* of the rationale of experimental activity...for the real basis of these generative mechanisms lies in the independence of the generative mechanisms from the events they generate... and they endure when not acting' *(Ibid: 34).* This last point is crucial, that a thing can have properties and generative mechanisms that can endure when they are not acting. A motor car has the powers and properties to propel humans even when it is not used; gunpowder has the power to explode when it isn't doing so. This ontological commitment gives the scientist the means to theorise about the existence of properties and powers without having seen them act and offers a basis for suggesting that reality can be considered stratified into the previously described levels of the *real,* the *actual* and the *empirical.*

The causal powers of something like gunpowder exist as a result of its necessary internal relations, its essential qualities. These qualities are dependant upon external relations for them to be exercised but these external relations are contingent – on the presence of a spark for gunpowder to explode for example. This means that an explanation isn't sufficient if we only seek to observe co-variation of events and take this as evidence of causality, as this would only deal with the contingent external relations of things. Sayer (1992: 107) argues 'merely knowing A causes B is not enough, we want to know the continuous process by which A causes B'. This for Bhaskar (1998a: 21) means 'that whilst the positivist (Humean) tradition is correct to stress there are causal laws, generalities at work.....it errs in the reduction of these laws to empirical regularities'. In other words relying solely on the co-variation of observed events to explain causality is an example of the epistemic fallacy and contains an ontological error; it assumes the world has the same properties as the way we come to know the world.

The notion of causal powers gives creativity researchers the beginnings of an ontological toolkit to consider the nature of creative potential. The recognition that a potential can exist un-exercised and still be considered real is a significant difference between critical realism and other philosophies of science. It gives us the ability, as was demonstrated with the acquisition of language, to theorise creative potential at the level of the *real*, the *real* and *actual*, and finally the *real, actual* and *empirical.* This stratification of reality, means we can consider theories of creative potential and its modes of operation as just a potential, as an acquired but un-exercised skill, through to being a skill exercised but not available to empirical observation. It is therefore possible with this ontological tool kit to consider

unrecognised and un-actualised creativity whilst being consistent with the philosophy of science used to inform research.

4.3.2 Stratification and emergence

With the ontological commitments of causal powers and stratified reality it is possible to generate emergent theories of reality. Collier (1994) argues that 'whilst recognizing that the more complex aspects of reality presuppose the less complex; they also have features which are irreducible' *(Ibid: 110).* Critical realism contains a notion of reality that has layers to it, such as the physical, biological, psychological and sociological. Each of these layers is seen to be rooted in the previous layer but not reducible to it. Mechanisms of one level, say the biological, will be emergent from lower levels (the chemical and physical) but will also contain mechanisms that only operate at that level and cannot be said to follow the same laws as lower levels. For example, an animal will have chemical processes within it that follow the law of osmosis but the animal's behaviour will not be based on such a law, or collection of laws. Each of these levels of reality is stratified further into what can be regarded as *real*, *actual* and *empirical.*

For Collier 'Each level is autonomous in the sense of having its own irreducible set of mechanisms, and distinct sciences using different concepts and discovering different laws will be required to study them' *(Ibid: 116).* The higher up the strata one goes, the more open a system becomes. He argues it may be possible to close a physical or chemical system but that it becomes more difficult at the level of biology upwards *(Ibid: 121).* This does not mean the natural and physical sciences operate on different rules, rather that it is easier to observe a causal mechanism in operation at a lower level in the strata by closing the system it operates in and thereby deducing what properties or powers the mechanism may have. It also means that reality isn't *reduced* to what is observable and it also doesn't conflate reality into existing *merely* as social constructions.

These advances in ontology enable several of the debates in creativity studies to be viewed through a new lens. In chapter three, the nature of cross-contextual creativity and the idea that domains of mind exist and determine, to an extent, our creative potential was discussed. It was argued that the theory may have been reductionist in nature and as such no strong conclusions could actually be drawn. These ontological commitments enable the debate to be re-examined and to consider how potentials develop and interact on each level of reality, from the biological to the sociological. The blocks to creativity at each level may then become easier to identify; having clarity of meta-theory can disperse the fog that blinds existing research.

As Stenberg & Lubart (1999) observed, existing creativity definitions either reduce creativity to its component parts and render it trivial, or each instance becomes a unique construction, confirmed only by recognition and therefore explanation remains elusive. Causal powers and notions of stratification enable researchers to examine both the component parts and the unique emergent contributions whilst still claiming to be studying creativity. It can recognise that there may be generalities at work and that they may not express themselves in each instance of creative behaviour. Crucial to understanding this is a clear notion of these generative mechanisms that exist in both the person and the context and all the ways in which they can inter-relate. This means explicit conceptions about the nature of agency-structure relations are also required for meta-theoretical clarity.

4.3.3 Agency-Structure relations

Bhaskar asks (1998a) what properties do societies possess that might make them possible objects of knowledge for us? He builds on his ontological commitments and suggests that the ontological properties of objects make possible an epistemological understanding or knowledge. That is to say, for example, it is because sticks are solid that we can pick them up and throw them, gaining knowledge of their state and use. He adds that societies are irreducible to people and that social forms are a necessary precondition for human action. The pre-existence of these social forms establishes their ability to be autonomously studied as possible objects of scientific investigation and it is their causal powers that establish their reality.

This ability for society to exist beyond our knowledge is described through a transformational model of structure and agency. He argues that the purpose of social science is to highlight these transformational relationships and to understand that agents may be unaware of the relations and that they can be both context specific and dependant, and yet relatively enduring across contexts. He therefore argues that societies are complex real objects and that they are irreducible to people *(Ibid: 25-27)*.

It is in the nature of structure and agency relations that Archer (2000) makes her major contribution to the realist project. In essence, she claims that the realist account starts in the privacy of human exchanges with the natural world, rather than in the public domain of social relations. What the human self encounters in the social domain is not simply *societies conversation* as a flat discursive medium, as she argues the cultural realm is deeply stratified containing emergent ideational properties and structural properties and that these do not need to be discursive at all, in order for their powers to be causally efficacious. She claims the human agent develops stratified personal powers which emerge sequentially *(Ibid: 116-117)*.

She bases her argument on the assumption that *practise*, that is physical embodied experience in the natural and social worlds, is primary in terms of our access to it and that all emergent properties of the self are themselves based upon this primacy. This she argues is also a refusal to accord primacy to language and that the emergence of self consciousness is dependant upon it. She claims the embodied practises of human beings in the world are more important than their social relations for the emergence of selfhood, (defined as a continuous sense of self), and for the development of its properties and powers, (defined in part as reflexivity), which exist only in potential for every neonate *(Ibid: 121)*.

What this gives to the study of creativity is the ability to recognise that social structures may be emergent from agents' practices, but once in existence they have causal properties irreducible to agents' practices. Moreover, these causal properties are open to investigation. Whilst creativity exists within a given context, and that context can be considered unique, this does not necessarily mean creativity lacks properties that can endure across contexts. What is key to understanding these relations is to have clear and consistent ontological commitments towards agency-structure relations. This enables the unobstructed uncovering of the causal properties of both agents and structures, and how they interact. Combined with the concepts of stratification, emergence, and causal powers, this notion of agency-structure relations enables research into the areas of research interest and an understanding of the domain specific domain general debate, rather than providing constraints.

In summary then, critical realism offers a unique understanding of the relationship between agency and structure which does not conflate agency and structure, or collapse one into the other as some forms of social construction do. It recognises that each exists independently of, and through the other, and that each can be seen as *real* in a stratified and emergent social world. Moreover, both consist of causal powers which may or may not be actualised at any given moment. These concepts in themselves offer an ontological toolkit to creativity research that has been unavailable through the various forms of scientism and postmodernism. However, creativity definitions still contain within them a paradox that the toolkit does not comment upon – that of *ex nihilo* creation.

Because critical realist philosophers have not generally concerned themselves directly with *ex nihilo* creation in the development of critical realism they have not really engaged with the problems this form of creation introduces. However, by exploring the concepts of absence and negation, and using the ontological commitments described above, it is possible to suggest a potential solution to this paradox. This can then be extended to research on creativity, where it

permits a definition of creativity without the paradox, and offers an explanation of human creativity consistent with the ontology of the social world advocated through critical realism.

4.3.4 Absence, negation and solving the ex nihilo paradox

The concept of absence in meta-physics has a difficult history, yet it can be argued that the concept drives much scientific investigation. We are not aware of other life in the universe, knowledge of it is absent to us, yet we can theorise about and research its possibility. Air travel and space travel were absent for large amounts of human history; science and invention have led, in part, to its presence. For critical realism, a dialectical philosophy, absence is central to the development of any philosophical position. Bhaskar and Norrie (1998: 562) claim absence is a fundamental property of presence; we can explain the positive only in relation to what it lacks - what it is not.

Andrew Collier (1998) regards this as 'the power of negative thinking' and uses a number of examples in the history of science to justify the concept of absence, noting that it has already been theorised by other philosophers (including Sartre, Heidegger and Hegel). Such an ontological presupposition is not problematic to most of us, as it is part and parcel of our everyday experience. We tacitly acknowledge that the absence of something does not mean its existence is negated, or that the possibility of its existence is diminished. Philosophies of science which advocate methods that account only for the positive or actual levels of the world therefore do damage to a world which we all experience, where absence and negation is taken for granted.

Bhaskar's (1993) work *Dialectic: The Pulse Of Freedom* is perhaps one of his least known works but contains important arguments for the construction of a dialectical critical realist meta-theory. In it, he demonstrates the dialectical reasoning employed within critical realism, and through it, he argues how the social sciences can become emancipatory in their nature. But it also contains reference to the *ex nihilo* paradox. In order to explore the solution to the *ex nihilo* paradox it is first necessary to explore the detail of the arguments he makes about absence and negation in order to show that the solution is consistent with critical realist meta-theory, I ask therefore for patience as this will require extended description of this text.

He argues that one of the key themes of the book is to 're-vindicate negativity' and argues for 'the importance of the concepts *real negation, transformative negation* and *radical negation'*. He claims the most basic of these is *real negation* defining it as real determinate absence or non-being. It can mean not in the conscious, death, demise or non-existence. He claims it also contains within it a notion of the hidden, the empty, the outside, lack and need. He then

defines absences in a material way, spaces between sentences, someone not being here and so on[40] *(Ibid: 5).* It is these concepts of *real negation* and *absence* that are important to the *ex nihilo* paradox and as such will be the focus of this analysis.

Real negation is most simply defined as the presence of an absence, for example a stapler missing from the bench. He argues that 'determinate non-being within a determinate locale, which is existentially intransitive, whether the absence is positively identified or identifiable, is also possible' *(Ibid: 38).* That is to say, the stapler can exist in a state where it is not on the bench and this can occur outside of our knowledge of it, and this may or may not become knowable through our investigations. We could enter a room never before entered, in which a stapler has previously consistently sat on a desk but is currently hidden under the desk having been moved by cleaners. For Bhaskar these negations may be 'infinitely large or as small as is (naturally) possible; they may be hidden, unobservable, aided or not, deep or superficial, real but not actual' *(Ibid: 39).* He claims the basis of this argument can be extended to less determinate kinds (such as quantum particles, or ideas). Finally, he claims the region maybe totally empty, constituting a specific level void or may just not contain the chosen object.

Having described his concept of *real negation* he then argues that absence is also possible to sustain and includes things such as the past or the outside *(Ibid: 39).* In discussing the link between the two he argues that *real negation* can be argued to be the more basic category than *transformative negation* (change). He offers four means to describe the process of real negation or absenting. The first he calls *simple absence,* including nothing.[41] The second is called simple *absenting through divergent distanciation,* taken to mean a thing being somewhere else in space-time, me in another room, for example. He also claims this can be through substantial or non-substantial process (by experience, changing, cause). Next, he claims this can be as *process in product* as in the 'existential constitution of the nature of absence by its geo-history' or our knowledge of the possibility of absence through our witnessing the absence of things that were previously present, such as a cliff that falls into the sea. Finally, he sees negation in the sense of a *product in process* in the iterable and non-iterable exercise of its causal powers *(Ibid: 39).*

He then poses the question of what is being negated in real negation and argues that it is straightforward to explain things that have already existed. However, when a thing has never previously existed, or is altogether absent from being, as in never anywhere in existence, other meta-theories have struggled. He maintains that we can refer to non-being, that non-being

[40] It is important to recognise that this is not the same as the concept of nothing which implies the absence of all things.
[41] Also note that whilst he introduces the term nothing, no definition of the term is offered at this stage.

exists, and that non-being has ontological priority over being. In other words, things not in existence are a feature of our universe and they enable and give ontological status to things that do. He understands these claims may seem paradoxical but it foregrounds the contingency (epistemological and ontological) of existential, not least, human existential questions. In other words our knowledge of the world presupposes a world and our questions of the existence of the things not present are merely contingent questions, they do not mean that what is not present is not real. *(Ibid: 39-40).*

He then gives examples of his argument based upon the Pierre is/is not in the café developed by Sartre. He claims that when he isn't there it is a *real negation*; he really is not in the café. Real negativity understood as absence (or process of) is vital to dialectic and crucial to a dialectic of change or development according to Bhaskar. He claims that absenting absences is the essential feature of dialectical freedom, in other words taking what isn't and turning it into what is. He then claims the absence may be trans-factual or actual (potential or actualised) in process or static, internally related or isolated *(Ibid: 42).* That is to say that a things causal power can remain un-actualised and therefore absent and that the existence of some powers may prevent the actualisation of other powers which would otherwise be capable of coming into being. For example the presence of oxygen in the air enables oxygen breathing animals to actualise their causal powers but its absence means that those causal powers are denied the opportunity to be exercised.

He claims dialectical comment can isolate an absence in the theory/practise relationship, indicating inconsistency or irrelevance and advising against its dialectical universality. In other words we can take a theory, examine its relationship to practise, examine all the things this presupposes and ask whether any of these are impossible or inconsistent with the nature of reality the theory presupposes. We can check for internal/external consistency of the theory-practise relationship. In creativity studies we have already shown that some definitions and theories are not consistent in this sense. The ontological presuppositions they contain are inconsistent with the nature of the social world and with their own theories and definitions. He argues that in critical realism the category of absence is critical to moving from the *real* to a notion of agency and that dialectics depend upon the positive identification and transformative elimination of absences, or in essence the process of absenting absence; hence the ontological priority of absence. *(Ibid: 43)*

He uses the example of human agency to demonstrate the argument as he claims in any world where human agency is to be possible (a pre-condition of human agency), the human agent must be able to bring about a state of affairs which would otherwise not have prevailed. He argues that not admitting that absence is possible is contradictory, and claims that if we only

say what is absent by reference to what we know to be present, we only know what is absent from our own viewpoint so we deny the existence of a world beyond our knowledge *(Ibid: 44)* (hence a further critique of the hermeneutic tradition is offered).

Having established Bhaskar's concepts of absence and negation we can now turn to the *ex nihilo* problem and examine the claims made of this by Bhaskar. I will argue that whilst his concepts of absence and negation are consistent with critical realism, his deviation[42] in the text to discuss the concept of *ex nihilo* leaves an unsustainable argument. I will also argue that the source of the error lies in the argument presented being inconsistent with its own presuppositions. An alternative solution to *ex nihilo* will be presented which is consistent with the other assumptions of critical realism and as such may offer creativity researchers a new way of dealing with the age old problem of defining creativity.

Although the *ex nihilo* problem was not part of the central issues developed through the philosophy of critical realism, Bhaskar has written about the concept of *ex nihilo* and included reference to it within his own definition of creativity (Bhaskar 2002: 107)[43]. Regardless of intent, the concept of *ex nihilo* he presents is, arguably, flawed (a) because he fails to fully substantiate his conception of absolute nothing and (b) because the notion of *ex nihilo* presented seems inconsistent with other critical realist ontological commitments such as the notions of potentiality and causality.

For Bhaskar, the concept of *ex nihilo* emerges from his concept of absolute nothing and this follows from his logic on absence and negation. For ease of critique I will offer a detailed exegesis of this complex argument before comment:

> A world without voids would be a world in which nothing could move or occur, as it presupposes an impossible conjunction of atomicity, rigidity and immediacy. That is to say, in effect, non-atomicity (and hence constitutive absence) and/or action-at-a-distance (and hence across voids) are transcendentally necessary features of an intelligible material object world. Transmission of energy, like information in inter-personal communication, is

[42] His claims on *ex nihilo* seem to be presented as an aside to his main arguments, they do not seem to reveal a commitment either way to any of the conclusions he details. Collier (1998: 691) notices this as well when he details the inconsistent nature of the argument and claims 'I take it he (Roy) actually rejects autogenesis too, and favours a pluralistic account of the origin of the universe as we know it'.

[43] Again his writings do not entirely reveal his thoughts on the subject. He claims 'every human act mirrors the creation of the world' and then when speaking of human creativity says 'the genesis of the new, the emergence of something which has never existed there before, an emergence which is always a transcendence of what pre-existed it, and always out of absence, always de novo (which itself must always contain an element of ex nihilo)' (Ibid: 107).

> possible only by (substantial or non-substantial) travel across, at the very least, specific gaps. *(Ibid: 46)*

Whilst there is nothing inherently wrong with the argument thus far, what he argues next turns on his interpretation of the terms 'specific gaps' and 'voids', which are poorly defined.

> This being granted takes me to my fourth argument against the ontological dominance of the positive. If a totally positive material object world – a packed world without absences – is impossible there is no *a priori* reason to exclude the opposite – namely a total void, literally nothing[44] *(Ibid: 46).*

Whilst he is correct to say this does not preclude the concept of absolute nothing, this should not be extended to mean that absolute nothing actually exists. For this to be sustained we would have to identify what the essential features of absolute nothing are. Such conceptions, whilst seemingly logically consistent, are difficult to find.

> By transcendental argument, non-being is constitutionally essential to being. Non-being is a condition of possibility of being. No non-being is a sufficient condition of impossibility of being. But there is no logical incoherence in totally non-being. Dialectical arguments establish the conditions of possibility (dr') of the conditions of impossibility (dc') of some initially established result or posit. Now, employing a strategy of dialectical detachment from our initial premise – positive existence – in the meta critical end game, we can argue that not only is a total void possible but if there was a unique beginning to everything it could only be from nothing by an act of radical *auto genesis*. So that if there was an originating absolute, nothing would be its schema or form, constituted at the moment of initiation by the spontaneous disposition to become something other than itself. Similarly if there was a complete end to everything it would involve a collapse to actualised nothingness, absolutely nothing. In sum complete positivity is impossible but sheer indeterminate negativity is not. *(Ibid: 46-47)*

Whilst there is no logical incoherence in Bhaskar's terms as he defines them, there may well be when one applies them to the world that critical realist meta-theory presupposes. Here we see Bhaskar's argument move from the concept of absence and negation, and he links to this the term void, which he defines in terms of these absences or negations. This is not problematic in terms of his logic; he is claiming that absences exist and that without them the

[44] The term nothing still lacks a definition other than the opposite of absolute positive.

universe as we know it couldn't exist. The next step of this argument is to claim that, as voids can exist, it can be dialectically reasoned that absolute nothing can also. To claim that a void is an absence is sustainable through his logic, to argue that this can also lead to absolute nothing, is not sufficiently developed.

