CREATIVITY AND SERVICE INNOVATION: AN EXAMINATION OF DIFFERENCES BETWEEN THEORY AND PRACTICE

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Abstract

This study addresses creativity and innovation literatures and explores the necessity for creativity in the implementation of service innovations in the English National Health Service. In doing so, it examines whether the standard definition of creativity (Stein 1953; Runco and Jaeger, 2012) is sufficient to explain the workplace creative practices associated with the implementation of a service innovation through the replication of best practice.

Based on a qualitative research design, and using a critical realist approach (Bhaskar, 1975/2008, 1998), this research unearths a rich seam of empirical data through observations and semi-structured interviews in an English National Health Service primary care organisation, known as a NHS Clinical Commissioning Group (NHS CCG). Although human creativity is an essential ingredient of any successful innovation, characterised by individuals and teams having 'good ideas' (Amabile et al, 1996), creativity has a crucial role in the development of new services (Zeng, Proctor and Salvendy, 2009). However, it is noted that there have been relatively few recent empirical studies of creativity in service innovation (Giannopoulou, Gryszkiewicz and Barlatier, 2014), and in particular in the public sector. Thus models of organisational innovation remain virtually unchanged over the last three decades (Anderson, Potočnik and Zhou, 2014), and have not attempted to account for creativity and service innovation in the English NHS.

The thesis makes a number of contributions to creativity and innovation literatures. It also provides some understanding of creativity and service innovation in a public sector health service context. First, the study provides empirical evidence for human creativity when new services are introduced through the replication of workplace practice from another geographical location or organisation. This means that the current understandings of creativity, which are focused on creativity as a teleological outcome, driving the production of novelty, for example a creative product, need to be

modified to account for novelty in a new context. Accordingly, a definition of creativity which accounts for contextual novelty is presented.

Second, the research study also contributes to existing knowledge by illuminating the creative practices of workers tasked with implementing service innovations. Hitherto, creativity research has focused attention on the importance of creativity in the earlier ideation stage of the innovation process (for example, West, 2002a). The empirical evidence presented in this thesis demonstrates that creative practices are also necessary at the back end of the service innovation process, and may be driven by human reflexivity, rather than more formal organisational structures, such as ideation workshops.

Third, there is a contribution to both creativity and service innovation literatures. These literatures are influenced by stage-gate models of innovation, with an ideation stage followed by an implementation stage. This research study suggests that future approaches to service innovation should embrace the innovation process as a whole social process rather than be separated into discrete segments.

A final contribution relates directly to the context of the research study. The English NHS is one of the world's largest employers, with strategic guidance provided by the Department of Health, and operational training and developmental needs met by NHS England. However, this top-down approach has not stifled the capacity of its workforce to problematise issues arising during the implementation of service innovations, even though there is a lack of purposeful guidance on how to do this. Instead, with the support of the local clinical and managerial leadership, front-line staff are able to address difficulties requiring creativity as they arose, drawing, primarily, on their reflexivity. Further, while the workforce is being creative, it is not associating their practices with creativity. Consequently, people lack a discourse of creativity, which would otherwise make further calls on their reflexivity, and positively impact on their productivity.

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List of Abbreviations

CCG   Clinical Commissioning Group

CT   Computerised Tomography (scanner)

CLAHRC-NDL – Collaboration for Leadership in Applied Health Research and
        Care – Nottinghamshire, Derbyshire and Lincolnshire.

GP   General practitioner (doctor of medicine)

IT   Information technology

MRI   Magnetic Resonance Imaging (scanner)

NHS   National Health Service

PCT   Primary Care Trust

RQ1   Research question 1

RQ2   Research question 2

Publications

The following conference papers relate to the research carried out for this PhD.

1. GORDON, S. (2013) Making a Claim for the Necessity of Creativity in the English National Health Service. In: International Association of Critical Realism Conference. Organizing for Alternative Futures. University of Nottingham, 29-31 July 2013.

2. GORDON, S., MARTIN, L. AND McDONALD, R. (2011) Creativity in the Health Service: A Theory-Practice Clash? In: British Academy of Management 25th Annual Conference. Building and Sustaining High Performance Organizations in a Challenging Environment. Aston Business School, Aston University, 13-15 September 2011.

3. GORDON, S., MARTIN, L. AND McDONALD, R. (2011) Creative Replication in Health Care: Where Structure and Agency Collide. In: British Academy of Management 25th Annual Conference. Building and Sustaining High Performance Organizations in a Challenging Environment. Aston Business School, Aston University, 13-15 September 2011.

Chapter 1 - Introduction

1.1 Purpose of the research

This thesis presents an account of aspects of workplace creativity in connection with the organisational practice of service innovation. It is developed from the researcher's previous work experience, and attends to contradictions between theory and practice in relation to the workplace creativity necessary for service innovations.

This thesis is informed by a number of key fundamentals, including:

1. Creativity is a universal human capability (Boden, 2004; Richards, 2007; Wilson, 2010; Florida, 2012).

2. In the context of work, creativity is possible in any job or by any employee (Shalley, Gilson and Blum, 2000), given the appropriate conditions (Shalley and Zhou, 2008).

3. Creativity is the cornerstone of innovation (Amabile et al, 1996).

4. Service improvement is driven, in part, by innovation (Sundbo and Gallouj, 2000).

5. At times, innovations arise through the use of a management improvement tool known as the replication of 'best' or 'good' or 'better' practice (Zairi and Whymark, 2000a, 2000b; Horbar et al, 2001; Newman, Raine and Skelcher 2000; Hartley, 2005; Department

of Health, 2011), which is an active rather than a passive process (Rashman and Hartley, 2002).

There are aspects of service innovation with which the researcher has been involved, in a work-related capacity, that demand creativity on the part of those engaged in service improvement projects. However, not all creative practice is explained by extant theory. The first area of concern addressed in this thesis relates directly to the 'standard definition' of creativity (Stein, 1953; Runco and Jaeger, 2012). The standard definition posits that creativity is a combination of two constructs: novelty and usefulness. Novel work without some utility is not considered creative, and neither is useful work without some novelty. Yet, while creativity researchers have assigned the construct of creativity to the person, the product, the process and the 'place' (climate) (Rhodes, 1961), creativity has not, in academic theory, been associated with the context in which it is being applied. This means that unless creativity may be explained in terms of any these four conditions, novel and useful practice cannot be considered to be creative.

However, it is argued here that creative practices do exist in organisations which fall outside of a description of the creative person, product, process or place. In the researcher's experience, creative practices are necessary when successful services and activities are copied from one organisation into another organisation. Extant theory suggests that such practice cannot be creative since the 'thing' that is copied is not original. This issue is examined

and unpacked later in the thesis, with a view to examining what is happening in practice.

The second area of contradiction between theory and practice relates to the extent of creative workplace practices associated with organisational service innovation. The extant theory suggests a front-loading of creativity in the early stages of the innovation process (Amabile, 1988; West, 1990, 2002a), through teams and individuals undertaking activities such as problem definition, idea generation and idea evaluation (Mumford, Mobley, Uhlman, Reiter-Palmon and Doares, 1991; Puccio and Cabra, 2012; Mumford, Hester and Robledo, 2012a). The later innovation implementation stage is considered to be less important in relation to the necessity of creativity (West, 2002a). However, current theory does not allow for what the researcher has observed and experienced in practice, so hence the deeper exploration of this second theory-practice contradiction.

Public sector organisations, including the English NHS, and businesses use the copying of so-called 'best practice' as a management tool to support and drive the improvement of services. Sometimes its use is connected to the production of an innovation and at other times it may relate to a smaller scale adaptation of an existing service. Whilst this technique for achieving organisational improvement has roots in benchmarking and total quality management practices (Zairi and Ahmed, 1999), it is also a model used in the UK public sector (Newman et al, 2000), and particularly NHS

organisations to secure service improvements and innovations (Department of Health, 2011).

The implications of the two theory-practice contradictions are that creative practices may remain unrecognised if they are not explained by extant theory. First, if creativity is necessary in the replication of workplace practice, then the fields' use of conceptions of the creative person, product, process and place fail to account for it. However, it is argued that it is the new context in which the replication of practice is happening that is critical in understanding employees' creative practices.

Second, if creativity is observed in the implementation of service innovations, then the extant theory, in both creativity and innovation literatures, is underdeveloped. Thus greater attention needs to be assigned to the workplace creative practices required for the implementation of service innovations.

1.2 Personal interest and experience

This research study is inspired by an inquiring mind, unafraid to ask questions and seek explanations of why the world around us is as it is. My own work experience, from early days as a technician in a local authority traffic engineering team in the mid-1980s, to a senior manager role at a county council in the early 2000s, to an independent management

consultant in the late 2000s, has had significant bearing on my interest in creativity research.

During my career to date, I have worked across various major public sector projects and policy initiatives, including the engineering design of part of the 'Red Route' network of traffic management controls in London, the piloting of the first UK government 'Safer Routes to School' programme, advising senior politicians and managers in relation to a new system of 'modernised' local government, the project leadership of wholesale review of the scope and provision of a county's library services and, in collaboration with NHS professionals, I led comprehensive review of sexual health services. I have also co-written a number of national guides researching and identifying 'best practice' in health and social care public services, and was a member of a national steering group with responsibility for preparing government guidance for involving patients and the public in shaping local NHS services. Indeed, much time and effort has been spent visiting organisations, near and far, assessing whether their 'best practice' (Zairi and Whymark, 2000a, 2000b), or 'potentially better practice' (Horbar et al, 2001), was potentially transferrable to other organisations.