He claims that *if* we can conceive of the absolute positive then this, through dialectical argument, enables us to sustain the concept of total void or literally absolute nothing and that *if* this is accepted and *if* one accepts an absolute beginning, then this could only come about through auto-genesis or *ex nihilo* creation, creation from nothing. He does not however state whether he agrees entirely with this position; it seems to stand as an aside in the text from his main argument. He certainly emphasises that the conclusions are only true *if* there was an originating absolute, without commenting on whether he thinks there was. He makes several assumptions here which require explanation and none is offered. Firstly, he assumes that an absolute beginning is possible[45]. Secondly, he does not define absolute nothing other than in relation to absolute positive existence but this logic in itself does not constitute evidence that the argument for its opposite is a feature of the world. Finally, there is an alternative argument regarding the relationship of the absence, negation and creation which is consistent with critical realism.

Bhaskar successfully argues that non-being is possible in the sense of space-time. (I am not there, I am here), but this does not lead inexorably to the concept of absolute non-being. To argue this would collapse two additional concepts into his concept of absence. First, he is trying to sustain a concept of absolute absence and second he is invoking the concept of *ex nihilo* from the premise that there was an absolute beginning to everything.

The alternative to this argument involves examining the role possibility plays in the *auto genesis* he describes. Critical realism accepts that possibilities, in the form of potentials and causal powers exist and can be seen as *real*, *actual* and *empirical*. They can be real and not yet actualised; actualised but not yet observable; and all three together. To argue for auto-genesis is also to argue that the *potential* for the creation of something did not pre-exist it. Referring to the Big Bang as the beginning of all time, space and matter, also means that one is inferring it was the beginning of all potentials as well. And here we meet the paradox which, simply put, means that the *potential* for the universe to come into existence did not pre-exist the actual universe. Such argument has two difficulties: (i) there is no empirical basis for it[46] and (ii) this contradicts the realist interpretation of the natural and social world which is predicated

[45] And I will argue that this is actually inconsistent with the philosophy of critical realism.
[46] The concept of the Big Bang is still just that and empirical evidence to irrefutably prove it occurred is not available. There are also alternative theories. Even if it did occur it does not preclude the next point.

upon the notion of potentials existing un-actualised and therefore pre-existing their coming into being.

Even within Bhaskar's own argument there is an implicit assumption that one of the necessary conditions for the universe to have come into being from nothing must have included the possibility for a universe to come into being from absolute nothing. Let us accept one of his premises, that the universe came from absolute nothing and ask: 'What are the necessary conditions for this to occur?' It can only be concluded that the potential for a universe to come into being from absolute nothing must have existed. If this potential is accepted, the potential would, by definition, have to pre-exist the coming into being of the universe. In other words the potential of that creation must have pre-existed its actualisation. As such, to say there was nothing before the universe would in fact be to say that there was no actualised universe, merely the possibility or potential for an actualised universe to come into being from absolute nothing. As critical realism regards potentials as *real* the concept of absolute nothing collapses as does this argument. Generalising, then, the possibility of the creation of a new entity must pre-exist its actualisation, whether from absolute nothing or otherwise.

It can therefore be argued that *ex-nihilo* creation (in the sense described by Bhaskar, Boden and Perkins) is not sustainable within a critical realist meta-theory. Indeed to be consistent with the ontological pre-suppositions of critical realism one must reject the *ex-nihilo* and accept that *potentials* and *possibilities* pre-exist the actual. With this argument it is possible to reject a definition of creativity as dependent on *ex-nihilo* creation and if we pursue this logic, we might say that a necessary, but not sufficient condition, for a creative act to occur must include the *potential* for it to occur. Creativity therefore becomes not so much production of novelty but discovery of possibility[47]. This is an extremely important finding. On the basis of this, in Chapter Five, a new and more nuanced definition of creativity, consistent with the idea of creativity as the discovery of possibility, will be proposed[48].

Before moving onto methods of enquiry appropriate for investigating creativity, I will first clarify why I think this might be a mistaken position for Bhaskar to have taken. It is clear within Bhaskar's work that he is attempting to establish the category of absence and the category of negative on the ontological level, in opposition to the previous philosophies which claim only the positive should be claimed to exist. The *ex nihilo* argument seems to be a

[47] More accurately - the discovery of potentials (actualised, as in the discovery of gravity or un-actualised as in the discovery of flight for humans). In making this ontological claim the argument collides with another within philosophy and science regarding the nature of possible and impossible potentials. As this research is about creativity this is not the place to explore such arguments. I refer the reader to Barrow (1998) for a discussion on the nature of impossibility.

[48] This is not the place to debate further whether such ontological claims are sustainable; this is perhaps best left to the field of theology and philosophy. The key point to make here is that the concept of *ex nihilo* is inconsistent with critical realist meta-theory.

sidestep of this main argument. He establishes the concepts of potentials and of negatives existing but in attempting to establish the concept of absolute nothing, it can be argued that he moves beyond the explanatory power of the argument. Indeed the purpose of this work was to establish the dialectics of critical realism not to establish the conditions of auto-genesis. Later in the work, when exploring these arguments in more depth and in relation to other issues, he notes that he is not primarily concerned with nothing or nothingness, but with real determinate non-being. At the base of this, is the concept of absence and that he can argue that positive without negative is impossible *(Ibid: 239)*. Given this admittance and that his arguments appear to stand up without the underlying principle of absolute void and *ex nihilo* creation, it is possible to sustain not only an alternative argument for the conditions of creation, but also one consistent with the basic premises of critical realism.

We have seen, then, that critical realism offers creativity researchers a unique set of ontological presuppositions for conducting research and theorising into the nature of creativity. It offers the notion of causal powers and potentials for dealing with the problem of creative potential and the *ex nihilo* problem; it offers a notion of absence and negation to enable an understanding of the un-actualised and unrecognised creative; and it offers notions of structure-agency relations, emergence and stratification which may help the researcher deal with the complexity of the phenomenon as it exists within the individual and social structures around them.

4.4 Ontology and the causal-explanatory method

Having explored the meta-theoretical presuppositions of existing conceptual framework and offered an alternative meta-theory with which to conduct research, the only question remaining is, given that the epistemological commitments of both positivism and postmodernism have been shown to be clumsy when dealing with the social world, how can we now conduct research into creativity?

Whilst critical realism may have been described as coming with a (metaphorical) ontological toolkit it does not contain simplistic or mechanical methods of enquiry to be applied to all objects of enquiry. So conducting research consistent with critical realism is not as straight forward as with other well established methodologies. Whilst there is research consistent with critical realist meta-theory, and whilst a variety of methods have been employed under the guise of critical realism, a certain degree of debate still exists (e.g. Ackroyd 2004; Brereton 2004; Harrison & Easton 2004; Mingers 2004; Naess 2004; Rogers 2004; Lawson 1998). For Andrew Sayer (1992) it is the topic under investigation that determines the methodology. In other words, the object of enquiry determines the method and techniques of enquiry. For

example, if one is interested in the reaction of a certain chemical with other chemicals, then he would suggest that the experimental method may be appropriate but if one is investigating the meaning of work for individuals within a given context then more qualitative or hermeneutic methods would be appropriate.

For critical realism, the objective of empirical research is to develop what has become known as a *causal explanatory* account of the object of investigation. This, it is argued, is consistent with the ontological presuppositions of the philosophy of science advocated. Sayer (1992) advances perhaps the best account of what the method looks like. He emphasises the importance of abstraction to explanation and notes that, in order for an abstraction to be practically adequate it 'must abstract from particular conditions, excluding those which have no particular effect, in order to focus on those that do'. In line with a critical realist understanding of the nature of the social world and causality he argues that abstractions should be able to distinguish between the *internal* and *external* relations of the object of investigation *(Ibid: 89).*

He calls these the *substantial* relations of connection and the *formal* relations. In essence, this argument is that a causal power will have a relatively enduring essence that will prevail even when producing no effect and that the effects of the power when exercised within the *contingent* relations of a context enable us to abstract its existence. Any account of the object of investigation must attempt to distinguish between these *essential* and *contingent* relations. He argues that doing this involves asking some seemingly simple questions to which the answers are often complex, such as: 'What does this object presuppose?', 'Can it exist on its own?', 'If not, what else must be present?' *(Ibid: 91).*

In doing this he claims we can then seek to understand causality and goes on to describe causality as the causal powers of object relations and their ways of acting. So a causal claim is not about regularities but a claim as to what an object is like and what it can do *(Ibid: 105).* He claims care must be taken to prevent creating a tautology when investigating causality but that this 'can be avoided by establishing empirically what it is about the substance which gives it its power' *(Ibid: 106).* Critical realism therefore isn't a licence to offer explanation in a purely idealist sense. Empirical investigation must be used to substantiate a claim and yet reality is also not reduced to this empirical reality. This means his conclusions about the role of theory in science are to understand, explain and accurately abstract the internal relations of a thing whilst seeking confirmation of these relations and the contingent relations through empirical investigation – although it is important not to reduce empirical investigation to testing hypotheses via regression or some other statistical technique. The immediate impact of

this is to seriously damage scientism and the statistical techniques it sponsors.

For my purposes, there are two necessary steps before research can be conducted. The first is a process of reflection on existing research and theories in order to establish what kind of object is being researched and what can currently be said about its causal mechanisms. A stage of this process has already been achieved via a critique of existing meta-theory, theories and definitions. The next step will begin in Chapter Five when an augmented conceptual framework of creativity will be presented and its presuppositions made available for empirical investigation.

The second step is to be explicit about all the ontological commitments concerning the nature of the object so that the methods of enquiry can be chosen. Whilst Chapter Five will deal with the ontological commitments used to explain creativity, the rest of this chapter will detail the ontology of my chosen context, that of the organisation. The work of Fleetwood (2004) perhaps offers the most suitable description of the ontological presuppositions held by researchers within the organisational context. What follows is a brief description of those presuppositions.

The first assumption of the critical realist ontology of organisations for Fleetwood (2004) is that whilst entities can exist independently of our identification of them, there is no unmediated access to the world. Therefore we must accept these entities are conceptually mediated when we come to explain them *(Ibid: 30).* Fleetwood further separates reality into four distinct domains: the *materially real*, the *ideally real*, the *socially real* and the *artefactually real. Materially real* refers to such things as mountains, weather, space, planets, the sun; they have a physical (or material) existence. The material may over lap with other forms of reality and he cites the example of the weather being affected by human action, but the important defining point of this category is that these objects or entities exist independently of our identification of them.

Ideally real refers to conceptual entities and these may or may not have a referent. The important distinction for Fleetwood is to accept that the *ideally real* can make a difference in the world and that they can contingently effect other real entities and therefore are considered real. They may be socially constructed but they are not *merely* socially constructed. *Artefactually real* refers to entities which are the synthesis of the materially, ideally and socially real. They can be interpreted in a variety of ways but they are not without limits[49].

[49] He uses the violin as an example. It exists via the other three categories and has causal powers to enable the playing of music. He claims it can also be used as a bat but there are limits to its efficacy as such.

The final form is the *socially* real which he distinguishes as being social because it is dependant on human activity for its existence. This is separate from *ideally real* entities in that socially real entities may be the subject of discourse but have an extra-discursive dimension and so are irreducible to discourse. He argues that separating the real into these domains enables critical realists to describe the world in ways that not only discourage, for example, conflating the world with discourse, or conflating the real with the observed, but also encourage the creation of a rich explanation *(Ibid: 31-35).*

Conclusion

It is proposed that the existing meta-theory underpinning creativity studies contains within it ontological presuppositions that are inconsistent, unsustainable and mistaken. These assumptions were at the heart of the problems of the existing conceptual framework, vis-à-vis defining creativity and understanding key issues (creative potential, un-actualised and unrecognised creativity and the ability to conduct cross-contextual creativity research). The philosophy of critical realism has been presented as an alternative to existing meta-theory and it has been shown that the ontological assumptions it contains enable creativity researchers to conceive of the problematic issues without being in contradiction with the meta-theory that informs their conception.

Importantly, it has been shown that the commitments to causal powers, stratification, emergence and agency-structure relations give researchers the ability to conceive of creative potential, unrecognised creativity and un-actualised creativity in ways not previously possible. But perhaps the most useful contribution of this chapter and arguably the most significant is the resolution it offers to the *ex nihilo* debate which has plagued those who have studied creativity for the one hundred and fifty years since the term became widely used to describe human behaviour. An augmented conceptual framework can now be presented and it will be shown that critical realism has enabled the *ex nihilo* paradox, which has haunted creativity definitions, not only to be re-found but arguably rendered to the history books.

5. An augmented conceptual framework for creativity studies

'Before you build a better mousetrap, it helps to know if there are any mice out there'
(Mortimer B. Zuckerman c.f. Williams & Yang 1999)

Introduction

Having established that the meta-theory of critical realism is appropriate to the study of creativity and that it can solve the issues creativity researchers have faced, a kind of 'critical realist augmented conceptual framework of creativity studies' can be developed. The problems faced by creativity researchers will be summarised and the difficulties to overcome identified before a definition of creativity is proposed. It will be argued that *this augmented definition* is both consistent with the meta-theory of critical realism and offers a solution to the many issues identified within the conventional definition and the existing conceptual framework. Importantly, the definition provides a solution to the *ex nihilo* problem that has plagued creativity research and therefore enables creativity to be conceived of, outside of its recognition. This, it will be argued, enables creativity researchers to theorise about creative potential, unrecognised creativity and un-actualised creativity whilst being consistent with the ontological commitments contained within the definition.

Such a position enables theory to offer *further* explanation of fields already considered partially open to investigation (such as creative potential) as well as opening up new fields for investigation in the from of unrecognised and un-actualised creativity. An augmented model of creativity will be presented to facilitate theory building and the resolutions it offers to the issues described in chapters two, three and four will be developed. It will be concluded that empirical research into creative potential, unrecognised creativity and un-actualised creativity via cross-contextual exploration can now continue unabated by meta-theoretical difficulties and subsequent theoretical development is finally possible.

5.1 From problems to an augmented definition of creativity

In Chapters Two and Three the problems identified were shown to lead to difficulties defining and understanding creativity. The review of the difficulties within the conventional definition of creativity showed a struggle to resolve what Boden (2004) and Perkins (1994) classed as the *ex nihilo* paradox of novelty and creation. It was shown that the lack of a resolution to the paradox had meant definitions of creativity had to rely, in some way, on references to the production of novelty that is *valuable*, useful, appropriate and *recognised* by some group or other. This solution was seen to develop initially as a temporary fix to the criterion problem

creativity researchers faced but subsequently became the standard and most popular form of definition in research, in many cases without reflection.

The consequences of this conventional definition were shown to be wide ranging. Creativity became reliant on the judgment of others for its existence, whether through recognition or the judgement of value in a creative product. By implicitly and explicitly requiring such reliance on others, it was shown that the conventional definition was incompatible with aspects of creativity this research is interested in, particularly unrecognised and un-actualised creativity. Worse, whilst it was shown that most creativity researchers are interested in the concept of creative potential, the conventional definition and the meta-theoretical presuppositions researchers held had prevented a deep understanding of creative potential from emerging.

These issues combined to cause difficulties answering many of the research questions posed by the field and debates raged, whilst resolution seemed distant. Researchers have struggled to understand how creativity can exist in more than one context and whether it is a domain specific or domain general ability and potential. Debate continues over whether the everyday creativity we all have, to a greater or lesser extent, can be considered distinct from or continuous with, the type of creativity that leads to historical contributions. This in particular has called into question the validity of some research because, if creativity *is* a distinct skill, then all the conclusions drawn from the study of so called genius level performers become superfluous to understanding other forms of creativity. Finally, it was highlighted that the relationship of discovery to creativity has also troubled researchers.

In Chapter Four, it was argued that far from being able to resolve these issues through more research and theory building, the existing conceptual framework had some insurmountable problems contained within its meta-theory. Specifically, the ontological commitments of both scientism and postmodernism (as well as research informed through a curious amalgamation of the two) were incompatible with solving these problems. It was shown that the ontological commitments within their meta-theory meant researchers were guilty of committing the epistemic fallacy - of either reducing reality only to that which can be observed, or assuming reality can be reduced to our conceptions of it. It was shown that this caused difficulties with conceptions of causality, sustainable notions of potential, and the ability to explain emergence. In committing this fallacy, the existing conceptual framework does not simply state that creativity must be recognised, but that the act of recognition constitutes creativity.

Researchers within the existing framework were shown to display some disquietude with this fact and indeed may even dispute it, if it were stated so boldly, and in such strong social

constructionist terms – although it is rarely stated with this clarity. The problem with this reliance on recognition in the conventional definition, is that this *does* commit the epistemic fallacy and is therefore (a) conceptually flawed and (b) inconsistent with the way the world is. This introduced ontological ambiguity into the paradigm. Some of the claims suggested creativity is merely a social construct, whilst others suggest it has an existence independent of the act of recognition and judgement. The problem is that whilst they 'feel' this may be a problem, they do not have the meta-theory to deal with it. Chapter Four explored the roots of these ontological problems more thoroughly and proposed that the meta-theoretical presuppositions of critical realism solve these issues for researchers. Research consistent with such presuppositions may also help resolve the issues creativity researchers face.

In order for this research to proceed, an *augmented definition* of creativity consistent with the meta-theory of critical realism will be presented and its justification and presuppositions explained. An *augmented model* of creativity will also follow which will detail and explain the conditions of possibility of the relationship between creative potential and creative performance and it will demonstrate how unrecognised and un-actualised creativity can occur. Then, the existing conceptual framework will be returned to briefly and some augmentation of the domain specific, domain general debate will occur in order for the possibility of cross-contextual research into creativity to be established.

5.1.1 Creativity defined

Utilising the meta-theoretical insights developed above, and drawing upon some of the ideas captured in existing literature on creativity, I offer the following definitions, which as you will see, build sequentially to an overall definition.

> Creativity is the human potential, power or capacity to make discoveries about the pre-existing potentials and powers of the world;[50] and to bring those discoveries into being through the *actualising of a potential* or the *revealing of a power,* or combinations of both.

This definition, it will be argued, underpins *all* forms of creativity and as such can refer to creativity as a personal event as well as an historical contribution. It is therefore possible and consistent with this definition to recognise Boden's (2004: 43) contribution to the

[50] I would actually prefer the term universe as this represents the full range of causal powers open to discovery. I chose to use the word *world* for purely rhetorical reasons as when the term *universe* was inserted it sounded too dramatic, especially within the context of the sentence ('powers of the universe'!).

understanding of creativity and accept that personal and historical creativity have different outcomes by adding:

> These discoveries can actualise *a potential* and/or *reveal a power* for the first time in human history, or merely *actualise* and/or *reveal it* for the first time to the individual or individuals concerned.

This recognises the importance society places on historical contributions but does not reduce creativity to such contributions. Finally, it is possible to include the role that personal and societal recognition plays (Amabile 1996; Csikszentmihalyi 1996) in the uptake of creativity and therefore one further addition can be:

> These discoveries may (or may not) be recognised by the individual and subsequently communicated. If recognised and communicated the discoveries may (or may not) gain individual, group, organisational, community or global recognition and that this process of recognition can be influenced by many factors including[51] economic, political and power processes.

This identifies that personal recognition of creativity does not always occur, when for example some discoveries are made yet their importance remains hidden to those who discover them. If they are personally recognised and communicated, the discovery can go on to gain wider recognition (or not) and this process of recognition begins with communication *and* can be influenced by many factors. Having offered a definition of creativity I will now offer a justification for this definition by examining each of the concepts in turn and demonstrating how this utilises the meta-theory of critical realism and revealing the solution it offers to the problems faced within the existing conceptual framework.

5.1.2 Creativity is the human potential, power, or capacity...

Critical realism advocates that causality refers to the power or capacity[52] of a thing to act; to its essential properties. This power can have both internal relations (its essential properties), and external contingent relations with other causal powers operating on and around it. This conception of causality means it can be argued that reality can be stratified into the levels of the *real,*[53] the *actual* and *the empirical.* With these ontological commitments we can make

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[51] But not limited to.

[52] I use capacity to refer to a human power as often in critical realist literature when referring to human powers the term human capacity is used inter-changeably.

[53] I use Bhaskar's original term for these levels but recognise Lawson's point that using the word deep is more descriptive as the term *real* may infer that the actual and empirical are in some sense not real.

claims about creativity not previously available to researchers. We can now recognise that creativity is a human power or capacity. That is to say, it is the power or capacity of human beings to be creative that enables creativity to occur. One can recognise the enabling and constraining effects society has on these human powers and capacities but creativity ought not to be reduced merely to the existence of those enabling and constraining effects.

This definition also recognises that the power or capacity for creativity can exist in potential. That is to say at birth we may have the potential to be creative and this potential exists at the level of the *real,* but in order for the potential to actualise, exposure to other powers is necessary (food, shelter, education and so on). The uncovering of these human powers and capacities for creativity, how they operate and interact, what is crucial to their development and how they can best actualise becomes the goal of the *person* and *process* approaches to creativity identified in chapter two. This means we can theorise about the human powers for creativity at a number of levels:

(i) As an un-actualised power or capacity and therefore a *potential* power or capacity.
(ii) As an actualised but not necessarily exercised power or capacity.
(iii) As an actualised and exercised power or capacity but not necessarily resulting in a discovery.
(iv) As an actualised and exercised power or capacity that results in a discovery.[54]

Levels (i) and (ii) refer to the development of *creative potential* into an actual skill, ability or in these terms a power or *capacity*[55]. Level (iii) recognises that even if this capacity is in operation, countervailing powers in the environment and self can prevent the capacity resulting in a discovery and level (iv) refers to the act of discovery. The role of theory then is, at least in part, to explain each of these levels and offer understanding and explanation of the interactions between them.

5.1.3...to make discoveries about the pre-existing potentials and powers...

The conventional definition of creativity relies upon the production of valued novelty. Epstein's (1991) comments on novelty serve as a reminder that it is conceptually impossible

[54] Level (iv) is available to researchers using other meta-theory, the power of this model is to open up on levels (i)-(iii) to theoretical understanding.
[55]Using the example of language in the last chapter, level (i) is akin to our potential power or capacity to acquire language at birth. It is a potential not yet actualised as we are not born with the capacity to speak at birth. Level two refers to the actualised but unused power or capacity, or having acquired language but not necessarily using it.

to develop criteria for the novel act. Creativity researchers tried to overcome this by claiming that creative novelty is in fact *valued* novelty and in doing so they collapse the creative act into the recognition of this value - for what can be creative other than that valued and how can that value be judged other than by a group of relevant people? A definition of creativity predicated upon a novel act is therefore problematic. In addition, within this concept of novelty a paradox exists as creative novelty presupposes a moment of creation from nothing.

It can be argued that *ex nihilo* creation is inconsistent with the ontological assumptions of critical realism as all creation must, in some way, be pre-existed by the potential for its creation. Therefore creation is not from 'nothing' but from something; in this case, from a potential. As a potential is considered *real* within critical realist meta-theory this means that creation or creating becomes the *actualising of potentials*. Away from natural creation and applied to human creativity it implies we also cannot create *ex nihilo* (in the biblical sense) but we can *discover* the potentials that pre-exist their coming into being and actualise them.

Revisiting the *ex nihilo* problem and using the meta-theory of critical realism provides the second fundamental feature of human creativity: that it must be considered an *act of discovery*. This provides a sustainable resolution to the *ex nihilo* paradox and circumvents the need to reduce creativity to the recognition of the value of the creative act. It also enables us to consider that creativity involves the discovery of un-actualised powers or powers that are not yet in existence[56] (therefore powers in potential), as well as actualised ones. Hence the recognition in the definition that discovery can take two forms, the discovery of un-actualised *potentials* and the revealing of *powers*. This gives us the ability to classify several types of discovery:

(i) The discovery of a potential (a power in its pre-existing potential state).
(ii) The discovery of an actualised but not necessarily fully exercised power.
(iii) The discovery of an actualised and exercised power, the effects of which remain countervailed.
(iv) The discovery of an actualised and exercised power of which the effects were previously oblique to human understanding.

In terms of the originally presented definition (i) refers to the *actualising of a potential*; (ii), (iii) and (iv) refer to the *revealing of a power*. This list should only be seen as a sample

[56] The motor car has powers but its powers existed only as the *potential* for its powers to exist prior to its discovery and bringing into being. Hence it was necessary to discover an un-actualised power or in this case I class this as the discovery of potential.

starting point, I have no doubt there are many more categories possible but these enable a distinction between the various types of discovery that creativity can refer to. In particular, it distinguishes between the *discovery of a potential* (as yet un-actualised) and the *revealing of a (actualised) power.*

Some examples may help with distinguishing these: (I) refers to the discovery of things like the motor car, its power remaining un-actualised (and therefore a potential) until the combination of other powers enabled it to be discovered (e.g. the discovery of the powers of petrol to combust, strength of steel and so on). Hence, this is an example of the discovery and *actualising of a potential* ***and*** bringing into being as an exercised power. (II) refers to the ability to discover a hidden power such as the ability of metal to conduct electricity. Its power can be viewed as actualised but only exercised when it comes into contact with an electrical current. Its actualised power therefore required *revealing.* (IV) refers to such things as the ability to explain gravity. The power of gravity is actualised and its effects are physically apparent but its essential properties were oblique to the understanding of humans for large parts of history. Hence, we needed to *reveal the power* of gravity to human understanding.

These categories enable theory development to take into account the different forms of discovery and subsequently the potentially different human capacities or powers required in order for them to be made. Just as the object of enquiry can determine the method of investigation, these objects of discovery will have properties that may require very different human capacities for them to be discovered. For example, discovering a potential for something that is yet to exist might require the capacity for imagination; whereas understanding the power of gravity may require the capacity for abstraction and reasoned argument[57]. This also presupposes that environments contain powers that enable or constrain certain types of creativity. In the case of discovering that metal conducts electricity, it is first necessary for the environment to have an actualised power of electricity within it (amongst many other things) in order for the discovery to be possible. As shown in chapter two there is a history in the existing conceptual framework of considering discovery part of creativity (Goswami 1996; Richards 1996; Koestler 1964). However, the conventional definition with its focus on recognised production of novelty renders the role of discovery to a bit-part and also means it is conceptually inconsistent with such a definition.

When we speak of 'creative scientists' we are in fact referring to the great discoveries they made; Einstein's discovery of relativity theory, Newton's discovery of the law of gravity and

[57] I make no claim as to how similar or not these two types of thought process are, I merely highlight that human beings have many types of capacity.

so on. Yet, when describing these events we often slip between the terms creativity and discovery. As Tweney (1996) argued the problem is that the relationship between creativity and discovery, when referring to scientific creativity, is in fact an oxymoron. He claimed that surely a scientist is discovering reality rather than creating it, but then concedes that this debate is where the modernist and postmodern views collide. My definition solves the problem and enables discovery to take its rightful place at the heart of creativity.

5.1.4...and to bring those discoveries into being through the actualising of a potential or the revealing of a power...

The next step in defining creativity is to account for the *bringing into being* of the discovery. I've already discussed the distinction between *actualising a potential* and *revealing a power* (discovery of a yet to exist actualised potential or discovering the power of something already existing), the following gives some examples of the consequence of this. Whilst it is consistent to regard discovery in thought as creativity, (a thought is *ideally* real), creativity also involves bringing discoveries in thought into many types of being. Fleetwood's (2005) modes of reality provide a framework for conceiving of this:

(i) A discovery can be brought into material existence.
(ii) A discovery can be brought into ideal existence.
(iii) A discovery can be brought into artefactual existence.
(iv) A discovery can be brought into social existence.
(v) A discovery can be brought into multiple existences.

There is no need to provide endless examples of these as they are self evident. A simple one demonstrates the rule, the first time humans discovered the potential that water has to exist only as a gas[58] meant we *actualised the potential* of water to become gas at the *material* level of existence, and the idea of being able to do this also became real at the level of the *ideal;* if communicated to others it gained *social existence* and so on. This model equally applies to scientific discovery, invention, art, embodied movement and so on, many of which exist on multiple levels. The role of theory becomes one of explaining the processes by which these discoveries are made and then brought into being.

5.1.5...for the first time in human history...or for the first time to the individual...

By separating the recognition of creativity from the end result we have rid creativity of the reliance on social recognition and the subsequent ontological collapse this entails. We can also

[58] At one hundred degrees Centigrade and one atmosphere of pressure.

claim that a thing can exist for the first time in human history without having to qualify how we come to know that it does. Knowing that something is of historical importance does indeed rely upon agreement amongst relevant groups of people but it is important to separate that process of agreement from the thing that is being agreed upon. Without doing this, the thing being agreed upon collapses into the agreement; in this case creativity was previously collapsed into its recognition.

When considering personal and historical creativity there is no difference in *type* of discovery. Something discovered for the first time oneself, which had previously been discovered by others, is still considered creativity through this definition as is something that no one else has discovered. There might however be a difference in the level of difficulty of the relative discoveries; indeed there is a history of considering this within the existing conceptual framework (e.g. Gruber 1989). Discovering the potential of water to turn to steam is a creative discovery for a six-year-old when they boil the kettle for the first time, but is different in the degree of difficulty to the task a scientist faces in attempting to discover the nature of quantum particles. This difference in degree of difficulty has previously led researchers to claim that historical and personal creativity are therefore different *types* of creativity without having the necessary ontological toolkit to explain exactly *how* they are different and *how* they might be the same.

This augmented definition gives researchers the ability to theorise about the nature of discovery through explaining what human powers and capacities are in use, what the nature of the discovery is, and what enabling and constraining powers are in action in the environment. One might suggest that the personal discovery of steam by a six-year-old involves a simple discovery as there are many enabling powers available to aid the discovery and few of the human powers for creativity need to be in operation (e.g. the ability to fill a kettle and flick a switch). The discovery of gravity likewise could once have been considered a difficult discovery. Armed with this framework, theory can seek to understand these conditions in both organisations and individuals alike.

5.1.6 ...these discoveries may (or may not) be recognised by the individual...

A brief nod to the effect that some discoveries have been made and brought into existence yet their significance has been misunderstood by their discoverers. Contemporary folklore suggests that Edison thought the telephone would only be of limited use, and inventors at IBM did not think there was much of a market for computers. By recognising this in defining creativity it enables researchers to explore what it is in the relationship between discoverer, discovered and society that prevent the powers of a thing from being recognised as important.

5.1.7 ... or gain....recognition....

This final aspect of the definition enables exploration of just how recognition occurs. It takes into account that recognition is a personal and social process and moves from individual, to group, organisational, community and eventually global[59]. The study of this recognition as it relates to creativity is both important to our understanding of creativity and yet distinct from it. Creativity is not reliant on this recognition but the power of creativity to affect change requires recognition. It can involve many processes not necessarily directly involved with creativity itself such as psychological conditions, communication skills and power and political influences (e.g. Adarves-Yorno *et al* 2006; Fonseca 2002; Latour 1999). The complexity of creativity (and its subsequent recognition) is apparent but previous attempts to deal with the complexity were hampered by the existing conceptual framework and its conventional definition. Having established an augmented definition of creativity it is now also possible to augment the conceptual framework of creativity studies.

5.2 An augmented model of creativity

Whilst ultimately, creativity research would benefit from a full-blown model of the causes and processes involved in creative activity, such a model is beyond the scope of this thesis. The aims of this thesis are, therefore, more limited and are essentially related to meta-theoretical ground clearing or under-labouring. I have sought to enhance the existing conceptual framework utilising the meta-theory of critical realism so that the categories of research interest can be sustained and subsequently deepened, and to provide the beginnings of a framework with which to research them properly in future.

5.2.1 Distinct or a continuum

This definition of creativity implicitly sees it as a continuum. The discovery and bringing into being of pre-existing potentials and powers underpins both personal and historical creativity. Where creativity can be regarded as distinct is in the nature and level of difficulty involved in attaining and using the creative powers required to make certain forms of discovery. I previously argued that difficulty may be likely to increase as one moves from personal to historical creativity but this cannot be assumed *a priori*. For example, a historical contribution may be enabled by environmental powers in operation (say within a research institute) whereby the final step to break a paradigm (in the sense Kuhn 1975 describes) may be relatively simple, as the ground work for the paradigm shift may have already been laid by

[59] These aren't meant to be exhaustive categories of social structure and it is noted they require development but that this development is not the focus of this research.

others. It may be equally likely that an individual makes a discovery that required the learning of complex creativity powers and capacities, the learning of which was hindered by environmental conditions, and yet for all intents and purposes the discovery was 'ahead of its time' and therefore remains unrecognised. Understanding which causal powers for creativity are required for each type of creative discovery becomes the goal of research interested in the questions surrounding what is domain and context specific about creativity and what is domain and context general.

5.2.2 Creative potential

Through this definition, creative potential becomes a fundamental and integral part of creativity. The human power for creativity exists first as a potential, then as an actualised power or capacity and finally as an exercised power or capacity. These powers, capacities and the potential for them can interact with the environment and so even though a potential can be actualised and exercised, a discovery may be prevented. The powers and capacities for creativity (and the potential to obtain them) have a continuous existence which is not assumed to disappear in the act of discovery. This potential and power for creativity, consistent with Archer's insights can also have a stratified existence. Our biological creative potentials, that which Marx would term our species being, can be argued to underpin our psychological, social psychological and social potentials.

A brief exploration of what existing research claims these potentials might be suggests that at the psychological level, potential could include all the causal powers for motivation (e.g. Eisenberger & Shanock 2003; Abra 1995), intelligence (e.g. Sternberg & Lubart 1996; Gardner 1993), cognitive style (e.g. Mudd 1996), and potentially, all the other psychological factors so far identified to be related to creativity. Importantly, we can now explore this level of creativity without having to infer a psychology from studying recognised creative acts, as we can explore the category of the *powers or capacities for discovery* and have confidence that this is part of the process of creativity.

At the social psychological level we would be interested in the role of group processes, identity, attitudes and the impact of social structures on the powers for motivation and creativity. Human powers do not develop in isolation from the social world; they are dependant upon the structures and mechanisms of the social world for their activation and development, as well as for their deactivation or loss. The powers identified at the level of the psychological are also powers which are inseparable from the social and, especially when it comes to powers such as language and problem solving, these powers are dependant upon the social for their activation.

With this model, creative potential moves away from being a static thing that we either have or do not have. It is an evolving set of powers which interact to create new powers and potentials. They can increase through practise and decrease through neglect. Importantly, our biological inheritance cannot be argued to directly determine our ability, if one is consistent with critical realism.

At the level of the sociological, the social and economic influences on the powers and capacities for creativity can be explored. It is at this level we can analyse societal trends and influences which permeate and either enable or constrain our creative potential (e.g. Linstead & Mullarkey 2003; Maruyama 2003; Niu & Sternberg 2003; Makowski & Ostroy 2001; Witt 2001). Again, we can refer to the existence of the social outside of human awareness of it, and explore its influence on creative powers, their actualisation or otherwise. At this level we can also explore the political and power factors involved in the development of creative potential, in terms of access to resources, level of education, type of work being conducted and the societal norms that pre-exist the creative act.

5.2.3 Un-actualised creativity

Within this definition and using this model one can conceive of four types of un-actualised creativity:

(i) Un-actualised powers of creativity (creative potential).
(ii) Actualised but not exercised creative powers.
(iii) Actualised and exercised creative powers that don't result in a discovery.
(iv) Actualised and exercised creative powers that result in a discovery, but one that is *not* communicated.

The first three of these categories refer to un-actualised creativity in the sense described by critical realism. They can also be argued to represent our creative potential (both un-actualised potentials and actualised powers) and so un-actualised creativity and creative potential are overlapping categories. The fourth category exists as an example of produced creativity, deliberately or otherwise not communicated, and therefore stands as an exemplar of un-actualised creativity[60]. It was previously shown that there is a theoretical tradition that would assume such a category and there empirical evidence could be used to imply the existence of

[60] It can also be said that all these categories can exist outside of the knowledge of others and therefore unrecognised. It is the ontology of critical realism that enables these categories to be clearly separated and the interactions between them uncovered.

un-actualised creativity. Yet the meta-theory of the existing conceptual framework struggle to enable research and explanation of these categories. Such a state of affairs is not surprising given the current definitions, which implicitly deny the existence of creativity in an un-produced sense.

These categories can refer to the many types of un-actualised creativity that might be at play. (i) refers to our creative powers remaining latent (perhaps through poor education); (ii) refers to our creative powers remaining dormant (perhaps through lack of motivation); (iii) refers to our creative powers being constrained by environmental factors (lack of knowledge, tools or resources) and (iv) refers to produced creativity in the *ideal* sense that Fleetwood describes, we have discovered something conceptually, but not communicated. This is considered both actualised creativity at the level of the *ideal* (as the idea exists and is personally recognised but we choose (or are forced) not to communicate it) and un-actualised as it might refer to a *material* or *artefactual* possibility that requires further action to bring it into being and this is yet to happen.[61]

5.2.4 Unrecognised creativity

Such a category instantly caused difficulty within the *conventional definition* and explanations of creativity consequently suffered. Yet, creativity researchers were aware that this category had a basis in what they were studying. There are numerous examples within the literature of scientists who have produced something which is initially ignored, only later to be regarded as highly creative (e.g. Koestler). Strictly speaking, the work of Van Gogh was not considered creative in his time and neither was the work of Mendel. This definition however provides a clear understanding of just how this category can be considered as creativity.