It is in this territory that my work experience has led me to identify apparent inconsistencies between theory and practice in the field of creativity research. First, in relation to my work researching best practice, and its potential for transfer to other organisations, I learned that the 'copying' of best practice services and activities from one organisation into

another is far from straightforward. If significant attention is not paid to differences in situational and organisational contexts when replicating (or copying) such workplace practices, then this method of improving services may be problematic. I found that my team and myself had to draw upon what I now understand to be creative behaviours in order for the practice of replication to succeed. For example, in the late 1990s, as part of the Safer Routes to School programme, my engineering team 'copied' the original design of the 'Walking Bus', developed in a rural location in a county area, and implemented it in various locations in a London Borough setting, in a built-up environment. A straightforward replication of the scheme operating in a county setting would not have worked. So, for each location, we worked with individual communities to identify what the local problems were, and using creative practices, such as problem definition, information gathering, idea generation and idea evaluation, implemented a series of bespoke schemes to suit the challenges in specific areas.

The current understanding of creativity, with its dominant reference to the creative product, would not support a view that my team's work practices were creative. This is so as the 'thing' being introduced, which was a new combination of physical civil engineering measures and continuing service-like activities supporting parents and children to walk to school safely, would not be considered sufficiently 'novel' for the outcome to be creative as its basis was a replication of what already existed elsewhere (Caroff and Lubart, 2012). Further, there was no 'language' of creativity in the organisation I was working in. The absence of a discourse for creative

practices meant that we were unaware that our schemes of work may have been creative in any way. We were a team of civil engineers and engineering technicians, and had not received any training or development in using creative problem solving methods. On reflection, and now with an understanding of creativity theory, our working practices were highly creative, yet they would likely still remain unrecognised as such through a review of existing creativity literature. Creativity in a contextual sense is not theorised, hence the first disconnect between theory and practice.

Second, in connection with the design and introduction of both new and replicated services, I found that workplace creativity is necessary throughout the innovation process, rather than loaded at the front-end alone. For example, when designing major road safety improvements in a local area, the involvement of local communities in shaping technical design brought out many more issues requiring consideration than a simple engineering approach without such community engagement might have done. Through work practices I learned that service innovation often does not reach a position of 'standardisation' in the same way that a product innovation might (Abernathy and Utterback, 1978; Utterback, 1974). Thus, attention to the creative practices of a workforce goes beyond the initial 'creativity stage' and deep into what is termed the 'innovation implementation' stage (West, 2002a), and our experiences represented regular working practice rather than an occasional state.

My PhD research is thus intrinsically connected to the search for understanding what is happening in relation to creativity in the process of innovation in service organisations. I am interested to find evidence for some of the unrecognised, everyday creative practices of people working in service organisations; those employees who produce novelty in the context in which they are working, and yet brush off their evident creative practices, by saying, 'it's just what I do'.

1.3 Research context and contribution

This research study seeks to make a contribution to the understanding of the importance of creativity when used by organisations to drive service innovation. The foregoing paragraphs have set out some of my work experiences and illustrated two theory-practice contradictions.

The focus of this research, and consequential gathering of empirical data, is to unpick the practices of employees involved in service innovation, and to find evidence, or not, of workplace creativity.

The research was conducted in an English NHS organisation, known as a clinical commissioning group. The NHS CCG is a clinically-led membership organisation which is statutorily responsible for the commissioning of a range of hospital and community based health care services, and given it is comprised of a group of general practices, it also is able to design and implement new schemes of primary care. Part of the wider NHS, which

employs over 1.5 million people, and has an annual budget in of over £100 billion, the NHS CCG is one of the many organisations that make up the NHS. During the financial year 2014/2015, it had a notional, and not insignificant, revenue budget in excess of £100m. As part of its formal authorisation as a NHS organisation, the NHS CCG was required to design and implement service innovations with the aim of improving local healthcare services. Thus it provided an opportunity to study the implementation of service innovations over a period of time.

A critical realist methodology is used (Bhaskar, 1975/2008; 1998), utilising qualitative research techniques of observation, interviews and document analysis. The dominant research philosophy used in creativity research is positivist in nature, with research studies being carried out using quantitative research methods, such as survey questionnaires, followed by statistical analysis. Such studies are often, but not exclusively, conducted in 'experimental' settings. However, positivist research relies on a Humean concept of 'cause and effect'. This suggests that if creative practice is not directly observed then, with a positivist / empiricist approach, it does not exist. Instead, using Bhaskar's (1975/2008, 1998) critical realist approach, it can be argued, philosophically, that creativity may exist recognised, recognised but undetected, or as an unexercised power (Martin and Wilson, 2014a). Using critical realism as an under-labourer enables the researcher to explore the possibility that employee creativity exists, but that it may remain undetected. Indeed, at times, creative practices may exist unrecognised or remain unactualised in work settings, as a result of many

factors, including political and power processes (Martin, 2009; Martin and Wilson, 2014a). Thus, appropriate qualitative research techniques are operationalised in order to detect creative practices in working organisations.

1.3.1 A case for contextual novelty

The first area of research concerns the sufficiency of the existing 'standard definition' of creativity to account for the production of novelty in connection with the replication of workplace practice. Creativity arises from the combination of the 'novelty' and 'usefulness' of the creative output or outcome (Stein, 1953; Runco and Jaeger, 2012), and often manifests itself in a creative product (Rhodes, 1961; Stein, 1974; Amabile, 1983).

The creativity literature suggests that any replication or copy of that which exists, such as a product or a service, can neither be original nor novel (Caroff and Lubart, 2012). This means that the organisational work practice of the copying of what works in one place into another place, through the identification and replication of 'best practice', cannot, in current theoretical terms, be considered creative. Yet it is argued, from the researchers' work experience, that creative behaviours are necessary, in practice, for the implementation of replicated service activities. The research aims to find out if employee creativity is operationalised in a service organisation involved in implementing service innovation through copying industry 'best practice'. If evidence of creative practice is found, then the extant definition

of creativity will need to be modified to account for the novelty of the context, or situation, in which the creative replication is taking place.

1.3.2 A case for creativity throughout the service innovation process

The second area of research relates to understanding the necessity of creativity in relation to service innovation. Theoretical models of organisational innovation devised by Amabile (1988) and West (1990) remain influential in creativity literature and so continue to inform creativity theorists (Anderson et al, 2014). In both of these models, creativity, or ideation as it is sometimes referred to (Shalley and Zhou, 2008), is particularly important in the early stages of the innovation process. Though Amabile (1988) and West (2002a, 2002b) note that creativity may be required elsewhere in the innovation process, they are less prescriptive about precisely where, when and how. Indeed, Shalley and Zhou (2008) comment "*in the organizational literature, creativity has been commonly referred to as the ideation component of innovation, while innovation includes both ideation and the application of new ideas (i.e. implementation)*"(p.6). It is also noted that the separation of the innovation process into, at least, two stages has led to boundary conditions for creativity being established, with an emphasis on creative practices being required in the early steps of a new innovation, rather than elsewhere in the process.

Given that Anderson et al (2014) and Shalley and Zhou (2008) reflect that there has been little theoretical development in creativity research relating to the organisational innovation process over the past 25 to 30 years, it is argued in this thesis that it is unclear if the original models (Amabile, 1988; West, 1990), devised at least a decade or so in advance of early theories of service innovation[1], reflect modern, creative work practices in the context of service innovation. Similarly, Giannopoulou et al (2014) note a lack of depth to empirical research relating to creativity and service innovation, and reinforce the call by Crevani, Palm and Schilling (2011) for a better understanding of innovation in relation to the everyday operations of service organisations.

Yet, from the researcher's work experience, creative practice has been necessary throughout the service innovation process. There is some support for the expansion of the role of creativity in the innovation process too. Rickards (1996) suggests, "*we have accepted without challenge that creativity occurs at the front end of innovation*" (p.23). Instead, "*creativity [is] a dynamic that can be found throughout the process*" (*ibid*, p.24). The research aims to identify if employee creativity is utilised in a service organisation involved in implementing service innovations, whether they be new innovations or arising through creative replication of best practice. If evidence of creative practice is found during the implementation of service

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[1] Gallouj and Weinstein (1997) set out one of the first theories of service innovation.

innovations, then the understanding of the role of creativity in the service innovation process will need to be modified accordingly.

1.4 Structure of the thesis

The thesis is divided into seven chapters, described as follows:

Chapter 1: This chapter provides an overview of the content of the thesis. It sets out the purpose of the research, and the researcher's personal interest and experience. It also identifies the context of the research study, and indicates the nature of the contribution.

Chapter 2: An overview of the literature relating to creativity in organisations is offered. Though there is no universally agreed definition of creativity, it identifies that creativity is centred on a combination of novelty and usefulness (Stein, 1953). This has been termed the 'standard definition' (Runco and Jaeger, 2012), and its application in research has largely focused on the creative product (Amabile, 1983, 1988; Woodman et al, 1993, Oldham and Cummings, 1996). It is noted that the field of organisational creativity has a relatively short history (Shalley and Zhou, 2008), with influential models of the role of creativity in organisations, in psychological literature, being initially developed as recently as the late 1980s (Amabile, 1988; West, 1990; Woodman et al, 1993).

Chapter 3: Given the lack of a depth of research into the role of creativity in service innovation (Giannopoulou et al, 2014), this chapter unpacks organisational innovation, locating its origins with the work of Joseph Schumpeter (1934, 1939, 1942). A taxonomy of the dimensions of innovation, largely developed from studies in manufacturing, is presented and the emergence of the importance of service innovation, and public service innovation, is outlined. Theoretical models of organisational innovation by Amabile (1988) and West (1990), which place creativity at the front-end of the innovation process, are introduced and discussed. The chapter ends with a review of the current creativity literature in relation to service innovation (Zeng et al, 2009; Giannopoulou et al, 2014). The research questions are also presented at the end of the chapter.

Chapter 4: The purpose of this chapter is to establish the use of a critical realist methodology (Bhaskar, 1975/2008; 1998) as being an appropriate philosophy for this study. The qualitative research design is detailed, including methods and analysis. Background information to the case study, set in an English NHS organisation, is also provided.

Chapter 5: This chapter locates the existence of creative practice in the workplace inside the NHS organisation at the start of a series of service innovations. This observation is consistent with extant theory. It also reports evidence of creative practice of employees involved with a service innovation arising from the replication of best practice. The chapter

illustrates that creativity is necessary when replicating best practice from one organisational setting into another organisational setting.

Chapter 6: This second empirical chapter explores the necessity of creativity in the implementation stage of the service innovation process. It draws on two service innovation projects undertaken by the NHS CCG. The evidence demonstrates that creative practices are necessary not only at the beginning of an innovative project, but also during the later innovation implementation stage too.

Chapter 7: This chapter discusses the implications of the thesis, synthesising the empirical research and the extant creativity and innovation literatures. It addresses each of the research questions and identifies the key research findings, that: 1. The extant theoretical understanding of creativity is insufficient to recognise the workplace creative practices of those involved with implementing service innovations arising from the replication of best practice, and 2. Creativity is necessary during the implementation of service innovations. Accordingly a new definition of creativity is suggested. Chapter 7 also identifies limitations and suggestions for future research.

Chapter 2 – Theoretical foundations of creativity

2.1 Introduction

Creativity, in the context of organisations, can be described as both an outcome and a process, and is a relatively new and emerging research area (Shalley and Zhou, 2008), with increasing importance (Agars, Kaufman, Deane and Smith, 2012). Early research in this field explored the social psychology of creativity in organisations (Amabile, 1988) and the situational and dispositional factors in organisations which affect creativity (Woodman et al, 1993). More recent academic studies of organisational creativity have focused on personal and environmental factors that could facilitate or inhibit creativity, such as leadership (Basadur, 2004; Shalley, Zhou and Oldham, 2004; Reiter-Palmon and Illies, 2004; Hargadon and Bechky, 2006; Tierney, 2008), teams and groups (West, 2002a; Shalley, 2008; Paulus, 2002, 2008; West and Sacramento, 2012), and climate (Oldham and Cummings, 1996; Amabile et al, 1996; Hunter, Bedell and Mumford, 2007; West and Sacramento, 2012).

Indeed, given that creativity seeds organisational innovation (Amabile, 1988; Amabile et al, 1996; West, 1990, 2002a; Mumford, Hester and Robledo, 2012b) through a range of activities including idea generation (Anderson, De Dreu and Nijstad, 2004; West, 2002a) and idea evaluation (Puccio and Cabra, 2012), the importance of workforce creativity in the early twenty-first century cannot be overstated. Creativity is considered to

be at the front-end of the organisational innovation process, with more mundane, though demanding, business operations driving the implementation of such innovations (West, 2002a). That innovation is a driver of economic growth (Council on Competitiveness, 2005; Department for Business, Innovation and Skills, 2014) and improvement in performance in public sector organisations (Mulgan and Albury, 2003) is further evidence of the need for service organisations to have a strong understanding of the importance and value of workplace creativity.

Since the early 1950s, the focus of general creativity research has been on the creative product, the creative person, the creative process and the creative place ('climate') (Rhodes, 1961). Much attention has been given to the recognition of the creative product as an outcome (Amabile, 1983, 1988, 1996; Woodman et al, 1993; Oldham and Cummings, 1996), and organisational creativity researchers continue to have an interest in the production and application of novel ideas (Shalley and Zhou, 2008). Whilst there is no universally agreed definition of creativity, a consensus exists amongst many psychologists involved in creativity research that creativity is a combination of novelty and usefulness (Stein, 1953). This attention to a balance of these characteristics has more recently been referred to as the 'standard definition' of creativity (Runco and Jaeger, 2012).

Given that creativity is a key component to success in the workplace (Mumford and Licuanan, 2004), the study seeks to find evidence, or otherwise, for employee creativity associated with a business improvement

model termed 'the replication of workplace practice'. In this model, organisations seek to identify so-called 'best practice' in one organisation, and replicate it within their own organisation (Zairi and Whymark, 2000a, 2000b). It is a practice used to support operational efficiencies and effectiveness in businesses and public sector organisations. The English NHS advocates the copying of best practice as a tool to support service improvement through innovation (Department of Health, 2011). However, creativity theory struggles to account for this practice being creative, since the outcome – the replicated workplace practice – is unlikely to be sufficiently novel or original (Caroff and Lubart, 2012) in a strict interpretation of the terms of the standard definition of creativity.

Though the notion of a 'standard definition' is welcome, there remains some difficulty with the judgement of what is creative, and what is not. Amabile (1982, 1983, 1996), with her consensual assessment technique, and Csikszentmihalyi (1988, 1999), with his systems view emphasising the interrelationship between the individual, the field and the domain, have attempted to produce models which provide some assistance in making this judgement. However, both assessment methods rely on third party validation - for Amabile (1983) on *"appropriate observers"* (p.33) and for Csikszentmihalyi (1988) on *"a group of peers"* (p.326). That creativity is defined as an outcome through recognition in this manner is problematic in modern organisations (Wilson, 2010). It also suggests that research on unrecognised creativity is not possible – given that, *ipso facto*, an outcome is only creative if it is recognised as such. It is noted that Martin (2009) points

towards issues of workplace power and politics in constraining the recognition of human creativity. Further, Martin and Wilson (2014a) suggest that reliance on the standard definition can obscure creativity, and thus our understanding of novelty and usefulness, leading to theory-practice inconsistencies.

Creativity can also be described as a process, as well as an outcome (Shalley and Zhou, 2008). Given the difficulties described in an earlier paragraph in relation to the recognition of creativity when considered as an outcome, this thesis will seek evidence of creative practices during organisational service innovation processes, to account for creativity that might otherwise exist unrecognised. Thus attention will also be given to the process of finding and solving creative problems (Mumford, et al, 1991; Mumford et al, 2012a; Sawyer, 2012). This means that the identification of workplace creative practices such as problem definition (Mumford and Gustafson, 1988), information gathering (Sawyer 2012; Mumford et al, 1991), idea generation (Sawyer, 2012; Puccio and Cabra, 2012; Anderson et al, 2004; Paulus, 2000; West, 2002a) and idea evaluation (Puccio and Cabra, 2012) will be important. Similarly, the expertise of employees involved in innovative activity and the organisational climate in which they work will also be of interest.

This introduction has provided an overview of the key issues in creativity research that are important to this study. The remainder of the chapter is structured as follows. Section 2.2 provides an account of creativity

literature, including the identification of problems with the standard definition, and suggests that a lack of discourse for workplace creativity may contribute to the failure to recognise creative practices. Subsections also include information about the assessment of creativity and creative behaviour relevant to this thesis. Section 2.3 completes the chapter with a set of conclusions.

2.2 Defining creativity: issues and contradictions

The field of creativity is contested. There is no universal acceptance of a single definition, nor is there a single theory of creativity. Instead, there exists:

> "*[a] panoply of perspectives...[and]...a multitude of definitions, conceptualizations, domains, disciplines that bear on its study, empirical methods, and levels of analysis, as well as research orientations that are both basic and applied*" (Kozbelt, Beghetto and Runco, 2010, p.21).

However, in her literature review of creativity, George (2007) comments on "*an exciting era for research in organizations*" (p.439), and reflects on the elusive nature of the construct of creativity, and that "*theorizing and research on creativity is proceeding in anything but a linear fashion*" (p.440).

The following sub-sections will concentrate on understandings and theories of creativity relevant to the focus of this study. It will be shown that the

standard definition for creativity, with its emphasis on the recognition of creativity as the production of novelty, is insufficient to account for the workplace creative practices necessary when something, for example a service arising from the identification of 'best practice' and which is necessarily not original, is introduced into a novel context. Further, extant beliefs of creativity, whether misguided or not (Sawyer, 2012), preclude a discourse of creativity in the English NHS, even though there is a pluralistic approach to theories of creativity (Kozbelt et al, 2010). It is argued that this, in turn, has led to the failure of NHS clinicians and managers to usefully utilise the creative practices of their fellow employees. Finally, it will be shown that an understanding of creativity based upon the recognition of the creative product also fails to be a useful tool for accounting for the creative behaviours of a workforce when implementing replicated service activities.