The category of unrecognised exists when a creative discovery occurs and remains unrecognised. Interestingly, a great deal of complexity can emerge in this category. For example, an individual might not recognise the importance of a creative discovery but a colleague does so the discovery is, for a moment, individually unrecognised but socially recognised. This recognition may also occur at a group level but not organisational (by a team but not by the company), at organisational but not community (within a university but not a journal), and by a community but not yet by the world (such as the importance given to new philosophy of science)[62].

[61] In chapter two I gave an example of this in organisations, such as an idea that may lead to redundancies.
[62] Latour's work on Actor Network Theory is an example of theory which attempts to understand the mechanisms that lead to one idea gaining global acceptance whilst another does not.

In this model, the movement of creative discovery from the unrecognised to the recognised has a complexity to it that requires theoretical explanation and this definition enables the exploration of that complexity. Arguably this is perhaps the most interesting area for future research. With a definition of creativity which no longer conflates creativity to production of novelty, and the acceptance that creativity exists at multiple levels of the social world, the concept of un-recognised creativity can finally be explored. It is also possible for creative potential and actualised but unused powers to remain unrecognised: how many of us have been told -'he or she won't amount to much'.

5.2.5 Recognised creativity

This research is not primarily concerned with recognised creativity and so I offer only a brief account of where recognition fits into the model proposed. It is possible to recognise creative potential and also to recognise all the constraining and enabling mechanisms that might be at work to turn that creative potential into creative performance. At this stage, I do not want to muddy the conceptual waters by exploring these possibilities. Indeed, empirical research may be some way off providing enough material for an explanation to emerge at this stage. Within this research then, I am solely interested in how, once a creative discovery has been made or the potential for that discovery is recognised by an individual, it remains unrecognised by others, especially in the workplace.

5.3 An augmented framework for creativity research

Let us now turn to the remaining barriers to this research from within the existing conceptual framework, namely the debate over whether creativity can be regarded as domain general or domain specific. Clarifying this will inform the exploration and comparison of creativity in and out of work, and support the empirical work to follow.

As seen in Chapter Three, the essence of the debate in the existing conceptual framework has been an inability to establish whether creativity can be seen to be a general ability applicable in all contexts and also a universal feature of humans, or whether it is a specific ability, determined to an extent by the task and context within which creativity is occurring. Researchers in this camp also seem to assume that it is an ability available only to the few[63], although there is no *a priori* reason for this assumption to follow from this position.

What the augmented definition and model of creativity provide to this debate is the ontological clarity lacking within the existing conceptual framework. Whilst theory cannot

[63] Previously referred to as genius level creativity.

emerge solely from the analysis conducted so far, the ontological conditions which theory is required to explain have been further clarified. The augmented model provides assistance in understanding the domain general, domain specific nature of creativity by suggesting that creativity is both a general ability and a specific skill. The model therefore provides the conditions of possibility for theory to ask exactly what it is about creativity that is general and what *has* to be considered specific.

It has been demonstrated that the discovery of pre-existing potentials underpins all forms of creativity from the discoveries of a six-year-old to the novels and music of artists. What is different between these types of creativity, according to this model, is the number and type of powers and capacities in operation for the discovery to take place. The unique combination of causal powers (both individual and societal) in any one instant of creativity can be regarded as the basis for explaining the specific nature of creativity. Critical realist meta-theory enables consideration of the distinct interactions of causal powers as well as discovery of any general powers in operation. Thus the existence of causal powers which are both enabling and constraining provide the first element of an augmented framework to inform domain general or domain specific creativity theory.

The second element is to ensure that theory takes the stratified nature of the world into account. The act of discovery presupposes, and is entirely dependant on, something to discover and it also suggests that what is discovered was initially hidden. Marx famously claimed there would be no need for science if the essence of a thing was self-evident. Here then, we have one of the fundamental prerequisites for the possibility of human creativity: the nature of the universe needs to be open to discovery but that what is to be discovered may be hidden. This openness to discovery is predicated upon the concepts of stratification and emergence as it recognises that a thing to be discovered can exist at the level of the *real*, the *actual* and the *empirical* and on the several planes of existence identified by Collier (1994).

We can start with the assumption that the natural and social world (herein the world) contains within it the potential for discoveries that are currently (i) un-actualised, they only exist in potential or (ii) unrecognised, they are actualised but are operating independently of human knowledge or understanding and so on[64]. Examples of this are the discovery of a previously unknown species or, if one wishes to use examples currently considered as eminent creativity, Einstein's discovery of relativity theory. Understanding and explaining the domain specific domain general qualities of creativity requires an understanding of the stratified nature of the

[64] Detailed in the last section.

social world. Such an ontological commitment was absent from previous research and this model absences that absence.

The human powers and capacities for creativity are also regarded as having a stratified existence. Firstly, it is possible for the mind to have a tacit understanding of the nature of things through what Archer (2000) argues is the primacy of practise. That is to say, through our very being we have an embodied relationship with the world around us, which both precedes our language development and has a primacy over it. This means that it becomes possible to have a tacit understanding about the nature of something through embodied practise in the world, both prior to and also in the absence of the skills necessary to communicate such an understanding. Furthermore, it is possible to argue that these understandings can be regarded as creative if they also fit the criteria of creativity already developed.

In this instance, the existence of creativity is prior to social recognition and can even be prior to self recognition. That is to say, their discovery may be tacit, embodied knowledge of an internal property of the world that is not yet recognised as a discovery. An example of such a discovery could be an athlete who might train in a way that no other athlete has done previously because they intuitively understand it brings world-class performance; the reason they do so can also remain non-verbal or pre-verbal and the properties of the method can exist actualised but not recognised. It is a discovery but it exists prior to its recognition and codification.

This ability to conceive of the agent as stratified is important to acknowledge and means the previous example is able to demonstrate the existence of a new field of enquiry for creativity research. The example means we can assume that 'front line' workers in an organisation who are not tasked with management responsibility may have made tacit discoveries which remain hidden to their own recognition and therefore also the organisation. Revealing these tacit discoveries can become another goal of research and theory development through this framework. Especially, what it is about the nature of organisations that prevents them recognising their own discoveries.

It is also through this stratification that we can provide understanding of the possibility of features which can be considered general to all creative acts. Things such as our biological makeup; the nature of the social world to be open to discovery; our cognitive capacities in potential and the ability of our powers to be activated and de-activated can all be explored as universal features of human creativity. When asking what is specific about each instance of

creativity we can explore task difficulty and the unique combination of causal powers that come together to lead to creativity in all its forms.

It is possible that the environment can also have enabling and constraining features that influence the type of skills necessary to make a discovery. This position allows for the fact that creativity is only performed in practise by the few but could be a feature of the many. It enables us to explore how we can better understand the situational and organisational factors that will enable practitioners (workers, managers, teachers, trade unionists, organisational consultants and so on) to get to grips with the potential we all hold and help its development. After all, what is the purpose of human resource management, and especially processes of 'empowerment' if not to uncover and develop the latent powers and potentials we all hold.

Creativity, then, is context specific, in the sense that each case of actualised creativity will have its own unique set of events related to it. It is also context general in that the powers and properties that lead to the actualisation of creativity are in their potential state, a general feature of humanity. They can exist un-actualised and are for all human beings arguably based upon the same physical, biological, psychological, social and cultural powers[65]. The question for policy makers is how best to organise these factors to enable the human powers and capacities for creativity in more of the population.

In an organisational context, market conditions, current scientific knowledge, organisational structure, inventions may all have an impact. It is the power of people in organisations to understand these possibilities, examine them and explore new possibilities that, in part, guides the process of innovation. The definition recognises that creativity can occur in different contexts but allows for the unique skills and knowledge required to operate in one organisational context, as well as the general skills that can transfer across contexts such as the ability to discover previously unknown possibilities. This is important as most Human Resource Management practises are predicated upon these general skills (or powers). Why would a company hire someone from another organisation if their creativity skills were domain specific? It is done on the basis that their powers are capable of transcending domains.

[65] To a greater or lesser extent. The study of individual differences reveals that we may be differentially endowed with these powers and potentials, the extent and effect of this differential is open to debate. Certainly, until the study of individual differences grasps the meta-theoretical clarity advocated here I would suggest that we err on the side of caution when assuming that we are not all born equal. I refer the reader to the debate between Gould 1996 and Herrnstein & Murray 1996 on the (mis)measure of man for an example of the difficulty we face in understanding our human potentials and powers.

Conclusion

This chapter develops an augmented definition and model of creativity that enables research into concepts previously considered problematic, if not impossible. This model for understanding creative potential, unrecognised creativity and un-actualised creativity has been developed and the ontological commitments explained. The ability to conduct research across contexts has been established through identifying the meta-theoretical commitments in such research. It has been argued that the meta-theoretical clarity gained from augmenting the existing conceptual framework has both identified new aims for existing theory and opened up new domains for explanation.

Rarely, in the history of creativity studies, has discovery been placed at the heart of creativity as an essential feature of its definition. In a recent review of how to improve creativity there was barely, if any, explicit mention of the role of discovery (Nickerson 1999). As we saw in chapter two, however, there is a history of considering discovery as part of creativity, but just how they are related seemed problematic. Indeed, there is a separate field of research, not developed within this thesis, relating to the nature of discovery[66]. This chapter has argued that discovery should be considered not just a part of creativity, but as the essential feature of it.

This is an extremely important finding. On the basis of this a new, and more nuanced, definition of creativity, consistent with the idea of creativity as the discovery of possibility, is proposed. This removes the need to define creativity through its recognition, and by separating the definition of creativity from the end result of creativity, the subsequent ontological collapse this entails is avoided.

Whilst this research did not set out to provide support for critical realism, or its ability to facilitate understanding of complex social entities such as organisations, it can be argued that this research may have added to the weight of evidence that suggests the ontological commitments of critical realism facilitates social science in ways not previously possible. Research conducted from within the broadly defined scientism and postmodern meta-theories are hamstrung in their attempts to give the study of creativity in organisations sufficient clarity. Utilising critical realism has both helped resolve the meta-theoretical issues present within the existing conceptual framework of creativity studies, and provided an ontology that enabled the exploration of creativity in organisations without meta-theoretical confusion and contradiction. This research therefore adds to the many calls for scientists to utilise critical realist meta-theory in the conducting of their research.

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[66] This thesis was primarily about creativity. Theories of creativity suggest you can be creative in acts of discovery and that the great acts of discovery are considered creative but they do not limit creativity to discovery. Before exploring discovery, it was important to first make the argument that *all* creativity is based on discovery.

Through careful examination of the relationship between the powers and capacities for creativity, and the nature of the 'discovered', creativity theory can begin to emerge from the ontological bases suggested. As Sternberg (1999) notes, the most important aim of all creativity research is to develop a definition of creativity. The augmented definition, and model, can offer direction to future research and facilitate a deeper understanding of creativity. Importantly this research has shown that developing a taxonomy of what can be considered part of creative potential, is essential to the development of a taxonomy of creativity.

6. Research Techniques

'How do I judge whether it is so?'
(Ludwig Wittgenstein)

Introduction

This chapter aims to specify (i) the objective of the empirical research into the subject of creativity in organisations; and (ii) the method and research techniques consistent both with the critical realist meta-theory developed in previous chapters, and appropriate to the subject. In carrying out the second aim, it builds on the critical realist meta-theory developed in Chapters Four and Five. Having offered an augmented definition and model of creativity and resolved some of the issues within the existing conceptual framework it is now possible to explore aspects of organisational creativity with more sophistication. Specifically, this augmented definition and model *of* creativity enables the exploration of creative potential, unrecognised creativity and un-actualised creativity without being distracted by the incorrect notion that creativity is constructed in the very act of recognition by an appropriate group of people. As was demonstrated in Chapter Five, this opens the possibility of there being a richer research environment to explore than previously possible, and for new fields to be examined.

This augmented definition and model of creativity has enabled the generation of four overarching questions about the nature of creativity in organisations:

- To what extent can creativity exist unrecognised in an organisation?
- To what extent can creativity exist un-actualised in an organisation?
- What do employees believe happens to their creative potential in the organisation?
- How similar is creativity in-work and out-of-work? This is, of course, derived from the questions of cross-contextual creativity.

The overarching questions generate the following primary research questions:

- What does an employee believe happens to their creative potential within the organisation?
- Have the employees ever felt their actual creativity has remained unrecognised in their organisation?
- Have they had a creative idea but not shared it with their colleagues in the organisation?

- How do they view the relationship between their in-work and out-of-work creativity?

It also generates the following secondary research questions:

- Do they believe their creative potential is fully enabled within work or is it constrained in some way?
- Is their creative potential enabled or constrained outside of the organisation?
- If enabled outside, do they believe this can be used and transferred into the organisation? Could the organisation benefit if it was enabled?
- Has their creativity remained unrecognised outside of the organisation?
- What is the relationship between these contexts?
- What can be said of any common *causal mechanisms* at work in the organisation that have enabling or constraining effects on creative potential?
- What can be said of the causal mechanisms that lead to creativity remaining unrecognised or un-actualised?

6.1 Design

The first step in the design of this research was to consider the causal-explanatory method outlined in chapter four and assess the methodological requirements of the augmented definition and model of creativity. As noted in Chapter Four, the object of investigation determines the method of investigation rather than adherence to any strict doctrine prescribed by a philosophy of science or a set of epistemological rules. It is now possible to briefly consider the requirements of this research and the methods that can be employed.

Firstly when seeking to understand the relationship between creative potential and creative performance, they can be said to exist:

(i) As un-actualised potentials.
(ii) As actualised but not necessarily exercised capacities.
(iii) As actualised and exercised capacities but not necessarily resulting in a discoveries.
(iv) As actualised and exercised capacities that result in discoveries.

We saw that we can consider unrecognised creativity in all of the categories above and as such one can attempt to identify evidence of their existence in organisations. One can refer to various types of discovery and seek to uncover the relationship between the causal powers for

creativity in people, the enabling and constraining powers of the organisation and the object of discovery which can include:

(v) The discovery of an un-actualised potential.
(vi) The discovery of an actualised but not necessarily exercised power.
(vii) The discovery of an actualised and exercised power, the effects of which remain countervailed.
(viii) The discovery of an actualised and exercised power, of which the effects were previously oblique to human understanding.

We can also consider the types of existence such discoveries can enter into, such as:

(ix) A discovery can be brought into material existence.
(x) A discovery can be brought into ideal existence.
(xi) A discovery can be brought into artefactual existence.
(xii) A discovery can be brought into social existence.
(xiii) A discovery can be brought into multiple existences.

Finally we can consider if creativity might exist un-actualised in organisations as:

(xiv) Un-actualised powers of creativity (creative potential).
(xv) Actualised but not exercised creative powers.
(xvi) Actualised and exercised creative powers that do not result in a discovery.
(xvii) Actualised and exercised creative powers that result in a discovery that is not communicated.

6.1.1 Use of observation, interview and case-study

Due to the difficulties investigating complex, inherently qualitative, multi-dimensional phenomena like unrecognised and un-actualised creativity and creativity potential, qualitative methods are probably the only ones subtle enough for the task. Participant and non-participant observation, as well as semi-structured interviews are appropriate for this research and provide the benefits of intensive methods when exploring research questions as Sayer (1992) identifies. Because this thesis required a significant degree of theoretical and meta-theoretical analysis before empirical research could even be considered, time for the empirical research was limited. I decided, therefore, to opt for semi-structured interviews and observation. These techniques are consistent with the principles of critical realism.

Three organisations were available for this research to take place and each provided a unique environment for uncovering the nature of the objects of investigation. The interviews can each be considered an individual case study for understanding creativity in and out of organisations. They, along with the observation, occurred within the context of these three organisations and as such it may also be considered that the three organisations also serve as three general case studies into creativity in organisations. However, the primary objective of the research was to uncover evidence or otherwise in relation to the augmented definition and model *of* creativity, hence the results in Chapter Seven are presented in terms of understanding the categories of unrecognised and un-actualised creativity as well as creative potential and in-work-out-of work relationships to these. I discuss the findings of these case studies within the framework of these concepts but do not present case studies of the organisations directly as they are not the direct focus of this investigation.

In this instance as I have been interested in the existence of unrecognised and un-actualised creativity, and in the development of creative potential. I have been particularly keen to understand the world view of those who believe they are creative and those who do not and to understand how these beliefs are justified. One of the assumptions of the model is that we are all, in some way, creative people, how then do we account for that in our own world views?

6.2 Sample

The research was conducted within three small, owner-occupier[67] *creative industry* organisations. These companies were chosen via an opportunity sample and therefore cannot be claimed to be representative of this or other sectors, or indeed other organisations. They were accessed via university and personal contacts and agreed to participate as the owners (and directors) were interested in the object of study. *Big Idea Technologies*[68] had approximately eleven employees[69], of which nine agreed to participate in the interviews, and was the first organisation the research was conducted within. Working with this organisation led to *Easy Marketing* agreeing to participate; it had twelve employees of which eight agreed to participate and the research there immediately followed the first organisation. Finally, *Popular Publishing* agreed to participate about seven months after the research started[70]. It

[67] The companies were owned and run by the same people.
[68] These names are invented to protect identities; when it comes to presenting individual participants I may claim they worked for a different organisation than the one they did, as in such small organisations it would be relatively easy to identify who said what, if one knew the people who worked where.
[69] The number of employees in this organisation fluctuated through the course of my time there with many leaving and arriving. The exact number changed month to month but was eleven, on average.
[70] This is mentioned as, by this time, my ability at interviewing had improved and my conceptual awareness of creativity in organisations had naturally increased; this means that the results from this organisation contained richer descriptions of organisational life than the others. The results section should be viewed accordingly.

had thirty eight employees and seventeen[71] agreed to participate in the interviews. All the organisations agreed to periods of observation and no objections were made by any of the employees.

6.2.1 Participants – interviewees

The number of managerial positions in all the organisations was limited, as is a common feature of small owner-occupier businesses. Most of the employees were in a 'front-line' operational role, employed in the broadly categorised 'creative roles'[72] expected of them (designer, writer, editor, programmer), or in an associated support role (sales, administration, accounting). Six of the participants could be described as holding management positions in the commonsense understanding of the word, having control over other employee work, budgetary control, and so on. Two more had the title of manager but would be better described as responsible employees who could handle many tasks of management, without having the authority of a management role.

Big Idea Technologies had seventy five percent of employees interviewed in this sample; seventy two percent for *Easy Marketing* and forty four percent for *Popular Publishing.* Overall, the sample size was sixty three percent of the total number of employees for all organisations. Twenty one participants were female and thirteen were male. This was slightly biased by *Popular Publishing* which had predominantly female employees, thirteen of their seventeen participants were female.

6.2.2 Participants - organisations

The research was broadly conducted within the creative industries market sector, as defined within Banks *et al* 2002. *Big Idea Technologies* was primarily involved with new media; *Easy Marketing* was a print and direct marketing company; *Popular Publishing* was a producer and publisher of relatively well-known books. Each company had been in existence for less than ten years and was relatively successful within their field. I was informed that they all produced regular annual profits, although I did not attempt to substantiate these claims, and seemed to be reputable businesses within their own markets. Two of the organisations operated within a regional market; the third had an international market.