2.2.1 Problems with definitions of and contexts for creativity

The standard definition (Stein, 1953) is premised upon two key criteria: 'novelty' and 'usefulness', with a particular constraint: that creativity is achieved through its recognition by others that the outcome is indeed creative. Stein (*ibid*) elaborated on his interpretation of novelty:

> "*By 'novel' I mean that the creative product did not exist previously in precisely the same form. It arises from a reintegration of already existing materials or knowledge, but when it is completed it contains elements that are new.*" (p.311)

Stein's (*ibid*) use of the word 'product' implies that creativity results in a tangible, physical thing – an artefact that can be, in some way measured, or gauged, for being both novel and useful. Thus, the absence of characteristics of novelty and usefulness renders the product, *de facto*, non-creative. However, creativity is not exclusively seen through the form of a product. It may also exist in other forms, including through creative people (personality traits and individual differences), creative processes (mental processes that are operative in creating ideas), and the creative environment (the ecological press on the person and her mental processes) (Rhodes, 1961). Theoretically, creativity has also been accounted for as persuasion (Simonton, 1990) and as existing in potential (Runco, 2003a, 2003b).

Essentially, a challenge for this thesis is whether the standard definition of creativity is sufficient to account for the employee creativity when replicating successful workplace practices identified in one organisation, and copying them into a new organisational context. However, considering this reveals a tension between theory and practice. For if an organisation is concerned with achieving improvements in efficiencies and effectiveness through copying best practice from elsewhere (Zairi and Whymark, 2000a, 2000b) then, in terms of extant creativity theory, such replication of workplace practice, when used as a service improvement in a new context, <u>does not</u> require human creativity. This is because the product or outcome, that is the workplace practices existing in a new context, will not be sufficiently different from the workplace practices in the original source

(Caroff and Lubart, 2012). It is argued, though, that if creativity is necessary to achieve the replication of workplace practice, then the standard definition may be considered insufficient to describe contemporary working practices, and thus requires adjustment.

Such an extension of Stein's (1953) standard definition, which was initially considered a 'placeholder' rather than a permanent account of creativity, is not new. Other creativity researchers have modified Stein's (*ibid)* standard definition for their own purposes. Barron's (1955) interest in creativity research led him to examine 'originality', suggesting that:

> "*The original must be defined relative to the usual, and the degree of originality must be specified statistically in terms of incidence of occurrence. Thus the first criterion of an original response is that it should have a certain stated uncommonness in the particular group being studied.*" (p.478).

Barron (*ibid*) also qualified the instance in which something may be 'original', in so far as calling on the necessity for it to be "*adaptive to reality*" (p.479). Indeed, Stein (1953) was also not absolute in his definition, stating that, "*the extent to which a work is novel depends on the extent to which it deviates from the traditional or status* quo" (p.311). Runco and Jaeger (2012) note the continued failure of the field to unite behind a single definition (Mumford and Gustafson, 1988). This state of affairs has provided researchers with both opportunities and difficulties. Kozbelt et al (2010)

assert that "*pluralism*" (p.20), that is the multitude of theoretical perspectives associated with creativity research, provides a more robust understanding of human creativity than ever before. However, difficulties have arisen too. In recent years, some creativity researchers have cited more recent understandings of the definition of creativity without regard to the standard definition (Runco and Jaeger, 2012).

Creativity researchers have sought to build their own definitions of creativity, relying on alternative words to 'novelty' and 'usefulness'. Runco and Jaeger (2012), seemingly influenced by Frank Barron's (1955) notions of 'originality' prefer "*originality and effectiveness*" (Runco and Jaeger, 2012, p.92), whereas Kaufman and Sternberg (2010) use the terms 'novelty' and 'quality'. Stein (1974) reaffirms earlier notions of novelty and usefulness, and also discriminates between novelty that is "*of some significance*" (p.15) and that which is not so significant, and so does not merit being creative. Indeed, to help identify creativity, Stein (*ibid*) emphasises the importance of using "*experts or close observers*" (p.45) when judging whether something is creative or not. However, the recognition of workplace creativity is bound up with issues of power and politics (Martin, 2009), and at the mercy of political, economic or social factors (Martin and Wilson, 2014a).

It is reflected that Stein's (1953, 1974) definition of creativity was merely intended as a placeholder until research had confirmed the criteria necessary to separate creativity from other human capabilities (Martin and Wilson, 2014a). Even though Stein's (1953) understanding of creativity was

intended as a stopgap, it has influenced much creativity research, which does not formally recognise its initial pragmatic nature.

Amabile (1982) went further than Stein's (1974) call for 'judgements of creativity'. She recognised that a major obstacle to research was the criterion problem – that is, the lack of a clear operational definition and appropriate assessment methodology. To deal with this, Amabile (1982) constructed a pragmatic definition of creativity, known as her 'consensual definition'. This, too, was intended to be temporary until a better understanding of creativity could be achieved:

> "*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 or 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 is judged.*" (Amabile, 1982, p.1001).

Amabile (1982) identified creativity as an outcome, and argued that the consensual definition rested on two assumptions: [1] that it is possible to obtain reliable judgements of the creativity of products, given an appropriate group of judges, and [2] that there are "*degrees of creativity - that observers can indeed say, at an acceptable level of agreement, that some products are more creative or less creative than others*" (*ibid*, p.1001).

Amabile (*ibid*) summed up her consensual definition, by saying that the creativity of a product is "*something that people can recognize when they see it*" (ibid, p.1001). Like Stein's (1953) definition, Amabile's (1982) definition is problematic too in terms of its use to explain contemporary organisational creativity, given the complexity of organisations, and a 'turn' of world economies towards services, and away from manufacturing (Florida 2002, 2012). However, it must be reminded that Amabile's (1982) consensual definition was developed for operational purposes in pursuit of her research, and should be used in that context alone, or with appropriate markers.

Stein (1953) also recognised, but didn't explain in any further detail, the importance of the environment, or context, in which the creativity occurs:

> "*[Novelty] may well depend on the nature of the problem that is attacked, the fund of knowledge or experience that exists in the field at that time, and the characteristics of the creative individual and those of the individuals with whom he is communicating*" (p.311).

However, Csikszentmihalyi's (1988, 1999) 'systems view' takes the concept of creativity in a slightly different direction. Rather than answer the question, 'What is creativity?', Csikszentmihalyi (1999) pays attention to the issue of 'Where is creativity?' Instead of considering creativity as being located within an individual or as a feature of a work produced, Csikszentmihalyi (*ibid*) suggests that creativity is not the product of the

individual alone, but the relationship between the individual and the zeitgeist. Csikszentmihalyi (1988) emphasises the relevance of the environment, arguing that creativity is the product of three distinct "*shaping forces*" (p.325): [1] a set of social institutions, known as the 'field'; [2] a stable cultural 'domain'; and [3] the 'individual', who brings about change in the domain, a change that the field considers to be creative (Figure 2.1). Like Amabile's (1982) consensual definition of creativity, and that of Stein (1974) before her, Csikszentmihalyi's (1988, 1999*)* systems view requires creativity to be affirmed through the judgement of others. For Csikszentmihalyi's (1988) conceptual model, creativity demands social agreement through "*a group of peers to evaluate and confirm the adaptiveness of the innovation… [to] differentiate what is creative from what is simply statistically improbable or bizarre*" (*ibid*, p.326).

Figure 2.1: Csikszentmihalyi's systems view of creativity
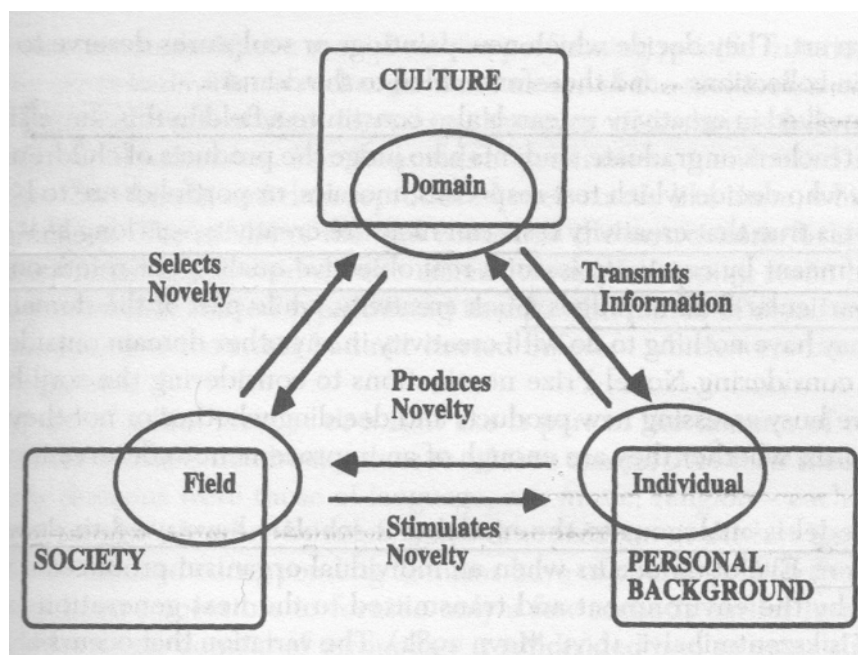
Source: Csikszentmihalyi (1999, p.315)

The emergence of the purposeful study of creativity in a social setting (Amabile, 1982, 1983, 1996) has encouraged other researchers to explore the relationship between creativity and innovation, thus applying creativity in an organisational context. In describing creative behaviour as "*the production of novel solutions to significant social problems*" (Mumford and Gustafson, 1988, p.28) it is noted that creativity is not a homogeneous psychological attribute, but, rather, determined by a complex interaction between the attributes of the individual and the attributes of the environment. However, for Mumford and Gustafson (*ibid*), judgement of creativity rests on measures of external criteria, such as overt production criteria, for example, patent awards, professional recognition through occupational awards and by social recognition, as in Csikszentmihalyi's (1988, 1999) concept of a 'field'. Mumford and Gustafson's (1988) understanding of creative behaviour may indeed work well when there are awards schemes in place, and when organisational power and politics are diminished, but, it is argued here, that the reliance on such awards can also deny the existence of creative practices elsewhere.

The issue of 'usefulness' (Stein, 1953), or 'appropriateness' (Sternberg and Lubart, 1999), is not straightforward – as it asks the questions, 'useful or appropriate to whom?' and, 'who is the judge of that?' Yet, whilst it is understood, and the premise is accepted within this thesis, that innovation is seeded by creativity (Amabile 1988; Amabile et al, 1996; West, 2002a; Mumford et al, 2012b), a lack of a language of creativity in organisations

such as the English NHS, perhaps a result of organisational hierarchies, appears to be a barrier to its recognition.

The visible pursuance of novelty in the English NHS is also problematic in certain circumstances. From an organisational perspective, Woodman et al (1993) focus on creative behaviour at an individual level. Creativity is defined "*the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system*" (p.293) (Figure 2.2). Woodman et al (*ibid*) also contextualise creativity as a sub-set of innovation – which itself is part of 'organisational change'. However, they also contend that "*innovation can include the adaptation of pre-existing products or processes, or those created outside the organization*" (p.293), suggesting that this type of innovation is not directly related to 'creativity', as they emphasise that creativity is about "*doing things for the first time anywhere or creating new knowledge*" (p.293).

Figure 2.2: Woodman, Sawyer and Griffin's systems model of organizational creativity
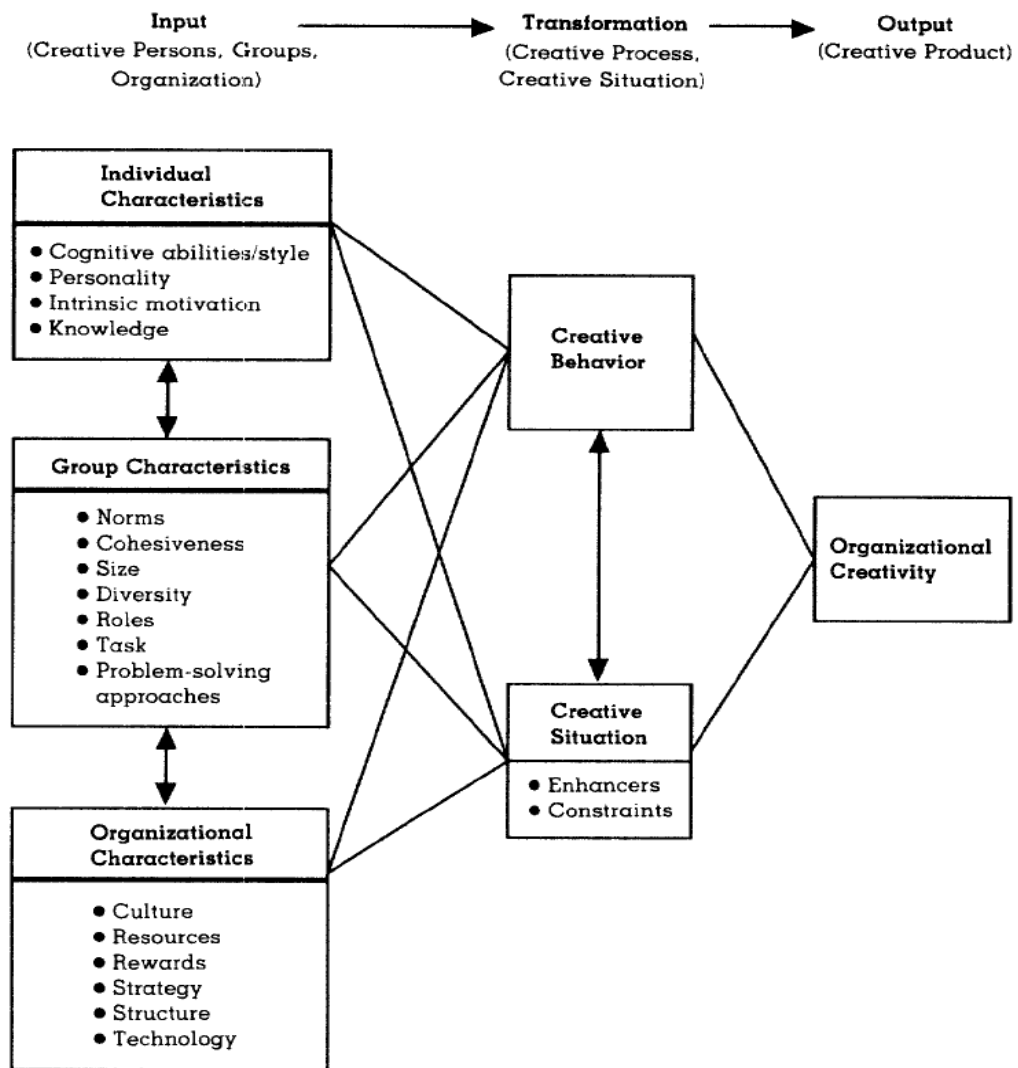
Source: Woodman, Sawyer and Griffin (1993, p.309)

Woodman et al (*ibid*) argue that the integration of "*process, product, person, and situation [brings interactional psychology] into a more comprehensive theory of organizational creativity than previously proposed*" (p.294). Given the intra- and inter-organisational nature of the design, commissioning and

provision and delivery of health services in English NHS organisations[2], Woodman's et al's (*ibid*) description of a 'complex social setting' seems to be met in this instance. Within organisations, including the English NHS, creative performance is influenced by a range of factors, including, but not necessarily exclusively, individual, group and organisational characteristics, social and contextual influences and the environment (Figure 2.3).

Boden (2004) offers an interesting insight into individual creativity, which offers some support insofar as understanding how the workplace practices of individual employees may be considered novel, and so creative rather than mundane. In developing her notion of creativity, Boden (*ibid*) argues that not only is human creativity new and valuable – consistent with the standard definition (Stein, 1953) – but that it is also "*surprising*" (Boden, 2004, p.1). Boden (*ibid*) also contends that creativity is a human condition, an aspect of intelligence, and something that is "*grounded in everyday abilities such as conceptual thinking, perception, memory, and reflective self-criticism*" (p.1), and that it is found, to a degree, in every human being.

In the context of this thesis, Boden's (*ibid*) assertion that creativity is a human universal helps to shape the research design, thus all employees involved in projects will be included in the observation[3]. Rather than cast

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[2] An account of the English NHS CCG case study is presented in Chapter 4. This account includes more detail in relation to the operational nature of English NHS organisations.

[3] Subject to the appropriate informed consent being given.

creativity as an 'all-or-nothing affair', Boden (*ibid*) examines the site, or place, of creativity.

Figure 2.3 Woodman, Sawyer and Griffin's systems model of organizational creativity – hypothesized linkages among factors related to organisational creativity

Individual Characteristics

Social Influences

Group Characteristics

Environment

Individual Creative Performance

Group Creative Performance

Organizational Creative Performance

Contextual Influences

Contextual Influences

Organizational Characteristics
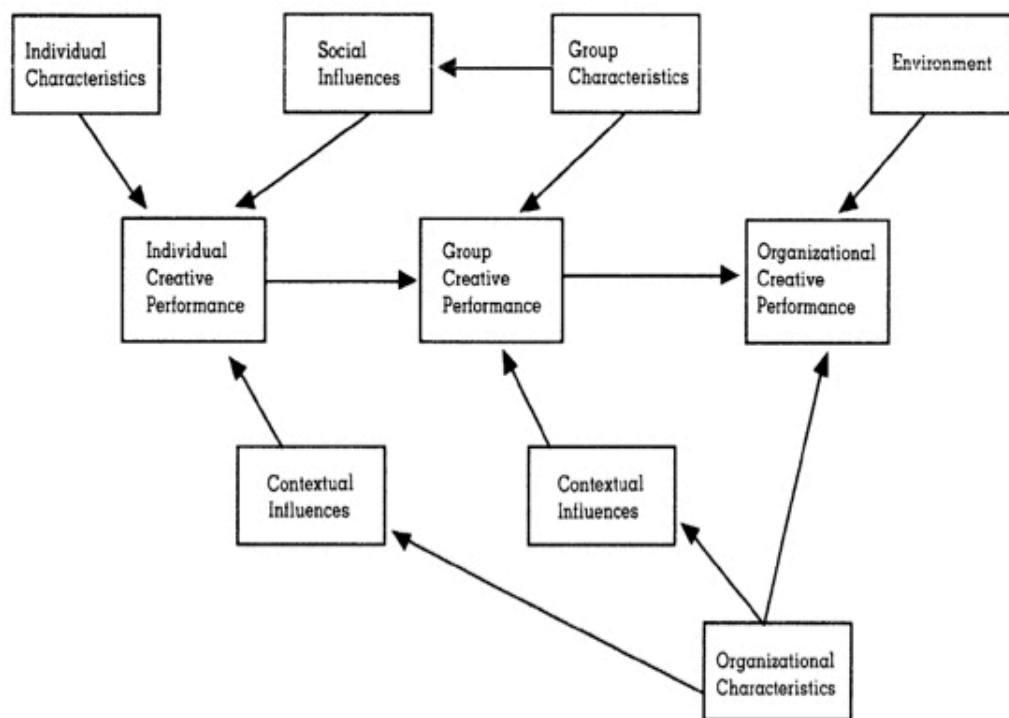
Source: Woodman, Sawyer and Griffin (1993, p.311)