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[71] In fact, nearly all the employees of this organisation agreed to participate but I was limited to spending a week in this organisation and was only permitted to interview at lunchtime and evenings; this restricted the number of interviews conducted.

[72] In the common sense understanding of the term 'creative' which means a role in which the person is expected to be creative. Not to be confused with my definition of creativity.

Big Idea Technologies

This was the first company to participate in the research and it can be loosely described as an internet technology company, based in the North West of England. It is owned and run by the managing director (MD) who started the company with colleagues four years prior to the research taking place; it is now being run by him solely. Its market is primarily small and medium-sized local businesses but does also include local government and large multi-national firms. The number of employees with the company varied during the period of research but never exceeded twelve. The MD had worked for national and multi-national companies and previously been a media sales manager in the South of England before moving to the North West and starting his own company. A graduate, he could be regarded as an entrepreneur who would admit he was learning how to run a successful business through experience. He was a prominent member of the local business community and assisted with government objectives to improve the interests of organisations in the North West.

The market in which the organisation operated at the time of the research was providing a healthy stream of leads, tender opportunities and contracts. The organisation was going through a period of financial growth, which seemed to lead to some stress for employees who were experiencing an increase and change in their work. Repeat business for the company seemed to be healthy and their portfolio of completed work was impressive. Certainly this seemed a relatively successful small business. There was no management structure in the organisation, the MD taking responsibility for all management function, and those working for him could only be seen as employees. Individual employees were taking on many of the functions that a larger organisation would consider in the realm of management but they were not afforded the title of manager and decision making was almost entirely done by the MD.

The MD was therefore responsible for the entire running of the company and took the role of sales director, production director and accounting director; probably typical for such small organisations. Each member of staff had direct access to the MD and would frequently use that access for a variety of purposes. This meant that the role of MD came with a heavy workload. The type of work involved internet and computer based design and the design, implementation, monitoring and reporting on direct marketing campaigns.

Easy Marketing

This print and direct marketing firm also publishes local magazines and had a commercial relationship with *Big Ideas Technologies*, the nature of which was not fully revealed. However, during my period of research these companies moved from separate offices into offices at the same location. This organisation was also owner-occupied and the owner also

acted as MD. Its market place was regional and local small businesses in the North West that would benefit from advertising within several publications they produced. They also produced magazines for other organisations including the government, tourist boards and companies.

The company had twelve employees at the time of the research and had a limited management structure, with the MD in sole charge of company decision making. He is assisted by a sales supervisor; an office manager, responsible for the administrative functions of the company; and a design manager who dealt with the design production department. It was not established how long the company had been operating prior to the research taking place.

Popular Publishing

This was a South West based publishing company involved in the design, development, production, printing and distribution of a range of books within a niche market sector. The company was an owner-occupier small business whereby the major shareholder was also MD of the firm. This company had been formed for approximately ten years and had been experiencing a period of sustained growth with staff numbers and publications rising consistently. Initially a small company with two people involved, it had turned into a company employing thirty plus people and producing at least nine publications per year. It operated within a niche market and had the luxury of having no competitors within this genre and a loyal base of customers and readers that was growing steadily.

It had a developed management structure with managers in most of the recognised positions (Sales and Marketing, Accounts, Editorial, Production, Information Technology). Most of the managers had previously been employees and gained their promotions as the company grew. However, most of the decisions in this company were made by the MD and his fellow director. The organisation had experienced a period of rapid growth and was continuing to grow, although there was concern over how the internet may effect future growth.

6.3 Materials

Few materials were needed for this research and no specialist equipment was utilised. For the observation periods, I used a pen and paper note pad as well as a laptop to record any observations. I used a dictaphone for the interviews, and recordings were downloaded to a laptop PC via an analogue connection;[73] freeware software was used for the playback of the audio with all the normal pause, rewind and play functions and keyboard shortcuts. The transcripts were produced via Microsoft Word.

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[73] The quality of the dictaphone, I discovered after the interviews had been conducted was low. Combined with the analogue connection this meant sound quality was poor and some sections of the interviews were inaudible.

6.4 Method

6.4.1 Observations

During the period of observation,[74] I was allocated a desk within the offices[75] as well as being given freedom to join meetings and move between rooms within the organisations. This included client meetings. In *Big Ideas Technology* the observations took place intermittently over a six-month period, whereby I would attend the offices in the morning or afternoon on all days of the week on a one-week on one-week off basis. The interviews occurred during the weeks of observation, normally over lunch (which I paid for). The observation functioned to provide the research with as rich an experience as possible of organisational life within the three organisations explored. More importantly, experience from the observation enabled me to give context to the semi-structured interviews. This also highlights the importance of observation to research within critical realist inspired research techniques. With a technique such as the semi-structured interviews, inspired solely through postmodern or interpretative meta-theory, research ends when the agents' understandings have been recovered. The snag with this is that it does nothing to check out the agents' claims: observing their behaviour might reveal something (in line with, or contrary to) about what they actually tell the researcher.

The techniques of observation were largely the same for *Easy Marketing* except the period of observation was considerably shorter,[76] at four weeks. *Popular Publishing* differed from the first two companies in one significant way - all of the research was conducted intensively during a one-week period. The location of the organisation required living away from home and there was a limited budget to cover expenses. For this organisation I was present during normal working hours from Monday to Friday and interviewed during lunch periods and in the evenings. The rest of the time was spent observing. Nevertheless, these observations and subsequent interviews revealed a richness to organisational life.

6.4.2 Definitions

The interviews were informed by the augmented conceptual framework and therefore participants were informed that the interest was primarily creativity, especially unrecognised, un-actualised creativity and creative potential and of the relationship between their in-work and out-of-work creativity. If they requested a specific definition of creativity, the augmented

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[74] Prior to any observation, participants were asked individually whether there were any objections to my presence and none was recorded.

[75] All of the desks were in open-plan areas of the organisations.

[76] Having completed the research in Big Ideas Technology, it became apparent that the interviews were able to provide the necessary wealth of experience required to tackle the research questions; a short period of observation (a few weeks) provided good context for the interviews but after that there was a sense of diminishing returns from such observations.

definition was offered. Examples similar to those used in Chapters Two and Five were given if the participants required further explanation of these categories.

6.4.3 Interview style and candidate instructions

Semi-structured interviews are best used when the purpose is to 'gather descriptions of the life world of the interviewee' (King 1994:18) and in that sense they are well served here. The interviews followed an interview guide informed by the research questions and the framework of possible categories for investigation presented earlier in this chapter. Not all the themes were explored in each interview. Some of the participants felt they had little to contribute towards them; some of the categories were explored in depth to the detriment of other categories as the opposite was true for the participant. This freedom to explore the world view of the participants and enable rich experience to emerge justified the choice of semi-structured interviews, as many of the insights gained would not have been developed through a more rigid structured interview. The interview itself was conducted using open questions as much as possible in the hope that the interviewee would lead the researcher to areas of interest. Probing and leading questions were, however, used when appropriate[77].

The participants were informed of the nature of the interview, that they could withdraw at any time and that a full debrief would take place at the end of the interview. It was made clear that the purpose of the research was to gain *their* opinions, views and experiences of organisational life and life outside of work, and particularly their experience of creativity in those contexts. Given the number of enabling and constraining factors that might lead to creativity remaining unrecognised or un-actualised, and of the complex way creative potential may turn into performance, I attempted to cover as many of the influences as possible in the time frame. Briefly they included: attitudes, motivation, experiences of work, creativity in-work, creativity out-of-work, comparisons of the two, recognition of creativity in the organisation, their assessment of their own potential and un-actualised creativity, as well as some data on age, length of career, position, role and responsibility and so on.

6.4.4 Example questions: unrecognised

These questions were informed by the augmented conceptual framework and covered such things as participant ideas to improve the organisation and what tended to happen to them. Opening questions were used and answered probed, examples included:

[77] I am aware of the role that leading questions and interviewer preconceptions can have in creating bias in these interviews. The reader should therefore interpret the results section in chapter six with reflection, as they would with all other qualitative (and probably quantitative) research.

i. Can you think of a time when you've had an idea which you felt would improve the company and it was recognised as such and implemented by your colleagues?
ii. Can you think of a time when an idea wasn't recognised and implemented?
iii. Can you think of a time when an idea was recognised as important but either ignored or not implemented?

The questions following these 'openers' depended to a large extent on the self reporting of the employees. The responses were then assessed for any examples of where the person claimed they had been creative but did not feel that their creativity was recognised by their manager or the MD of the company, nor by their colleagues. If it was established that they had experienced a lack of recognition, the consequences of that lack of recognition were explored. Whether they felt these experiences encouraged them to be creative in the future and the effect it had on their motivation was a key category of this part of the investigation. The consequences for the organisation were also probed and their opinion sought on whether the company could benefit if more of their creativity was recognised.

6.4.5 Example questions: un-actualised

These questions were also themed around ideas participants had for the organisation but examples were sought of where they were not shared. They were also asked what they would do if they were MD for the day. What would they want to change? This question was used to explore any ideas they had for improving the way the company operated, and served as a starting point for probing whether they shared any of these ideas, and what happened if they did. It proved a valuable technique for exploring whether their creativity was un-actualised, as they often reported ideas they had previously not shared. Questions that helped with this exploration included:

i. Have you ever had a creative idea and not had time to share it with colleagues?
ii. Have you had a creative idea that has not been shared because you have not found the right time to share it?
iii. Or the company is not ready?
iv. Or you don't believe anything will happen if you share it?

Giving context to the ways in which creativity might remain un-actualised enabled the participants to recognise examples of holding onto their ideas more readily than a generic question. This may have meant the answers were biased towards these categories but it had the benefit of revealing what might not have otherwise been revealed. As the purpose of this

research was evidence gathering to validate the categories, this method can be considered appropriate. It must also be noted that these questions enable the participants to discuss these situations without the angst that may otherwise have appeared. I sensed in the first few interviews that holding onto ideas is not considered a sign of commitment in modern day organisations and participants were reluctant to admit to this[78]. These questions then served the purpose of framing the reasons for creativity remaining un-actualised in the organisational setting, not through the agency of those being interviewed. In spite of this care, many participants were happy to reveal that they deliberately held onto their ideas and a complicated mix of situational and personal factors emerged.

6.4.6 Example questions: creative potential

Participants were asked whether they felt the organisation was using all of their creative potential and if not, how much was being utilised. Responses were then probed to try and understand why the person felt this way, and attempts were made to gain examples of where they felt their full potential was not being used and the reasons for such a state of events to occur. Questions that helped with this exploration included:

i. How much of your creative potential do you feel you use in the workplace?
    a. And outside of work?
    b. Why is this?
ii. Can you think of an example of when you did not use all your potential?
    a. What stopped you?
iii. How much of your creative potential is not being used for personal reasons?
    a. How much for organisational reasons?
    b. How much for other reasons?

Whilst being leading questions, these proved excellent at revealing the rich personal experiences of how creative potential remained inactive.

6.5 Transcription and analysis

The reporting of this research in Chapter Seven draws entirely on the interview transcripts, but explanations may also draw on insights gained from the periods of observation; where this occurs it will be highlighted. The interviews were downloaded onto a laptop and then played

[78] In the first example of this I realised that I had placed the participant in a slightly uncomfortable position, something I hadn't previously considered this line of questioning might lead to. I felt it appropriate in this instance to reaffirm that the interviews would remain confidential and that I would not share their comments with anyone in a way that could identify them; neither was I operating on behalf of management. The questions presented here emerged after this experience in order to ease any unforeseen pressure participants could feel agreeing to be interviewed.

back and transcribed into Microsoft Word documents. This produced approximately sixty thousand words of interview text. The text represents an accurate description of the conversation but, in the reporting, it may have been adapted slightly to ensure the meaning gained is represented appropriately. This process is an interpretive one and means there will be a degree of distortion in terms of what was said. The context of the examples may also have been changed to protect the identity of the participants, as in many of the examples it would have been possible to identify the person from the context of the example used. In transcribing and reporting this data, care has been taken to ensure that distortion of the findings of this research has not occurred; as much as possible the original text is presented as it was transcribed[79].

In this type of interview, answers do not always strictly correspond to the specific questions. In some cases, the answers to one question are contained in the answer to a slightly different one. The data should, therefore, be considered holistically rather than as discrete parcels, although they may be presented as such. The transcripts were then analysed for meaning. Category-typical[80] examples of the world view of participants, relating to the areas of research interest, are presented in Chapter Seven. A second form of analysis was conducted to enable some quasi-statistics to be presented about the findings of this research. A word of caution is necessary on these quasi-statistics, as the nature of the research did not involve producing standardised responses to standard questions and so bias exists in these figures. They were produced, initially, as an aid to my interpretation and involved creating categories of examples derived from the augmented framework, such as: 'Does this participant give an example of un-actualised creativity? Is this an example of unrecognised creativity? And so on.

These statistics should therefore be taken as heuristics that guide the reader as to the number of occurrences of these categories in this research, but should not be taken to be exhaustive in their representations. If, for example, a participant had a very clear example of unrecognised creativity but ambiguous examples of the other categories, most of the interview would focus on the unrecognised creativity. Thus the transcripts represent a biased form of reality and the statistics must also be treated as containing that bias. That said, what they describe did occur, therefore the decision to include them was taken. Although they may lack the reliability and validity normally expected of statistical findings, they provide further evidence of the existence of the areas of research interest. These findings therefore demand exploration via larger samples, and explanation in future theory.

6.6 Ethics

[79] I indicate when a change has occurred in the text.

[80] There were many examples relating to the research questions. The ones used in Chapter Seven were chosen as they best represent the categories of interest that the augmented conceptual framework suggests would exist.

It is in the nature of conducting organisational research that ethics and the interests of the individuals who participate in the research are considered above all other interests. With this in mind, the exact details of the organisations and participants will not be revealed within this research and care has also been taken to ensure that any individual participant cannot be recognised through any of the published material and associated appendices. It was inherent in this research that sensitive questions were asked and answered; such confidentiality was both necessary and essential.

In line with this, a number of precautions were taken. I have explained only superficial information of the organisations within which the research was conducted, names have been changed and care taken to ensure that no individual can be identified via their comments. Any identifying contextual responses within the text have been removed[81]. If this meant the accurate meaning of the description could not be portrayed, then it was not used in Chapter Seven.

When briefing the candidates prior to interview it was stressed that I was not there on behalf of management and that participation was entirely voluntary[82]. They were informed that they could withdraw at any time, didn't have to answer any of the questions and that they didn't have to continue if at any point they felt uncomfortable with the interview. The confidential nature of the interviews was stressed, as was the fact that they could withdraw at a later date and ask for their data to be destroyed. Discussions with supervisors and the ethical guidelines of the British Psychological Society were used to ensure ethical standards were maintained. The research did not involve any form of deception as participants were informed of the research questions and objectives at the start of the interview and a full debrief occurred immediately following the interview. Therefore, informed consent was gained from the participants. Having detailed the techniques of enquiry it is now possible to turn to the findings of this empirical investigation and that will be the subject of Chapter Seven.

[81] Some of those participating requested copies of the final thesis and therefore the likelihood that this will remain unread in the bowels of the university library is not sufficient to protect identities.

[82] After leaving the office and before the interview started I explained to each candidate that they did not have to participate and that they could still come and enjoy a free lunch without the interview being conducted; and that subsequently their colleagues would not be informed of this. This was to ensure those who felt pressured into participating had an opportunity to decline away from the office environment without effect.

7. Creativity in and out-of-work

Interviewer: 'Do you think your creative potential is recognised at work?'
Respondent: 'No, not at all, absolutely not.'

Introduction

The aim of this thesis, thus far, has been to reflect upon the theoretical and meta-theoretical underpinnings of existing definitions and conceptual framework of creativity, identify the source of the conceptual shortcomings, and take remedial action. The result is not only an augmented definition and model of creativity, but a definition and model rooted firmly in a set of ontological categories, namely creative potential, unrecognised creativity, un-actualised creativity and cross-contextual creativity. The new definition, model and ontological categories will, hopefully, move the paradigm forward.

Now, because there is a possibility that the aims of this chapter might be misunderstood, allow me to proceed with caution and explain what the empirical research reported here does and does not aim to do. The research in this chapter does not aim to *explain* the *causes* of creative potential, unrecognised creativity, un-actualised creativity and cross-contextual creativity as they arise (or not) within organisations. Rather, it aims to provide empirical evidence, via a sample of workers, in support of these ontological categories. That is to say, although theoretical and meta-theoretical reflection threw up these ontological categories, the categories themselves need validating before any further research can use them as a basis. Whilst these aims are more limited, they are consciously so. In a sense, then, this research aims to test ontological claims about creativity. It is, effectively, research into *the ontology of creativity.* The three sections of this chapter present examples from the empirical research that establish the existence of creative potential unrecognised and un-actualised creativity, and cross-contextual creativity. As will become clear, some of the examples belong to more than one of these categories.

7.1 Potential creativity

When exploring creative performance in an organisation it might be tempting to suggest that only a few people will have the potential to perform creatively, as there is little evidence of widespread creative *performance* in organisations. This belief was demonstrated in one of the organisations observed when the MD[83] asked me 'If there are people in the organisation that should be considered creative, where are they?' He thought he would know as they would not be able to stop themselves from being creative and he would, therefore, be able to identify

[83] He was interviewed but I cannot quote from him as it would reveal his identity.

them. He believed this because he considered himself creative, and he knew that he had ideas in all areas of his life, in work and out, all the time. On this basis, he felt that if people truly were creative, they would behave in the same way as him and he would be able to recognise them. This led him to believe that most people in his organisation were not creative in the way he viewed creativity, as he asked 'Where are all the ideas?'

Such questions, whilst consistent with his experience, would conflate the domains of the *real*, the *actual* and the *empirical*. What the MD lacks in his conceptual framework is the understanding that creativity may well exist beyond the level of empirical. There may be ideas and the potential for the ideas within his organisation and he simply cannot 'observe' them. The research conducted within his, and the other organisations, supports this view. When considering all the participants of this research who were asked whether they used *all* their creative potential at work, only eight percent felt that they did. Therefore, ninety two percent of those interviewed felt that their creative potential wasn't being used, or was only being used partially.

Exploring those ninety two percent further, forty one percent claimed they used little of their creative potential in the workplace, and thirty two percent claimed that their work had yet to test how much creative potential they had. Far from being ignorant of their ability, many seemed aware of their creative potential and had a grasp of how much of it was being utilised. When questioned about why they felt their potential was under used, twenty nine percent said they were unable to use all of their creative potential (and ability) when working on a project because of the time pressures they were under. Forty one percent claimed that poor people management led them to be less inclined to explore their creative potential fully. So a lack of time to utilise potential and a lack of motivation due to negative experiences of management practise were cited as reasons that potential did not emerge into practice. According to the world view of these participants, structural factors in organisations mean that their creative potential is not being utilised.

This is not alien to creativity theory. There are many theories of how to improve the conditions of work to optimise the effect of employee creativity in organisations (e.g. Prince 2003; Thompson 2003; Amabile *et al* 1996; Ekvall 1996; Oldham & Cummings 1996) but the lack of a sustainable notion of creative potential and the general belief that creativity exists in the domain of the few has left organisational theory devoid of the ability to ascertain the extent to which potential might be affected by these factors. To answer the question 'Where are all the ideas?' requires further exploration of the world view of these participants.

7.1.1 Creativity as an un-actualised potential

To see if there is evidence to support the ontological claim that potential creativity can exist as an un-actualised potential, I asked questions like: Do you feel fully challenged in the role you're in? What percentage of your creative potential do you actually use?

> *I feel like there is a lot more to come from me, I don't really see a future in the company. It's just that when something needs doing it's my job and that takes up a lot of time. Sometimes the little jobs take up such a long time, that other jobs that I feel are more important get pushed to one side like if we run out of milk or coffee and someone's coming, that's the most important thing for me to do but it's very time consuming and I feel I could get more involved in the erm the promotions and sales and the technical work*[84] *and try and get more business out of it and get more involved with the_<inaudible>_ so we can put it into the website and I'd liked to get more involved in it.*

She adds:

> *I don't think it's a job where I could move on from where I am now erm its such a small company that it would take like 10-15 years.....<laughs>.....because there's nowhere for anyone to go its something that I find very de-motivating, because I know I can never move on from where I'm at.....sometimes because I'm an administrator they can treat me that way in all the meetings and that's all of them and I don't like that.....sometimes I think the boss (changed to protect identity) recognises my potential but when I came onto the technical team, and that was something I wanted,.....people do know I've got ability but they don't do erm.....<long pause>.....they don't let me use it.*

As an administrator within one of the organisations, she feels others do not see her role as creative. In the interview it was established that she graduated with a BSc in Marketing from one of the leading business schools in the United Kingdom. She claimed to be ambitious but thought that in this role[85] she had more creative potential. There may be a perceived lack of need for such roles to be performed with creativity but this does not mean that those performing these roles lack creative potential, as the MD quoted earlier seemed to be

[84] Changed for identity protection

[85] She claimed necessity meant she took this role, as she could find no other employment in the area after graduation and this company had roles in her chosen area and she hoped to be promoted.

suggesting. During a period of observation I asked her whether she had any ideas that could improve the company, she claimed that she rarely offered any as she knew from experience that they wouldn't be listened to.

7.1.2 Creative potential as an actualised but not fully exercised capacity: lack of time.

The next participant demonstrated that he had developed the skills to be creative in his role and had used them on numerous occasions. When Mumford argues that we can either have creative potential or are performing, his dichotomous logic seems not to take into account those who are performing creatively but not to their full potential. His logic fails to grasp the actual nature of creative potential and creative performance that this participant's world view suggests exists.

To see if there is evidence to support the ontological claim that creative potential exists as an actualised but not fully exercised capacity, I enquired into possible factors that might restrict any potential such as time constraints. I started by asking: Do you consider yourself a creative?

> *erm yes I do. I think that the job which I have really requires creativity because I will be given a brief to create a specific thing and I need to come up with ways to do that. erm so pause for example erm I will be told that I need to do the.....details for a website to check that they are in a valid format and then using whatever programming language I happen to be using I would have to come up with, perhaps not the best way, but a working way to do it. So yeah there's a large amount of what I do that is involved with coming up with things that are new and have creativity.*

I also asked: When you say you are being creative is that creating things new to you or new to the world?

> *Erm, probably new to myself. It's possible I've come up with something that's new to the world but probably more, it's already been done and better. erm there are some areas where we worked on maybe very small bits that haven't been done before. I mean one of the things with this work is there is such a huge number of people who work on it I mean not just in business but at home who aren't necessarily professional but there are so many people looking at every possible use it's rare that you do something new but there are bits and pieces. Also there are certain things where you do things in different ways*

than you know have been done before so it depends.

I also asked Ok, you get a project and there are two types of solution you can come up with: the fit for purpose or the ideal. Do you find that most of the solutions you come up with in work are the ideal or fit for purpose?

> *Definitely fit for purpose.....one of the things is there are so many things that could be done erm that there isn't time for. For example.....when I first started there weren't really any php servers.....so we were writing in editable software. So one of the earlier on things I did was get us working in php but the way I did it was to develop it with a particular customer and we now work from that.....but I think it would have been better to have just developed it in general. Because we did it with the customer it was something that was specific to them, which then meant.....the next time someone else wanted the same thing.....we get it from that customer.....but it would have been easier to go through general build but that wouldn't have been done because there were time restraints. The customer wanted the product. There wasn't the time to take it to a more advance stage first and then work on the customer's job, we just had to do what they wanted.....and again.....I mean most, if not all of the projects are probably things that aren't really that good.....so for example with the back end no one would ever really know if you had taken some of the more elegant ways to do things; if it gets the job done, fine.*

This participant considers himself creative and claims to be coming up with ideas that he hasn't experienced before, *P creativity* in the Boden sense, but that there is also the possibility that some of his ideas are new to history also. Through his own world view and experience he could be categorised as a creative worker in any sense of the definition and certainly within the *augmented definition* I propose.

It can therefore be claimed that this person has *actualised their creative potential* into a capacity and is using that capacity to do his daily work. When asked about the nature of that daily work he demonstrates his creative powers are being expended in 'fit for purpose' solutions, under time pressure. He claims he is not using all of his creative capacities as there are restrictions on what is occurring within each project. When he considers the question of how much of his actualised creative potential is being utilised, he can see there is a better way to do things that the organisation has not done previously, but he does not have the time to

implement them. So he has actualised creative capacities, is using them but organisational constraints mean they are not being used fully.

7.1.3 Creative potential as an actualised but not fully exercised capacity - role restrictions

To see if there is further evidence to support the ontological claim that creative potential exists as an actualised but not fully exercised capacity, I also enquired into role restrictions as possible factors that might restrict any potential. Having explored some of the background and history in the organisation of the next participant, I ask how much of her *creative potential* she felt she used within her role:

> *About ten percent!_<laughs>_. Well I've been doing most of what I do now for about a year and you know literally, I'm just going over the same stuff and virtually every thing we produce is identical in production terms.....the content changes but the style and the format is the same. So it is kind of like I can do most of it on auto pilot really and.....I think there is a lot more I could do yes.*

Does she feel the company would improve, in any way, if she was given more freedom within her role to use her *creative potential*?

> *I'd like to think so yes. I mean its tricky, in lots of ways they've got people in.....roles who are also doing a very good job and I wouldn't want to, I don't know, insult that I suppose.....but yes, I'd like to think so. I mean I would always like to be more involved in the creative work and I do - do that in my own time.*

Do you give your creative ideas to the company and what happens to those ideas?

> *Yes I think so, more so when I started than now I suppose in that you get used to stuff, which is really dangerous. You just get used to the way things go and as soon as you stop thinking about it as a process.....they do ask regularly. The MD is very good at saying 'how can we make this more efficient' and they will ask everyone for their ideas so I will always make an effort.*

I then ask what happens to an idea of hers when it is offered to the company:

> *Don't know. <long pause> They have got better at this lately. There was a tendency for a while where ideas would get presented to management and then you don't hear anything about it. I've had ideas for new products and things but you never really used to hear anything back but I think at the last meeting they were trying to explain about how long it takes to make those decisions and how much research goes into it.*

In this case we can see that she feels that a minimal amount of her *creative potential* is being utilised by the role she is performing. So her creative potential remains actualised but latent, as the role does not demand it, yet she feels she could improve organisational performance. She recognises others are tasked with that function and that they are capable of being creative as well but nonetheless would still like to contribute. However, she indicates that when ideas are given she never hears of them again. She does recognise there have been recent improvements and understands that it takes a long time to make decisions and research whether the ideas are feasible for the organisation. Although the MD encourages ideas, she has offered few during her time there finding, at least initially, that ideas disappeared into the organisation with little feedback. She recognises this was a problem and sees that attempts have been made to change it, but still feels that only ten percent of her potential is being utilised.

7.1.4 Creative potential actualised but not exercised – attitudes countervail performance

This participant believed she was a creative person (had actualised creative capacities) but that they were latent in the organisation, and therefore her example is one of *creative potential.* This differs from previous examples in that she seems to believe that the company should not be expected to offer time for creative thinking, that this should be done in her own time. She also recognises that there simply isn't time during work for her to be creative. Thus, through this combination of her belief and structural constraints, her creative potential remains unused. To see if there is further evidence to support the ontological claim that creative potential can be actualised but not exercised, I enquired into possible factors, such as attitudes towards employees, that might countervail performance and restrict any potential. I asked whether others regard her as a creative person:

> *Yeah they do (see me as creative), like, the sales staff come to me a lot (for ideas).....but it's in the sales room I'm quite good at coming up with new ideas for the drives and things like that but its not really.....if there's a*

problem that needs solving yes that's fine but you don't get proper sitting down thinking time, there's no brainstorming just purely and simply because of time. We don't have the time in the day to do things like that so in one sense yes. Because everyone comes to me with their questions.....and they need to know what to do and what they're meant to say and things like that but other than that it's just a matter of time, I think. There just isn't the time to think creatively which is a bit of a shame.

Do you think the business would gain if you had a bit more time to think creatively?

Yes but the way it should work is that you should think on your own time.....if I can have ideas then I should do, I should think of them in my own time and then come back.....and put them into practise. That's just up to me really, not up to the company. But there's no way I could take half an hour out of the day to sit and think about what I can do or whatever, I've just got to get on and do it because you don't have enough time to do that.

There is a long history of research which suggests creativity is a necessary skill of those in sales and business development positions and that it can be of benefit to organisational performance (e.g. Elsbach & Kramer 2003). This participant also regards this as valuable but demonstrates that there exists an expectation that this creative thinking time should be done, not at the expense of the company but in one's own time; an expectation she seems to endorse. From my experience in observing her department, the tasks involved with selling (phone calls and appointments) are of primary importance and the employees are encouraged to spend their entire day dealing only with these sales-related matters.

Thinking time for this organisation was seen as a luxury that can be ill-afforded. There was a degree of economic necessity to this attitude within this organisation, but in spite of this, there was a large degree of self-reported creative ability within the department. The conditions attached to these roles, however, meant that the ability could only exist as an unused capacity and therefore in *potential*.

7.1.5 Creative potential, actualised, exercised and fully utilised?

There were a few participants who initially claimed they used all of their ***creative potential*** in the workplace but through the course of the interview changed their minds. The next participant is an example of this. Leading up to these questions she represented herself as a committed employee who always did her best, which meant using all of her potential. To see

if there is evidence to support the ontological claim that creative potential can be actualised, exercised and fully utilised, I asked questions relating to whether creative potential is fully utilised in the workplace?

> *I'd say yes. I probably have got more than I'm showing at the moment*[86] *at work. The reason I'm not I guess is that, I'm trying to think of the right word, I mean strict isn't the right word but.....the nature of this company is that you get given a brief from a customer which has particular requirements.....that you need to fulfil.....which doesn't give you the scope to just do whatever you want.....and I think that's something that they prepare you for at university but certainly you've got a chance now to do whatever you want to do creativity-wise and you're not going to be able to do that in the workplace. You can't just go and do whatever you want, you're designing for somebody, for a person and so I'd say that.....that can kind of govern what you are doing and you can be creative within that.....but it just doesn't give you the free licence to do whatever you want.....which I think might kind of give you that freedom to be creative. I also think, because you've got loads of different things happening at the same time.....you don't have the length of time to think about things and come up with the best possible design that you ever could.....but you'll come up with a better thing if you had a lot more time to spend on it.*

I ask how often she feels she gets enough time to come up with a creative solution that reaches her full potential:

> *I guess we're more talking of us having enough time to be able to come up with something. There's quite a few where we're so rushed to come up with something.....it'd be great to have more time but you recognise that that will not always happen.*

So whilst she feels she is using all of her creative potential within the parameters of the role she is performing, she also recognises the restrictions placed upon her in that role. She regards being able to use all of her creative potential as being able to do her best in the given circumstances, but recognises that there are other situations where she could give more (with more time). She seems to hint that using all her creative potential means using all the creative

[86] She felt that her work was relatively easy at the time of the interview

potential that the role she is performing requires her to do, regardless of whether this is in fact all the potential she has available to her.

Notions of creative potential in existing creativity theory have been unable to explore these questions *and* claim meta-theoretical consistency, and this has led to a paucity of valuable theory. Having begun this exploration we can see that the participants in this study claimed to have more potential than was being used and also that even when they wanted to use more, the organisational conditions often constrained them. This shows that the answer to the question 'Where are all the ideas?' requires a deeper investigation.

In terms of our research questions, these examples show that in the world view of these participants, creative potential in organisations exists. It exists as a un-actualised potential, as an unexercised capacity and as what remains when a capacity is only exercised partially. For that potential to turn into performance, these examples suggest that many organisational conditions need to be met. Within these examples they include but are not limited to: the amount of time available; 'good' people management; attitudes towards creativity; client understanding of roles; role expectation; and management feedback on ideas. Other than demonstrate the feelings participants have towards their ability to use creative potential, this research has, at the very least, indicated that there may be more *creative potential* in these organisations than the MD of one of them believed to be true.

7.2 Unrecognised and un-actualised creativity

A second premise of the augmented definition and model of creativity presented in Chapter Five is that creative potential and creative performance can exist unrecognised. General support for this assumption is offered when considering the findings of this empirical work. Forty four percent of participants claimed to have been creative in the workplace *and* that it had gone unrecognised by colleagues and/or management. Only twenty nine percent of participants claimed that their creative contribution was always recognised in the organisation. Eleven percent felt this lack of recognition may have contributed to slower than hoped career progression (both in and out of work[87]) and twenty nine percent felt their company would benefit if employees were recognised for their creative contribution. In general terms, this research offers support for the position that creativity *can* exist unrecognised, and there may be more unrecognised creativity in organisations than has been previously speculated in any theory or empirical account of creativity.

[87] Some were actively pursuing alternative careers outside of the workplace but felt a lack of recognition of their creativity was holding them back. One participant in particular detailed the troubles she had trying to start an acting career but she was not alone.

Un-actualised creativity is complex and there are many combinations of circumstances involving instances of creative potential, performance and recognition, which would leave the creativity un-actualised. However, one clear category of un-actualised creativity exists when an employee holds onto a creative idea, for whatever reason, it therefore is actualised at the psychological level of existence but un-actualised at the social. Thirty five percent of participants in this study reported that they had held onto a creative idea that they felt would have improved the company. Some of the reasons for this will be explored within the individual cases but from my experience in conducting this research, a common theme emerged; that of a sense of alienation from the aims and objectives of the organisation. For example, twenty three percent of participants felt that their creativity remained un-actualised due to poor management responses to their previous ideas; and thirty two percent felt that poor internal communication led to their creativity performance being adversely affected, which subsequently affected company performance.

The categories of un-actualised and unrecognised often combined in these examples. For example, fifty five percent of participants claimed they had ideas that they believed would improve the organisation, that they were communicated but that they were not used. Thus, the idea was actualised at the level of the individual but un-actualised within the organisation. Seventeen percent also claimed their creativity was recognised but they were restricted from putting it into practice, even if it was acknowledged as a good idea! This shows evidence and support for the notion that creativity *can* exist at the level of the *real* and *actual* but that it does not always exist at the level of the empirical. This is certainly the case for those who consider a definition of creativity relies on the recognition of the creative act by a relevant group of people or judgement of appropriateness, or some such value. There would be no evidence of innovation relating to these ideas within these organisations although the ideas for this were available and not actualised.

7.2.1 Unrecognised creative potential in the organisation

The next participant was a senior member of the team within the organisation and had creative interests outside of work[88]. In order to test the ontological claim that creativity can exist unrecognised I asked first, whether, in his opinion, he is recognised as creative:

> *I don't think I'm really recognised.....the MD is the creative head of the company.....he's the one who will take the risks and will have the creative urges.....the only trouble with him is.....although he likes to think he's*

[88] In fact he had a degree of success in the creative work conducted outside of the organisation; unfortunately I cannot reveal it as he is also well known for this within the organisation.

> *not, he actually is a bit of a benign dictator type.....I think he boxes people quite readily and quite quickly into certain roles and I don't think he's particularly good at seeing people outside of their role.....I think some people he would turn to more quickly than me for original ideas, yes.*

I ask how he feels about the lack of recognition:

> *That's not great, that doesn't feel great.....but I sort of live with it, it's not a problem. I suppose were a new boss to sweep in and have a slightly different attitude that could be very liberating for those people.*

This certainly offers evidence for the argument that creativity can remain un-recognised, at least in the opinion of this participant, and it is therefore a valid question to ask just how much and in what forms is creativity existing unrecognised in the organisation.

7.2.2 Unrecognised creative potential – prior to work

The previous participant reveals that he believes he is unrecognised; the next case reveals that unrecognised creativity does not only occur in organisations, it can affect the recruitment of those with potential. This participant reveals that whilst her degree course gave her the skills to do the work he is now in, it was the part-time job she had whilst doing the degree that she felt her employer took as evidence of her potential. Indeed this perception led her to almost change courses. In order to test the ontological claim that employers might not recognise the creative potential of prospective employees, I ask about her experiences in finding work:

> *Certainly at times throughout my degree I was thinking about re-starting and doing the graphic design course, because I was scared that I wasn't learning enough.....to be employable.....I thought people would look at me and think "hang on, she's just done a fine arts degree its nothing to do with graphics." That's what I was worried about.*

She found employment but claimed this was due to the part-time graphic design experience gained while studying at university.[89] When asked if her degree, or the part-time job gave a better understanding of the design process, she responded that the degree had given her the skills needed and the job was what the employer needed to feel safe that she could perform. Clearly, the recognition of creativity is not as simple as seeking demonstrable competencies

[89] This case is dealt with further in section three.

from previous history.

7.2.3 Unrecognised creativity leading to un-actualised creativity

To explore the ontological claim that work environments might constrain creativity, I ask the next participant for views of her workplace and the effect this has on her creativity. She describes the environment she works within as being both enjoyable and stifling creativity. She gives some background on her experience of this organisation:

> *The company is a really, really good place (to work) and I really appreciate being here I really really do. The only, well_<long pause>_sometimes it prevents us being honest with how we really are feeling because we're always having to reinforce how wonderful everything is and sometimes you know you feel a bit down and want to be able to talk about things and it doesn't mean that things aren't good. You know and sometimes you feel that you can't disagree with anything because it's all so wonderful. There's actually a bit of pressure in that sense for us all to conform because we wouldn't want to appear ungrateful for all the good things. I don't think there are many places like this <laughs>. And it's a very sort of.....it's a highly emotional environment and that makes it even harder to ever disagree because everything sort of blows up.....I think the company's probably too large now for that level of intimacy.*

To explore the effect of this further, especially on how it might influence her creativity, I ask what that means for her and what she would do if she were MD for the week:

> *I suppose I'd make sure that everybody knows where they stand because.....nobody really knows what they are being judged against and what the criteria they should pay attention to. Sometimes.....decisions are made about you without (you) knowing why; and maybe they're not.....but sometimes it feels like that because it's such an informal.....you know family feel.....and I think a lot of us especially the newer (ones) would like a bit more clarity about what we need to do to be liked. You never know what part of your behaviour and your work matter. You don't know what you are being judged against. This is a company that has very high expectations of everyone which is great, fantastic.....especially in terms of generosity, they expect total commitment and total generosity in terms of (your) time and.....willingness.....sometimes I'd like the company to reciprocate.*

So how does this affect creative performance?