Two 'different' types of creativity are identified: 'psychological' creativity (also termed P-creativity) and 'historical' creativity (also termed H-creativity). 'P-creativity' involves "*coming up with a surprising, valuable idea that's new to the person who comes up with it. It doesn't matter how many people have had that idea before*" (Boden, 2004, p.2). It is thus possible for others to have had the idea before, and still for the idea to be creative under

the concept of P-creativity. The 'second sense' of creativity, but less common, is H-creativity, which applies to *"ideas that are novel with respect to the whole of human history"* (*ibid,* p.43). Indeed, in terming H-creativity as "*the more glamorous notion*" (*ibid*, p.43), she also reminds us that such ideas can only be provisionally H-creative, as often it cannot be assured that it was actually the first expression of a particular idea. The discrimination between H-creativity and P-creativity provides firm grounds for exploring the contextual nature of 'novelty'. For if novelty can be conditional, in psychological terms, to an individual, then it may also be possible to conceive novelty in other ways too, for example in a new situational context, such as a new location or organisation.

Yet, within all of this work, there is no means to understand how creativity might be required to replicate best practice. In workplace settings, the introduction of new services through the replication of workplace practice from another geographical location or organisation, may mean the new context is so different that creative behaviours are required to translate the best practice from one domain to another. This is regardless of whether the idea, process or service may have initially existed elsewhere. When ideas, processes, services, changes in practice, and ways of doing things are translated to other workplace settings or contexts, then it could be that the novelty within the new context is what drives the need for creative behaviour. Such 'contextual novelty' may produce 'creative replication', if creative behaviour is necessary during the replication of workplace practice into a new organisational context.

In summary, the extant creativity literature does not explain the creative practices associated with the introduction of replicated (in this case) service activities in a new organisation. If creative practices are indeed necessary to drive the introduction of the replicated services in a new context or setting, then the extant understanding of creativity needs to be modified to account for a construct of contextual novelty.

Having demonstrated a case for the existence of contextual novelty, an account of applied creativity is now examined. The following sub-section illustrates that novelty in a new context is not accounted for in organisational creativity literature, yet creative behaviours are required when organisations are faced with the implementation of creative replication.

2.2.2 Creative replication, contextual novelty and problems with existing understandings of creativity in organisations

Contemporary organisational creativity researchers continue to adopt the standard definition suggested by Stein (1953), focusing on the principles of novelty and usefulness. Exploring the group processes underpinning organisational creativity, George (2007) has described workplace creativity as "*coming up with new ways to combine old or existing ideas, procedures, and processes to arrive at creative solutions to problems*" (p.463). George's (*ibid*) contextualisation of this type of creativity recognises the reality that in many organisations novelty is sought through investigating the possibility of

developing existing ideas and ways of doing things. On first sight, it could be argued that George's (*ibid*) 'new ways' might include the workplace practice of creative replication, but the focus of creativity remains on the 'creative product', rather than developing an understanding of the context in which the product is produced. It is the inability of creativity literature to explain contextual novelty that is problematic. Further, in examining the relationship between creativity and innovation, in an organisational context, Mumford et al (2012b) describe creativity as "*the production of high quality, original, and elegant solutions to problems*" (p.4). Again, there is a focus on the creative product, or outcome, rather than the context.

The application of creativity to problem solving in the workplace is emphasised by Shalley and Zhou (2008). They suggest the construct can be described as both an outcome, such as, for example, a product, and a process, such as the continuous process of finding and solving problems, and implementing new solutions. The notion of creativity as a process is not new (Wallas, 1926; Rhodes, 1961; Amabile, 1983; Mumford and Gustafson, 1988; Mumford et al, 1991; Mumford et al, 2012a, Sawyer, 2012; Puccio and Cabra, 2012). Creativity has been applied with the aim of making a significant impact on work performance through "*continuously discovering and defining new problems, solving those problems and implementing new solutions*" (Basadur, 2004, p.103).

However, while there is a case for the study of creativity as both outcome and process, the field struggles to recognise creativity in some

organisational circumstances, such as associated with 'copying' or 'the replication of (best / better) practice'. Instead, Caroff and Lubart (2012), citing Lubart's (1994) definition of creativity, based upon novelty and usefulness, suggest that produced work "*must be novel in the sense that it goes beyond a replication or copy of that which exists*" (p.13). This approach, once again focuses on the creative product or outcome, and so renders the concept of 'creative replication' invalid. For Caroff and Lubart (2012), replication or copying of work does not produce novelty or originality, regardless of whether the produced work is useful and appropriate. Yet, for Shalley and Zhou (2008), creativity may be expressed as a process, thus any creative practices undertaken as part of the creative replication of a new service, such as problem finding, information gathering, idea generation and idea evaluation (Mumford et al, 1991; Mumford et al, 2012a; Sawyer, 2012) cannot adequately be explained in extant creativity literature if not directly associated with the production of 'novel' work.

Sternberg, Kaufman and Pretz (2002) examine the tension between creativity and the workplace practice of replication, in pursuit of developing Sternberg's (1999) taxonomy of types of creative contributions. Indeed, Sternberg et al (2002) reason that replication or copying lacks novelty, since for an idea to be original it should, 1. reiterate a known idea in a new way, 2. move a field forward along its current trajectory, 3. move a field forward in a new direction, or 4. lead to an integration of diverse trends in a field. This taxonomy of how an idea may be novel or original (Caroff and Lubart, 2012)

is consistent with creativity being associated with a discrete product or outcome.

Indeed, Sternberg's (2006) propulsion theory demands that a creative contribution, "*represents an attempt to propel a field from wherever it is to wherever the creator believes the field should go*" (p.95), thus moving a field from some point to another. However, in relation to the type of creative contribution which Sternberg (*ibid*) terms 'replication', he contends that:

> "*the [replication] is an attempt to show that the field is in the right place. The propulsion keeps the field where it is rather than moving it forward. This type of creativity is represented by stationary motion, as of a wheel that is moving but staying in place*" (Sternberg, 2006, p.96).

Sternberg's (*ibid*) conception of 'replication' differs from that which is used in this thesis. In this research study, replication is used to imply a 'copying' of a thing. As a result of the replication of workplace practice, in the context of this thesis, the new outcome is a forward development on what existed before, not a static position as suggested.

Recent research by Martin and Wilson (2014a) also recognises a theory-practice inconsistency in the application of the conventional understanding of creativity in an educational setting. Martin and Wilson (*ibid*) argue that current thinking in creativity research, and in particular the standard definition which privileges the creative product or outcome, prioritises

value judgements over and above creative potential. In order to account for creative practice, a new definition of creativity is suggested, with the notion of discovery at its core. Drawing upon the critical realist philosophy of Roy Bhaskar (1975/2008; 1998), Martin and Wilson (2014a) suggest an alternative definition of creativity: "*Human creativity is the capability to discover and to bring into being, new possibilities*" (p.37).

The overwhelming consensus in the existing literature is that the standard definition (Stein, 1953; Runco and Jaeger, 2012), with its roots in a combination of novelty and usefulness, and variations of it, is favoured among psychologists to explain the concept of creativity. It is supportive of the creative product, or outcome, and locates creativity with the individual. However, it is argued here that the recognition of creativity in this context is problematic. This is particularly so in organisations, where issues of power and politics may be influencing factors in the recognition of creativity (Martin, 2009). Thus the 'usefulness' of a product or outcome may be denied by peers or by other expert judges for reasons other than objectivity.

Similarly, the dominant understanding of the construct of novelty encounters difficulties when considered in the context of the modern workplace. Once again, the 'deviation' from what existed before is subject to peer assessment and review, with the possibilities of creativity remaining unrecognised for the same reasons as before. Further, such assessment is also based upon the novelty of the creative product or outcome – which is a tangible 'thing'. This thesis examines creativity in the context of service

innovation. While the nature of services is discussed in greater detail in Chapter 3, it is helpful to note here that services and service activities are different from goods[4] (Hill, 1977), and are of an immaterial nature (Illeris, 1989).

This thesis seeks to examine two contradictions between theory and practice. One of the contradictions[5] relates to the use of the service improvement tool in organisations of the replication of workplace practice. This management tool is used to support and drive organisational efficiencies and effectiveness. It relies on copying successful work practices from one organisation, into another organisation. A review of creativity literature suggests that this practice of replication is not creative, because the product or outcome is not sufficiently original, but a replica of what exists elsewhere. However, this denies the possibility of creativity being required in the 'context' because of the novel combination of contextual factors acting as a barrier to successful replication (discussed later in Chapter 5). Thus a new understanding of creativity is required to account for the possibility of creative practice being associated with the replication of workplace practice.