> *Making complaints here and not providing solutions is a big no no. So....if you have a problem, it's about how you sort it out.....when things come up we all start thinking of ways to sort it out before we voice our different points of view.....it's a good thing but sometimes you don't always know how to sort things out and its still a problem. Which is really good in some ways because you know it gets you in that frame of mind.....but then sometimes it makes it really hard to speak with people because.....they can see you as ungrateful.*

An important part of creativity detailed in Chapter Two is the ability not just to solve problems but to identify them. The problem can be seen as a manifestation of pre-existing possibilities or actualised powers which have effects that require resolution. Identifying pre-existing possibilities can entail understanding previously unknown problems within an existing frame of reference. The individual may recognise this and begin the first important step in the discovery process. In this organisation, the participant describes a series of events which lead to problem solving being highly valued and problem finding being viewed as low value, and therefore an unrecognised skill. This means creativity remains un-actualised, as people do not share the problems they identify.

In this instance we have a participant who feels she can recognise problems that she may not be capable of solving. However she will not inform colleagues of these problems because of her perception of a negative attitude towards bringing a problem to people's attention without a solution. Perhaps she also sees that, to maintain a good impression in this organisation, it is better to be seen as a solution provider than a problem finder. The consequence of this is that problems in this organisation can be left unattended.

I ask this participant about whether she has any confidence in her (self reported) good creative ideas being implemented in this organisation. This is her reply:

> *I wouldn't bank on it.....there's one side to this company where all decisions are made at the top and then there is another side where everything is discussed in these little committees.....not many ideas get implemented because of that.*

I ask whether either of these two factors lead her sometimes to hold onto ideas:

> *yes.....it tends to be ideas about small things and about how to make people feel better and how we are valued here.....I don't.....I sort of try to balance.....my desire to get my point across with..... (the) practicalities of not rocking the boat unnecessarily.....if you do that, it can feel awful but I think it depends.....on how important the change will be.*

This participant perceives that her creativity isn't recognised by her colleagues in the organisation, or at least she 'wouldn't bank' on her ideas being implemented. This has led her to become an un-actualised creative person; she has ideas, but claims not to always share them as she needs to balance political influences against the perceived importance of the problem.

Unrecognised creativity will be explored again in a later section, which examines all of these categories occurring together and begins to explore the nature of cross-contextual creativity in organisations. What is clear from this analysis is that there is sufficient evidence to say that, in the world view of these participants, both creative potential and creative performance exist unrecognised and that it has consequences for their motivation and arguably for the efficiency and performance of the organisations.

7.2.4 Un-actualised creativity

Un-actualised creativity has a complex existence and can occur at individual, group and organisational levels. For example, someone might have a creative idea about how to improve a organisation which is actualised for them at the *ideal* level of existence. If they choose not to share it at the material or artefactual level it remains *un-actualised.* If they do share it and an individual or group of people develop the new *idea* or product and share this development with the organisation and it is recognised as a good idea but not implemented or utilised, then this becomes another form of un-actualised creativity. It can exist at the level of the ideal, material, artefactual and social, and yet its full potential to affect change is not realised. It is therefore actualised at the individual and group levels but not at the organisational, community or national levels.

These two types of un-actualised creativity have very different causes but similar effects in terms of organisational effectiveness. The emotive content of the first type means it proves incredibly difficult to gain examples of from people willing to be quoted. For example, I had

one participant who claimed to have an idea for a new product and was intending to leave the organisation in the near future to develop the product within a new business. For obvious reasons he was unwilling to share the idea on interview. Such examples are sensitive and the detail cannot be explored other than to say the existence of such un-actualised has a precedent within organisational life. As they have complex existence, they also tend to exist in multiple of the categories developed here. They are therefore best dealt with in the next section.

7.3 Cross-contextual and multiple category examples of creativity

I can now turn to the fourth research question and begin to explore creativity in-work and out-of-work and by exploring the experiences of the participants. The first case will explore the relationship between work and non-work creativity from a motivational point of view. The second will continue this exploration and offer insight into the nature of creativity skill transfer between these contexts. The final case will add a further dimension to the in-work out-of-work exploration by re-examining experiences before work, that is to say during higher education, and the relevance of those experiences to creativity in organisations. These, it is hoped, will reveal the complex inter-play between creativity in and out-of-work, whilst demonstrating that creativity can indeed be considered both a general and specific skill.

7.3.1 Creativity in and out-of-work, recognised, unrecognised and un-actualised.

This participant was fairly well known locally for his music. He wrote his own songs and performed around the county. This remained largely unknown to his work colleagues. I explore the case in-depth as it reveals the complexity of the relationship between creativity in and out-of-work and the effects work can have on the ability to be creative. In order to explore the ontological categories of unrecognised and un-actualised creativity and how they interact in and out-of-work with creative potential, I discuss the next participant's views on creativity. This is what he had to say.

Do you enjoy it (your creative work)?

> *Not as much as I did.....There was a big challenge when I first joined because all I had done before was a bit of (technical work) and I had to learn all the (new technical work) and.....they gave me the opportunity, you know, they trusted me with this huge job. Which I still do like, I'm not saying I don't but it's got to the point now where it's well, <pause> Dull. Quite honestly and you know.....is there something else I can learn or am I just going to have to carry on doing all these things. So I enjoy learning I enjoy doing things that are new that I haven't done before and.....solving*

problems....with.....projects, problem solving and coming up with new.....new (tools) that the rest of the company can use.....and.....its not quite there anymore. It tends to be more a case of the boss will sell a really big job that'll take months to do and .....because I'm the senior guy he puts me onto it and I'm doing that job nonstop for a few months and it can be really frustrating.

He explains that how he feels about his role involves a complex relationship between his motivation, length of time in the organisation, the types of projects he is given and his creative input. I explore the relationship in more detail and ask about his creative work and his feelings of motivation at work:

In my own opinion it can be a bit touch and go because even if you're motivated and being creative and you're really excited about something it doesn't always come out the way you want it and sometimes the best creations you come up with are the ones that you've just rushed. A great example, I hope she's not here, is a project I did for (name of woman), she's a wonderful woman, and she's an (artist).....she needed (some design work).....and I spent an entire morning on it but I had something which was like, she had a handbag which was like paisley and I took a strip of this handbag and used that as part of the logo and it took about half an hour to come up with the right one and when I showed it to her she just fell in love with it straight away and from that I could put it into the (rest of the work).....I threw (it all) together and it looks great. This was two and half years ago and it still looks great and it was all the result of me just messing about.

In the first section of his answer he recognises that motivation on its own is not enough to guarantee creativity. In the second section he recognises that creativity can be achieved in the shortest time frames and with very little input from the creator. In this instance he discovered the relationship between the client's sense of identity, the need to promote the business and the aesthetic value of the designs he proposed. So his creativity skills were employed and he evaluated the contextual needs of this project before actualising a solution to those needs. His creative performance therefore can be seen as relevant to this context but perhaps not relevant to the historical context proposed by creativity theory. In terms of our definition of creativity, this is an example of learnt capacities being applied and discoveries being made, just not necessarily discoveries that are new to history.

I continue with the exploration of his motivation and its relationship to his creative performance

> *Half of me at the moment.....is very much I don't want to go to work, most mornings for the past week and a half, its been a case of dragging myself into work but that's because I'm unhappy..... in what's going on at the moment, in work. There's been a lot of changes recently that have been.....quite unsettling one of the more senior people is leaving and he's the greatest (at what he does) I've ever come across.....it's a big loss to the team.....and it's not the first person we've lost lately and I don't think it's just down to them getting better jobs. I think it's they're basically looking for a better job because there's something wrong.....and that disappoints me, because I love working for the company and.....and I can see there's a lot wrong with it.*

The effect of this is highlighted as he continues:

> *There is lots of time pressure I know (the boss) is doing a lot of work that he doesn't really want to be doing.....I'm doing a lot of work I don't want to be doing and I think the whole company is suffering at the moment because we're trying to make money as opposed to doing work we enjoy, which was the original ethos of our company. It was: get good clients, treat them well, they'll last for....you know....ever, do nice jobs and just make the money we need to make and now it's changed a lot because we've moved into a bigger place and it costs a lot more and suddenly its like well let's get some big companies in that want the world and let's charge them the earth and do our best and I don't like working like that I think there's a huge shift in....I think there are no staff that are happy with it...*
>
> *...Its almost like when I first started you got a (project) and you could send a brief on it and that was fine and now if we get a (project) I just bang it in. It's got to be done in a couple of hours.....and I've got to live with that because each month something will come along that is kind of like.....this is actually quite urgent could you just sort it out.....and because you can sort it out they think it's alright to do it again the next week. Which is fine.....but it gets to a point where you're just working all the time to*

urgent deadlines and you never actually get to slowing down to normal pace you're just running all the time and.....you're swimming hard just to get your head above water.

He is viewed as a creative person in this organisation, to the extent that he claims he is placed under an inordinate amount of pressure. He finds that pressure both de-motivating and physically exhausting, and claims it provides him with little satisfaction, affects the standard of work a client receives and leaves him questioning why he works for the organisation. He thinks this has led to a number of other good quality staff leaving and feels that his workload is having an impact on his enjoyment of the creative work as well as its quality.

I ask about his out-of-work creativity?

I enjoy working with music, the way it works with sound. You know you wouldn't do it if you didn't enjoy it. I feel like I'm expressing myself.....putting down on paper, in a song my feelings.....so.....absolutely it's totally run by how you're feeling. I could take the songs that I've written and go back in time and each one means something. There's a meaning behind it even though it's not in the music but you know between the lines you know what it's about and it's in my head. Which is why I.....yeah it's creative and it's really enjoyable.

You spoke of the enjoyment (at work) at the beginning. Is that like the way you enjoy the music?

To be fair when I first joined I was still doing the music and had the chance.....come along I would most certainly tried to earn a living through music but I'm happy to do this and that's because there are a handful of people that make it every year and become big and famous and make money out of music whereas a steady job, everybody has a steady job and you can make good money out of it. I'd much rather be doing music, ah god I'd love to be able to play for a living and.....I've seen people look at me at gigs and they don't know what to expect and you open up with a number which is something that they all know but they've never heard a band do before its so energetic and you see this hard face audience just go "nice" and that's a wonderful feeling, you can't beat it. God I wish I wasn't working (here) and could be doing music.....As I say, people have been interested but nothing

ever has really happened and it's a great disappointment in my life.

I asked him to clarify which is more important to him, his out-of-work creativity or his in-work creativity:

> *Yeah by a long shot, out of work I get to do what I want to do.....and one day I'll wake up and think I really want to write a song today and then I realise I have to go to work and I get myself dolled up for work, go to work, have a stressful day and all I want to do is sit on the sofa.....and I miss that opportunity.....and if you do you can't get it back, you feel you can do something really creative and to be taken away and made to do something else.*

So not only is his out-of work creativity more important to him, he is often finding that his commitments to his working career are actively preventing him from pursuing his music outside of work. His creativity becomes constrained outside work because of the pressures put upon him within the workplace. Hence, his creative potential remains un-actualised outside work due to the effect of work on his potential. I asked whether he felt he would be more creative outside work if the pressure of work was less:

> *Yes. Oh yeah.....I mean.....completely. When I first started (here) I was writing songs at least every week and now I'm lucky if I do one every month, I really am.....and it's just because I'm tired.....I'm stressed_<I struggle[90]> to go to sleep.....and I wish I could just come home and be fresh as a daisy, cook myself a nice meal and then go and see what I can create whether that be music or on the computer or with some wood. But I'm too tired to do it and even at the weekend.....even if I get up early I'll still sit in my dressing gown until two or three because I'm just shattered.*

So his out-of-work creativity is important to him but has been affected by the pressure of his work. It can therefore be argued that his creativity exists as an actualised but unexercised capacity. His in-work creativity used to be important to him also and in some sense still is, but this is being overridden by his negative experiences in the workplace. His work therefore is having a detrimental affect not only on his out-of-work creativity but also, arguably, on his health. The question of how this affects his creative performance is explored next: Do you think you are more creative out of work than in work?

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[90] This section of the text was changed as it revealed some personal feelings which were not necessary to develop in order for the evidence to be of use.

> *There's a bit of cross over again, it's never black or white, it's kind of greyish.....because I'm certainly more creative out of work.....because it's what I want to do but whether that means you're more successful.....because at work you have to be, you have to find those solutions, you have to be creative and.....I suppose at home you can just go off on a whim and you may never come back from it.....and you might end up with nothing and maybe not waste a day but not actually come out with anything. So it's a bit of a grey one. You're definitely more, because you want to be, out of work you're more creative and ideas flow.....but in work you have to, you're going to get more end result.*

He seems to support the adage 'necessity is the mother of invention'. We can see the relationship between in-work and out-of-work creativity is complicated and in this instance, the pressure being experienced in work is leaving his out-of-work creativity un-actualised. He also suggests that his in-work creative performance does not reach its full potential as it is hampered by the lack of time available and pressure he is under[91]. When asked about the recognition he feels he has for his creative input, it was difficult for him to answer. He is in a creative role but he isn't sure whether his full creative potential is recognised in the organisation:

> *its a difficult one; I think they do now because.....there hasn't been a project I've set out on that I couldn't do.....and I don't think I've ever said that, or even turned anything away.....and half of the development is because I work at it at home. It's difficult to know what they think. They don't know how passionate I am about being creative.....they don't know about my music.*

I ask whether he thinks the company would improve if all staff took time to recognise each others creative contribution and potential:

> *I think it would certainly alleviate some of the time issues that we can have.....I don't think it would matter too much in terms of what we do for the end product.*

[91] I observed his work for several different periods and discovered that he was being constantly interrupted by colleagues and phone calls (during one particular morning of observation he was interrupted 18 times in 30 minutes) and yet seemed able to continue working on his projects which were complicated projects requiring high levels of concentration.

This seems to indicate a degree of confidence in his ability to get the job done regardless of circumstances (probably a justified opinion from my observations), but the circumstances in this instance were putting him under undue stress. I ask him how all this makes him feel when he works:

> *Let's say it doesn't make me a happy man.....I'm absolutely frustrated. 90% of the work is rushed because of it. It's not polished, it shouldn't be like that.....We're not getting the time just to polish things up because its all about money and deadlines its like this person is going to have a go at me if we don't get something done, exactly when we say, and so we're rushing.....and its hard to be creative when that happens..... you try but it doesn't work. So no, about 90% of my work at the moment, I'm unhappy.*

So in his experience, time pressure and organisational design issues have had a negative effect on his creative performance. In addition, it has meant that he feels he is not performing to his full creative potential and that, whilst he thinks his creative work is recognised for its importance, he feels the organisation does not seem to appreciate the full range of his abilities and that outside of work especially, much of his creative potential remains unused

7.3.2 Cross-contextual creativity, task similarity, creative potential and creative performance

This next participant reveals his perceptions of the nature of the relationship between his creativity both in and out-of-work. In order to explore the ontological categories of creative potential, how it results in performance on different tasks and the relationship between this and unrecognised and un-actualised creativity, I begin by asking about his creativity in work and where his best creative ideas are gained:

> *I'd have to say on the bus on the way to work. The office's too busy for me to think.....I get the bus to work.....it takes about an hour and I get to look out of the window and think. Certainly I come up with better ideas on the bus than I do in the office.....although it's a different type of work or idea, in the office I work more on solving technical issues, the niggling stuff that needs engineering. On the bus I get a chance to look at the project overall.*

This provides further insight into the difficulties of separating the work-non-work boundary and of working within this organisational-environment. If there isn't thinking time within working hours, especially when it comes to work which requires thinking time, then the

quality of the work will arguably suffer. I was interested in exploring the relationship between his in and out-of-work creativity and so asked about his out-of-work experiences: Do you do any other form of creative work?

> *Yeah I do some painting, and some illustration type things and the fine art sort of stuff. I have a studio back at the house and I love being in it. I sell some of my work and get a lot of people asking me to make something for their house. Mainly friends but people I don't know as well. I had an exhibition in my home town. It went well, sold a lot through that. I think I'm well known for my art. Probably more so for my music but I think for the art as well. Certainly locally, it's how people know me. They probably don't know I do <hidden to protect identity> as well.*

I asked how work was affecting his outside interests:

> *I don't do as much as I'd like to. Especially when you're working, last summer I had a real go at my art but I just got exhausted. Evenings are no good because you get back from work and all you want to do is eat have a beer and sit down. The work's all head work, mental work, when you get back you just want to relax especially when you've been looking at a computer screen all day. Which means it's just weekends I can do it but life seems to get in the way, occasionally now I get in my studio but work's so busy at the moment I don't do it as much as I like.*

I ask more about this:

> *It's always rushed; we waste so much time, dealing with clients mainly. The sales people, they don't understand the <hidden> work. We could certainly improve how it works between us. They don't get the right briefs, they haven't worked in <hidden>, and they never seem to give us enough information and sign up work to be completed before we can do it. You know, we'll be working on one project that's got some serious <hidden> to do or we need a bit of time for some <hidden> work and then get told to do another project, cause there's more money in it and then we drop the old one but it takes ages to get back up to speed when we eventually start it again.*

The problems as he sees it are not limited to this though:

> *Clients are always calling as well, or visiting. And then there are the meetings and people wanting to chat when you're <hidden>. Its open plan so it's hard to concentrate when you need to. It's much easier to think on the bus.*

Given the conditions of the organisation, to ask how much creative potential is turning into performance and whether creative performance can exist unrecognised and un-actualised is clearer in this example. He goes on to add what he thinks he gives to the organisation in terms of his *creative potential*:

> *In terms of my work, it's always professional but I reckon it's only 10% of what I could do given the right time. If they can sort out the problems I'd perform much better. We never keep the stuff we do in a way to help in the future. If we solve something, we tend to forget what we do; we have to reinvent the wheel when we have a similar problem.*

I ask his opinion of where his most creative work occurs:

> *Definitely more creative outside of work, not that my work isn't creative, you just get more time outside the office. I am thought of as a creative person, I'm a <hidden> so I think everyone views me as the creative but I reckon they don't really know what I do or what I'm capable of so no I don't reckon my creativity is fully appreciated. I could certainly improve the way <hidden> works if I was asked but no one has the time.*

He claims that even though people understand that he can be creative and that it is part of his job description, he still cannot bring all his creative potential to bear on his work. In part this is due to the time and commercial pressures of working in this organisation and in part because his colleagues still do not recognise all of the skills he can offer, to the extent that his creativity is un-actualised. He has ideas to improve the production process but nobody has the time to ask or implement anything that he suggests. This evidence begs the question: How much could this organisation gain through attempting to recognise and foster the creative potential of its employees?