The next sub-section identifies (mis)beliefs about creativity held in the general population, from which workforces are created. It highlights a

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[4] The terms 'goods' is used in economics literature to mean a physical product. In psychological literature, the term product is frequently used to mean the same thing.

[5] The second contradicition in practice is explored in Chapter 3.

possible reason for the lack of a discourse of creativity in the workplace, and suggests a way forward for a common language of creativity, that goes beyond traditional conceptions, and which may embrace contextual novelty.

2.2.3 Creativity as "something that others do": the lack of a discourse for workplace creativity

The construct of creativity is studied across several different disciplines, for example, in psychology, sociology, anthropology, biology and computer science (Sawyer, 2012). Whilst there is a general recognition that creativity researchers embrace creativity as a singular interdisciplinary concept (Sternberg and Lubart, 1999; Sawyer 2012) much of the research into creative practices has drawn solely on the psychological theory and it is within these approaches that this work sits. However, beliefs about creativity vary from country to country (Sawyer, 2012). The notion of human creativity has a long history, which can be traced back to pre-Christian times, with early accounts of genius (Runco and Albert, 2010).

Modern creativity research, which dates from the 1950s and 1960s (Sawyer, 2012), is no longer confined to the study of the so-called individual genius and the magical but, rather, is guided by purposeful research practice. Yet in spite of this academic activity, a number of "*roadblocks*" (Sternberg and Lubart, 1999, p.4) to creativity research remain, including the publication of a plethora of popular management books which associate the phenomenon with commercialisation (George, 2007), and the continued belief, in some

people's minds, that creativity is a spiritual process (Sternberg and Lubart, 1999).

Such roadblocks have had the effect of leaving many of the general population associating creativity with either something they cannot possibly achieve themselves, as in the high arts, or as a phenomenon that has little value to scientific study. It is of little surprise that Sawyer (2012) has produced a taxonomy of Western cultural beliefs about creativity – some completely false, some partially true. For example, a mistaken commonly held belief is that 'people are more creative when they are alone'. Yet the academically driven evidence, in support of getting good ideas, points towards collaboration and communication with others.

Whilst a detailed review of innovation literature is undertaken in Chapter 3, it is helpful to note that the recognition of workplace innovation in the context of the implementation of services is also problematic (Voss, 1992; Toivonen and Tuominen, 2009). This has implications for the recognition of creative practices in the workplace too. For if service innovation is not recognised by those involved in the innovation process, then it is argued that creativity may also exist unrecognised.

Florida's (2002, 2012) account of the rise of a 'creative class' offers some hope in relation to understanding of the importance of human creativity. His underpinning argument is that "*every human being is creative*" (Florida, 2012, p.xi). However, there appears to be a paradox in that while a claim to

the existence of a creative class is championed, such a claim also has the effect of categorising a 'non-creative class' too. 'Working class' and 'service class' labels are attributed to those who "*are primarily paid to do routine, mostly physical work*" (*ibid*, p.9), though it is said that "*creativity in the world of work is not limited to members of the creative class*" (*ibid*, p.10).

Florida's (2012) notion of creativity being a social process rather than an individual phenomenon is welcomed. Conceptualising creativity as a social process rather than the traditional view associated with the production of novelty, or the characteristics of the creative individual, opens up philosophical space for a notion of contextual novelty. However, the classification of creativity by means of employment category, such as a creative class, a service class, etc., puts at risk the idea that human creativity is a universal capability.

Instead, given the reality of modern workplaces that they are spaces where power and politics can contribute to the failure to recognise workplace creative practices (Martin, 2009), it is suggested that creativity may remain unrecognised, where there is an absence of a discourse creativity within an organisation. Thus, though conditions are in place for an understanding of creativity beyond the product, person, process or place (Rhodes, 1961), there is something limiting about Florida's (2012) focus on the creative class, and its association with creative organisations, rather than a wider perspective.

Wilson's (2010) concept of social creativity provides some illumination. He argues that creativity is a key part of the modern workplace, involving people in different organisations, representing different disciplines and operating at different hierarchical levels. Calling for creativity to be 're-claimed' as a social phenomenon, Wilson (*ibid*) captures an essence of Florida's (2012) notion of creativity as a social process.

Wilson (2010) develops creativity as a social process even further, noting the potential for creativity across the workforce. Further, in critiquing Csikszentmihalyi's (1996) systems view of creativity in organisations, Wilson (2010) recognises problems associated with the continued dominance of the individualistic notion of creativity in such models. Instead, he argues that social creativity helps to understand how interaction <u>across</u> organisational and professional boundaries enables "*the realisation of human beings' creative potential*" (*ibid*, p.368). In challenging the dominant paradigm in creativity research, Wilson (*ibid*) also develops a case for the recognition of creativity beyond "*a particular type of talented person*" (p.371), including the creative practices of the "*marginalised*" (p.368).

Citing Negus and Pickering's (2004) viewpoint that creativity can be both exceptional and ordinary, and elevated and mundane, Wilson's (2010) notion of the creative economy is broader than that of Florida (2012), and is "*founded on both the creative potential of all individuals and the social conditions, especially the relations between ourselves*" (Wilson, 2010, p.372). Wilson's (*ibid*) notion of social creativity, encouraging "*actionable crossing of*

boundaries that isolate parochial identities and reductionist ideas" (p.373) is a welcome and refreshing alternative to the traditional understanding of creativity as the production of a novel and useful good, etc. It also provides some space for a discourse of creativity in the workplace which is not about the creative product.

Additionally, it affords consideration of the operationalisation of what has been termed in this thesis, 'contextual novelty' – the undertaking of such creative practices in a workplace setting which may not necessarily led to the introduction of something that is novel and useful (cf. the standard definition of creativity), but nevertheless requires human creativity for its implementation (cf. creative replication).

The lack of a discourse of creativity, at least in domains outside of the so-called creative economy, risks the perpetuation of a misconception of the understanding of creativity: that it is <u>not</u> a universal characteristic of human behaviour, thus its value in the workplace is diminished. Whilst Florida's (2012) idea that creativity as a social phenomenon is a development on traditional understandings of creativity, it is Wilson's (2010) notion of creativity as a social process that spans boundaries, whatever they might be, that is more supportive of an appropriate language of creativity that reaches beyond the tradition definitions relating to the measurement and recognition of creativity as an output or a process.

The next sub-section explores the many theories of creativity that exist, though none appear to satisfactorily address the issue of contextual novelty.

2.2.4 The absence of an explanation of contextual novelty in contemporary theories of creativity

Creativity has been studied as a way to achieve a better understanding of novel and useful behaviour, products and processes in the areas of clinical, cognitive, differential, personality, development, and social psychology (Sternberg et al, 2002), and also, more recently, in organisations (Zhou and Shalley, 2008; Mumford, 2012). But not all creativity theories are the same, or even similar. And as well as there being a number of interpretations of the definition of creativity, there are also many theories too, summarised by Kozbelt et al (2010). Indeed, it has been argued that creativity is better understood if "*no one theoretical perspective is emphasized at the expense of others*" (*ibid*, p.20).

In advance of examining the taxonomy of creativity theories (Table 2.1), Kozbelt et al (*ibid*) suggest that a knowledge of magnitudes of creativity is helpful in better understanding the array of theories of creativity that exist. In this regard, it is noted that Stein (1953) initially commented on the importance of the recognition of the 'magnitude' of creative achievement, and inquired of size of the departure from the *status quo* that the environment within which the achievement was made actually permitted. Stein (*ibid*) also noted that, hitherto, the study of creativity had been focused

on 'the genius', identified through the "*deviation*" (p.311) between what was achieved and what existed before.

Table 2.1: Summary of theories of creativity	
<u>Category</u>	<u>Primary assertion</u>
Developmental	Creativity develops over time (from potential to achievement); mediated by an interaction of person and environment.
Psychometric	Creativity can be measured reliably and validly; differentiating it from related constructs (IQ) and highlighting its domain-specific nature.
Economic	Creative ideation and behaviour is influenced by "market forces" and cost-benefit analyses.
Stage and Componential Process	Creative expression proceeds through a series of stages or components; the process can have linear and recursive elements.
Cognitive	Ideational thought processes are foundational to creative persons and accomplishments.
Problem Solving and Expertise-Based	Creative solutions to ill-defined problems result from a rational process, which relies on general cognitive processes and domain expertise.
Problem Finding	Creative people proactively engage in a subjective and exploratory process of identifying problems to be solved.
Evolutionary	Eminent creativity results from the evolutionary-like processes of blind generation and selective retention.
Typological	Creators vary across key individual differences, which are related to macro- and micro-level factors and can be classified via typologies.

Systems	Creativity results from a complex system of interacting and interrelated factors.

Adapted from: Kozbelt et al (2010)

While the taxonomy of theories of creativity set out in Table 2.1 illustrates that traditional explanations of creativity can be achieved through a creative product, or an outcome, and through problem solving practices, it also reveals limitations in our understanding of creativity. None of the above theories are able to satisfactorily account for the contextual novelty required to ensure the successful introduction of new, but not necessarily original, services.