I ask more about clients:

> *I might be wrong with this but there are a lot of clients as well who don't help. They want to get something cheap and quick and put pressure on you and it's like, you just do what makes them happy knowing that there are better ways. This company doesn't charge enough for doing it right. Not that the work is bad, it works fine and clients get good stuff for their money but you know it can be so much better. They don't think about their brand when they give the <hidden> brief.*

We have already seen that creative potential can remain un-actualised for individual and organisational reasons; here we see that this can extend into inter-organisational reasons. The world view of this participant suggests this might be the case. As he hints, the commercial conditions between this organisation and the client companies actively prevent what he regards as better creative ideas being utilised to the benefit of those other organisations.

I ask whether he believes the company can improve:

> *Yeah but they need to recognise that it needs improving, I don't think they realise what the problems are, you know the poor communication and the lack of control over projects and expecting things done too quickly. They think we're just not organised and think we should work harder; they don't understand what the job's about. It's annoying, especially when you're sweating to finish some work and you can see sales staff there just chatting away. You think, help me out here, call my clients, and get that information for me.*

He claims that people in this organisation lack the recognition skills to understand what is required to run production, and in lacking those skills they merely conclude that it is the fault of those working on the projects, and not a form of organisational inefficiency. I asked whether he ever mentioned any of these insights to management and colleagues:

> *I used to but it just causes rows, then the boss gets involved and tries to fix it and that makes it worse.....learnt to just get on with it get your head down and not get involved with the others.*

Here, he gives another clear example of the complicated inter-play between the recognition of creative potential and creative performance, organisational factors and un-actualised creativity. He clearly identifies time constraints, motivational factors and lack of control as being detrimental to his creativity. Given the detrimental relationship between his in-work and out-of-work creativity, I ask whether the skills used are similar, as this might mean that skill development outside of work is a necessary part of his in-work creativity. In preventing the out-of-work creativity the organisation is impacting on its own efficiency:

> *It's very different working on a computer than working on something with your hands. With a brush you've got a lot more control over it than a computer, I know you've got control over a computer but it's not the same.*

Which of the two types of work does he feel is more creative in and why?

> *Everything I put out I'm happy with, I always try and do something good no matter how much time I've got to do it. I'd have to say though, I'm more creative in what I do when I'm not at work. I'm more interested, not that I don't like my work.....it's for clients though.....you're working to what they want. My work, I can do more with it. When I do commissioned work I tend to take my time over it. Working on computers was a learning curve I think, especially the graphics side of things, that kept me interested, now that is all in the bag, there's less of interest. Got to keep learning you know, otherwise it's dull.*

I turn back to the in-work and out-of-work comparison again:

> *The design skills are the same, you think about it the same way. The tools are different, using a brush and a computer. But the thinking is the same, just different context, briefs from clients or a commission; you're trying to work out how best to represent the ideas. They come from anywhere, hard to say how you work them out. I've found since I've done the <hidden in-work activity> that's helped. You have to be very methodical to do the <hidden>, very logical. It does help the mind when you're putting together the ideas for a project.*

What about your paintings?

> *I don't know, I guess so, not thought about it.....I guess I am a bit more systematic about the commissions now. Painting is more about expression of something than it is representing a client. Different way of thinking but yeah, I guess I'm more systematic about that now.*

So there does seem to be an interplay between the in-work and out-of-work creativity. He views the thinking processes as the same and notes the effect his in-work creative performance has given to his out-of-work skills (more systematisation). It is therefore not a great leap to assume that out-of-work creativity may lead to improved performance in-work as well.

7.3.3 Creativity in, out and before work

The final case I present adds another dimension to the analysis of the relationship between in-work and out-of-work creativity by exploring a third category, the before-work category, and attempts to understand how experiences gained before entering employment have impacted on his creativity both in and out-of-work now. I ask about these experiences:

> *Before my degree I did a lot of art.....but my degree has just taken away every single bit of enthusiasm I had for art, I mean I loved still scenes and obviously I still love graphics.....if you have an education it's theory, as well as practice and having that education has made me realise that art can be so pretentious and it really really annoys me now.....I have got a lot of respect for good art.....but its really.....killed my enthusiasm for doing my own art.....I think because it was in an educational context and you have to get all this stuff done for your final degree show.....and it was really really stressful.....I think that kind of carries on.....when I think of art now I just think its really stressful and I can't be bothered to do that. Graphic design while I was at university was my way of chilling out a bit. I could go and do a few hours at the student union job and really enjoy being there so that kind of led me on to really wanting to do what I'm doing now.*

Here we see her discuss the stress and the pressure experienced at university as there was a need to perform in order to get a qualification and that this made the artwork very stressful. She claims that doing graphic design, now her chosen career, was a way of relaxing from the

pressure of degree work. I was keen to probe this further and explore attitudes towards her work and how they have changed since entering the workplace. What she claims fits with Amabile's claim that intrinsic motivation is important for creativity; the lack of control over work at university could have led her to abandon her creative interests:

> *I go through.....little phases when I think "oh yeah, it'll be great to do some painting now" so I go out and buy nice paper and.....all the charcoals and I get home and.....I sit down to do it and I'm like "no, I can't be bothered" and I go and play on the piano.....So for the moment.....it's not something I'm doing much of. I think when I'm older.....and I've got a lot more time on my hands, I can see me doing it again.....I hope it comes back because I like doing stuff just for my own thing whereas graphic design is all for clients.*

Before asking about this in more detail I explore attitudes to her course in a little more depth:

> *We were taught in our course that it's not really.....about the technical ability anymore it's about ideas and..... getting these ideas across.....My end of degree show was all video art which is completely unlike me. Before I started I was.....a pencil drawer and I was told I was really good at it.....when I got there (to university) I was.....encouraged not to do life like drawing.....I was.....encouraged to do.....what fitted in with what was going on ten years ago.....I don't know if you know about the young British artists that Saatchi has got, its all very way out, and its better now but they were encouraging us to be.....pretentious just for the sake of it. To try and get a reaction.....the first thing I did got really bad marks because of that. Then I realised I'm just going to have to go with what they want because I need a good degree out of it so I conformed to it and did what they want to get my degree and that was quite hard actually to spend that time doing not what you want to do just for the benefit of them.*

Here we can see one of the possible consequences of considering recognition by a group of experts in a field as a way of defining creativity. This young artist, before entering the workplace, felt that in order to get a degree, a particular style of fashionable artwork was required to be produced for the lecturers. As a pragmatist she realised the need and the value of achieving good marks whilst at university and conformed to their requirements. This begs the question what happened to her creative potential?

She went on to claim that she did achieve a good degree and that the degree show was well received by tutors, colleagues and the public. The unintended consequence of this was that she no longer felt able to engage with art once leaving an academic institution. It suggests that there may be other artists with large amounts of creative potential who disengage from their creative work due to the expectations placed on them through their training. The augmented model of creativity does include the recognition of creativity as an important part of communicating creative discoveries to a wider audience; it is not however all that creativity is. This example demonstrates that fashion in art had a major impact on the perception of this participant's education, and that this has in part led to her feeling disenfranchised from 'art'. The question 'What would have become of her creative potential if the recognition of ability was less determined by the judgement of a group of experts?' remains open.

I ask how she feels about her creative potential in work and whether or not she has begun to fulfil it:

> *No not really.....I do enjoy the work I do.....I've got to understand that I'm working for a client and it's about what they want it's not about what I want, so when it comes to the art work sometimes I come up with an idea.....and the client said that's dreadful.....and that's kind of hard to take. Then you say "ok", take a step back and come up with a new one.....sometimes you come up with work and think that looks awful but the client is absolutely thrilled with it.....I've got to get used to that kind of thing happening. I don't know, here when we're doing like people with market shops there's not really much scope for us to do anything.....groundbreaking.*

I explore this further with her:

> *For the moment my creative side is not going forward in work, I take it forward outside of work but at the moment in work it's not really something that I'm trying to do.*

I ask whether she feels her creativity, both potential and performance are recognised within the organisation:

> *Occasionally, one of the problems I have at that place is.....as someone who really works hard.....at first all I got was negative feedback and I know some*

people will get that and say "right I'm going to prove them wrong" but that's not how I work.....I'll make the extra effort to do something.....an advert.....(came in)..... and I re-designed it for (the client) and they absolutely loved it.....suddenly we're getting more business every month because they're happy with the artwork and they were happy for that.....its quite nice when you do get that feedback.....I do get good feedback from sales.....they are really really good at giving you good feedback but I don't have any contact with (my boss) hardly ever.

So here she equates recognition with getting feedback, indeed getting positive feedback or praise for work that has been done. Whilst the lack of it here may leave her feeling under appreciated, it does not constitute a lack of recognition in the sense that this research is proposing. I probe further, but this time ask whether she has any un-actualised creativity, and/or does she ever hold onto creative ideas for any reason:

I don't. I think.....I've come up with really good designs outside work which I wouldn't use within work because it's too modern for.....most of the clients.....that's the reason.....I would hold it back not because I don't want them to have it.

Why not offer these designs?

I know that it would come back and they would ask for loads of changes.....when I first started I did try and do really good designs and they would come back and make changes to the text, or the graphic and just make it look awful again.....when you've done that a few times you just think "hang on, all this work I'm doing to try and make it look good".....you end up giving them exactly what you think they want.

So whilst she wouldn't deliberately hold onto ideas and is happy to give them to clients, she recognises that some of her work would not be appreciated and therefore doesn't attempt to communicate it. Whilst this is technically un-actualised creativity, it also reveals that she sees the ideas as inappropriate for the clients worked for. The important thing for the purpose of this research is to provide another example of how ideas can remain un-actualised within a design process, that is they exist but remain un-communicated. Once this category has been established, which this evidence goes part of the way to doing, we can then explore if there are any more meaningful examples of ideas that have existed but are not communicated, and

identify the causes of these circumstances.

I ask where she feels most creative:

> *Out of work, definitely. I think maybe because like this morning I had to do a job really quickly and I like to spend a bit of time doing you know, playing with it but this job came up and it was like "do it now" I mean the thing is that was fine but I could do so much better.....at home. When I'm designing something (at home) I do get to do it in my own time. I don't necessarily do it any slower.....it's just the fact that I'm not rushing....to get it done.....I am getting better and better at being able to work under pressure. So definitely at home I'm more creative and I use more of my ability.....I guess almost that's because it's.....for me as well and I want to make sure what I do I can do better and as I said at work the clients aren't going to go for what I would create for them so that restrains me from wanting to.*

So this case provides an insight into how this participant's pre-work experience influenced enjoyment of out-of-work creativity in the form of art and drawing but that this has been replaced by an enjoyment of music. It has also revealed that her in-work creative potential does actualise and she uses it on projects but in no sense of the word is all her potential being utilised.

Conclusion

Within these three organisations, creativity is considered a key feature of the roles that need to be performed. However, when asked, the employees claimed that their creative potential is only partially utilised, at best, and much of their creative potential and performance remains both un-actualised and unrecognised. It has been clearly demonstrated that in the world view of these participants, creativity *can* and *does* exist unrecognised and un-actualised; and there is a complex interplay between a person's perceived creative potential and their actual creative performance. There is, therefore, evidence to support the ontological claims, definition and augmented framework developed in earlier chapters. Having provided support for the possibility that this augmented model of creativity has the meta-theoretical sophistication to inform future research and theory, researchers can now turn to offering the causal explanatory accounts demanded by these important developments in understanding creativity. With this accomplished the final chapter can turn to some of the consequences of these findings.

8. Conclusion: from the ontology of creativity to the politics of creativity

'If the paradox and mystery are dispelled, our sense of wonder is not'

(Boden 2003)

In many ways, this thesis can be read as an exercise in the ontology of creativity. Earlier chapters established creativity as an act of discovery[92] and this in turn enabled further ontological claims about the nature of creativity to be sustained. Categories of creativity including *creative potential, unrecognised* and *un-actualised creativity* were shown to have the possibility of existence and it was also demonstrated how it might be that the human powers and capacities for creativity can move between contexts. The previous chapter used empirical research to provide evidence for the existence of these categories and detailed a complex interplay between a person's creative potential and the actualisation and recognition of it in organisations and across contexts.

Some of the participants hinted at what can be called the 'the politics of creativity'. Such political commentary is not alien to creativity studies (e.g. Prichard 2002; Sietz 1999); indeed they add to a long history of commentary from within the Humanist tradition (e.g. Ollman 1976; Mészáros 1975). I would like to conclude, then, by speculating briefly on how future research might move on *from the ontology of creativity to the politics of creativity*. Such a move is, of course, entirely in keeping with critical realism's emancipatory concerns. It also demonstrates that despite its abstract nature, ontology has lessons for politics. In fact, there are two broad political implications: those relating to the politics of creativity ***research*** and those surrounding the politics of creativity ***per se***.

8.1 The politics of creativity research

We know from recent developments in the sociology of science that all sciences have political biases built into their assumptions, arguments and conclusions – and there is no reason why creativity studies should be immune from this. Consider one such example. The dominant view of many creativity researchers is that some of us (the minority) can be creative and some of us (the majority) cannot. There is, however, very little conclusive evidence to support claims like this. The ontology of creativity developed in this thesis provides researchers with a meta-theoretical framework to explore the validity of such claims, by providing the means to think through the possibility that the creative potential (of the many) can turn into actual

[92] Whilst all acts of creativity must contain an act of discovery, the converse is not necessarily true.

performance (of the many). Without meta-theoretical and especially ontological clarity, claims that may appear to have 'scientific objectivity' are difficult to refute.

8.2 The politics of creativity per se

If creativity can exist as a potential, unrecognised, unexercised and un-actualised, and the human power for creativity can move between contexts, then the fact (and this research lends support to the idea that this probably is a fact) that we rarely see creative activity displayed in contemporary organisations should not (mis)lead us into believing that millions of people simply lack creative potential. Such misleading ideas fuel elitist policies aiming to make intellectual education available only for those deemed to be 'creative' and vocational education available for those deemed to lack creative potential. Rejecting these deceptive ideas should lead us to ask far more searching questions, not just of people *qua* agents, but of the class, gender, and race-based social structures, institutions and organisations that people find themselves interacting with.

If people are potentially creative, as my empirical research suggests, future research should enquire into what it is about these social structures, institutions and organisations that not only prevent workers' creative powers being exercised and actualised, but also prevent their exercised and actualised creativity from being recognised. This clearly means that issues of politics and power need addressing. For example, we might address the social, political and economic nature of the organisation. The possibility that the over-riding need to meet financial objectives (like maximising profit, sales or shareholder value) sets in motion strong tendencies (rooted perhaps in exploitation, alienation and commodification) that prevent workers' creative powers being exercised and actualised, could be a useful explanatory tool when considering the comments of participants in this research.

Consider another example. Rather than suggest people lack creative potential if they are not acting creatively, we should first explore whether it is something in the nature of the wider political power structures that actively prevents them not only from being able to be creative, but also from wanting to be creative. Should they manage to overcome these structural barriers, many contributions may well be ignored regardless of their merit. Structures of class, gender and race have previously been shown to negatively influence the achievement of certain groups in organisations and wider society, so let us first consider these influences on creativity before rejecting the potential of people to be creative. Future research should urgently seek to ascertain whether there are indeed widely prevalent countervailing tendencies in organisations and wider society, and seek to address them. Whilst explaining such scenarios was not the aim of this research, future research might fruitfully consider these lines of investigation

Although my empirical research did not explicitly set out to explore political implications arising from the constraining effects of social structures, institutions and organisations, many respondents mentioned this in passing. The effect of these constraining factors is not, of course, a new discovery. Organisational theory is littered with accounts (e.g. Sennett 1998; Walton 1985; Braverman 1974) of the effect of management control on employee performance and motivation. Indeed, in their own way, many creativity researchers are often attempting to explore ways to minimise the effect of such factors. The empirical work reported in Chapter Seven supports this literature, and strongly suggests that several constraints and restrictions are in play. Three examples - role restrictions, time pressures and financial pressures, should serve to illustrate the point:

Role restrictions

Many of the participants referred to their lack of creativity in-work as a consequence of the role they were asked to perform. Several examples were given which showed that, either through overt restrictions or an implied attitude towards their roles, participants felt they could not use all their creativity. Or in the words of the participants:

> *people do know I've got ability but they don't.....<long pause>.....they don't let me use it.*

> *Well I've been doing most of what I do now for about a year and you know literally, I'm just going over the same stuff.*

Time pressures

Time pressures took on two guises in their affect on the creativity of the participants in this research. The first was the lack of time they felt they had to get the job done. For example:

> *there are so many things that could be done.....that there isn't time for.*

> *There just isn't the time to think creatively which is a bit of a shame.*

> *but you'll come up with a better thing if you had a lot more time to spend on it.*

> *it gets to a point where you're just working all the time to urgent deadlines and you never actually get to slowing down to normal pace you're just*

running all the time and.....you're swimming hard just to get your head above water.

The second guise is the attitude managers reveal they hold towards giving time to be creative (often mirrored with the participants). Respondents often reported that the time for being creative was either on the way to work or outside of work, because there was no thinking time *in* work. There is also evidence to suggest that they did not even expect the organisation to offer creative thinking time. For example:

if I can have ideas then I should do, I should think of them in my own time and then come back.....and put them into practise

I mean I would always like to be more involved in the creative work and I do - do that in my own time.

Financial pressures

Most organisations, especially profit-seeking organisations, are strongly influenced by financial pressures. These pressures subsequently exert a degree of pressure on employees. For example:

and I think the whole company is suffering at the moment because we're trying to make money as opposed to doing work we enjoy,

and it's just because I'm tired.....I'm stressed_<I struggle[93]*> to go to sleep.....and I wish I could just come home and be fresh as a daisy, cook myself a nice meal and then go and see what I can create whether that be music or on the computer or with some wood. But I'm too tired to do it and even at the weekend.....even if I get up early I'll still sit in my dressing gown until two or three because I'm just shattered.*

These examples are just a few of the many I encountered during my field work.

In summary, by demonstrating that creativity can exist unrecognised and un-actualised, and by developing a framework for studying creative potential and how it moves between domains, we can begin to seek out the creativity not only of the few, but of the many. Until

[93] This section of the text was changed as it revealed some personal feelings which were not necessary to develop in order for the evidence to be of use.

such time that access to wealth and resources and the subsequent power and political consequences are proven not to hinder *creative potential*, the position of assuming all members of the population who do not *display* creativity, do not *have* any creative potential should be abandoned. Future research exploring and explaining exactly how creativity fails to actualise is very necessary indeed.

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