A discourse of creativity that is predicated on creativity seeding innovation, rather than being necessary for the implementation of an innovation, and a focus on a tangible outcome, or product and its confirmation as a creative act through recognition by a set of peers acting as judges, limits what can be claimed about creativity. The final sub-section addresses the measurement of creativity and creative behaviour in more detail.

2.2.5 Assessment of creativity and creative behaviour

It has been asserted that organisational creativity may be described as both an outcome and a process (Shalley and Zhou, 2008). Essentially, the measurement of creativity has been consistent with the positivist tradition (Plucker and Makel, 2010) relying on direct observation, using a variety of

quantitative research techniques (Long, 2014). This means that, whether for the creative product, process, person or environment, creativity is measured through the statistical analysis of empirical data gathered through, for example, psychometric tests or peer rating schemes[6], etc. Critics of such assessment methods refer to a lack of predictive, discriminant and construct validity (Plucker and Makel, 2010). However, it is also argued that such methods limit our knowledge and recognition of creativity. In places where there is no discourse for creativity, unrecognised creative practices may continue to exist and consequently peer rating schemes, and similar measures, do not seem an appropriate assessment tool.

Further, as Wilson (2010) notes, creativity is a social process, crossing borders, including disciplines and professions. Thus, what may be 'recognised' or 'accepted' as being creative in one domain, may not be so in another domain, hence the problem with Csikszentmihalyi's (1988, 1999) systems view. Amabile's (1982) notion of creativity as being "*something that people can recognize when they see it*" (p.1001) continues to inform measurement and recognition of creativity, with an emphasis on the product as a measureable, in some way, creative output (Gilson and Madjar, 2011). Thus, the implementation of a new set of service activities, that are new in a situational context but a replication of what exists in another organisation located elsewhere, would, in all likelihood, fail Amabile's (1982) test if a group of peers knew the new service activities were replications. This would

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[6] A detailed and thorough account of the assessment of creativity may be found in Plucker and Makel (2010).

be so even if the workforce used creative practices to implement the replicated activities into a new context.

This thesis seeks to conduct empirical research in order to identify whether or not creative practices are necessary when replicating a service innovation in a new context. Evidence of workplace creative practices[7] will be sought, through observation and interviews, of creative practices in a real-world setting. The context for the research is a workplace [8] requiring the production of viable and original solutions to problems that call for creativity (Ghiselin, 1963). In this setting though, the originality relates to the context rather than the novelty of the replicated service activities.

A creativity / creative practice assessment framework is presented in Appendix 1. This framework has been assembled following a review of creativity (and innovation) literature(s) relating to outcome and behavioural measures which have been observed through empirical research. This practice is consistent with techniques supporting the assessment of creativity suggested by Mumford et al (2012a). Such measures include an assessment of outcome measures and behaviours as part of the process (Mumford et al, 1991; Mumford et al, 2012a; Sawyer,

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[7] It is noted that Mumford and Gustafson (2012) describe creative problems as "*ill-defined, novel, complex, and demanding*" (p.34), stating that these types of problems call for multiple cycles of problem-solving activities.

[8] The workplace is a English NHS CCG. It is an organisation which has, among its reponsibilities, a need to of design, commission and provide a range of health care services, which, at times, may be innovative.

2012), including problem definition (Mumford and Gustafson, 1988), information gathering Sawyer, 2012; Mumford et al, 1991), idea generation (Puccio and Cabra, 2012; Anderson et al, 2004; Paulus, 2000; West, 2002a) and idea evaluation (Puccio and Cabra, 2012).

2.3 Conclusion

There is no universally accepted definition of creativity in the literature used by psychologists to explain the construct. Further, there is also no single theory of creativity. Instead there are a plurality of understandings and theories. However, it is generally accepted in the field that creativity is a combination of novelty and usefulness, despite increasing recognition of issues in this definition (Martin, 2009; Martin and Wilson, 2014a; Martin and Wilson, 2014b).

Indeed, if creative workplace practices are necessary when organisations seek to improve services through copying and implementing best practice from another organisation, then the standard definition becomes difficult to sustain. Without novelty, replication does not require creativity. Yet, my previous work experience has indicated that creative practices are indeed necessary when replicating work-related services and service activities in a new organisational context. Having established that contextual novelty may well require creativity from those implementing the replicated services and service activities, it is necessary to understand whether the service

innovation literature makes any comment on the need for creativity during

those implementation phases of the innovation process.

Chapter 3 - Creativity and Innovation: Locating Creativity in the Service Innovation Process

3.1 Introduction

In the early twenty-first century, the practise of innovation dominates the world we live in: in work, in politics, in sport and in the communities where people live. The importance of organisational innovation to business organisations and public sector services cannot be overstated. It is in connection with the achievement of human progress that the concept of innovation has been shown to be important: economic growth is predicated upon the success of innovation in both manufacturing and services (Gopalakrishnan and Damanpour, 1997; Clayton, 2003; Hamel and Getz, 2004; Council on Competitiveness, 2005; Department for Innovation, Universities and Skills, 2008; Department for Business, Innovation and Skills, 2014).

However, innovation is not just about opening up new markets, it is also used as a tool of organisational improvement to further develop existing markets (Tidd, Bessant and Pavitt, 2005). Innovation research developed as a specific activity in the 1960s, with studies relating to manufacturing (for example, Hollander, 1965; Myers and Marquis, 1969). Research was mainly informed by the theories of economic development of Joseph Schumpeter (Fagerberg, 2005). More recently, innovation research has examined service

industries (Miles, 2000) and public sector services (Djellal, Gallouj and Miles, 2013), and continues to be informed by Schumpeterian thinking (Toivonen and Tuominen, 2009). Furthermore, it is noted that innovation research is multi-disciplinary (Ettlie et al, 1984), with many of the studies being carried out under the gaze of economists, technologists, sociologists, organisational scientists and business and management academics (King, 1990; Gopalakrishnan and Damanpour, 1997; Fagerberg, 2005).

Creativity research related to the study of innovation has a more recent history. Researchers have focused their attention on the role of human creativity in the organisational innovation process (Mumford and Gustafson, 1988; Amabile et al, 1996), with early studies locating creativity at the front-end of the process (Amabile, 1988; West, 1990; West and Farr, 1990; Woodman et al, 1993; West 2002a). Creative practices such as problem definition, information gathering, idea generation and idea evaluation (Mumford et al, 1991; Mumford and Gustafson, 2012) have been identified as evidence of creative problem solving in organisations (Mumford et al, 2012a).

Later innovation studies by creativity researchers have examined specific aspects of the innovation process relating to creativity in more detail, such as idea generation (for example, Shalley et al, 2004; Litchfield, 2008) and leadership climate (for example, Oldham and Cummings, 1996; Shalley and Gilson, 2004).

However, there is a dearth of research relating to creativity and service innovation (Giannopoulou et al, 2014), with models of organisational innovation, for example those devised by Amabile (1988) and West (1990), not having significant theoretical development since their inception nearly three decades ago (Anderson et al, 2014). Sundbo's (2010) conception of 'creativity-in-the-process' recognises the necessity for late stage creativity, associated with problem solving, in the service innovation process. However, while, Sundbo (*ibid*) notes the social nature the innovation process, and that it may involve a range of employees, managers and others, he does not further explain the nature or scope of creativity during the innovation implementation stage. Rather, it appears to be a pointer to towards further research. This means that not only does academic theory continue to locate creativity in the early stages of the organisational innovation process, but also there has been no sustained deliberative investigation of the role of creativity in service innovation, and how it might differ from its role in industrial and technological innovation.

This thesis examines the workplace creative practices necessary for the implementation of radical or incremental service innovations, whether they arise from the copying of best practice from elsewhere, or if they are new schemes of service innovation arising from a programme of creative problem solving within an organisation. The extant creativity <u>and</u> innovation literatures suggests the necessity of creativity at the front-end of the organisational innovation process (for example, Amabile, 1988; West, 1990, 2002a; Rogers, 1983; Schroeder, Van de Ven, Scudder and Polley,

1986, 1989/2000). The later 'innovation implementation' stage requires more deliberative management practices, in a demanding working environment[9] (Rogers, 1983; Schroeder et al, 1986, 1989/2000; West, 2002a). However, the researcher's work experience has pointed towards employee creativity being as necessary for the successful implementation of service innovations, as in the early stages of a service innovation.

So, if creativity is necessary, then the question needs to be asked, how might workplace creativity necessary for the implementation of service innovations be accounted for? This chapter identifies and critiques the appropriate creativity and innovation literature which has informed current thinking, and explores the more recent theoretical developments relating to service innovation and public sector innovation.

In section 3.2, I begin by unpacking the relationship between creativity and innovation, setting out the models of organisational innovation developed in the late 1980s, and which are typical of innovation models in creativity literature. Section 3.3 provides some contextual background information relating to the development of general innovation theory. In section 3.4, I illustrate similarities and differences between products and services, demonstrating how innovation models developed through the study of manufacturing industries are not relevant to an understanding of the

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[9] West (2002a) notes that creativity may be required during the innovation implementation process since unanticipated problems might emerge, though 'how' or 'when' is not unpacked any further.

necessity of creativity in service innovation. Finally, in section 3.5, I conclude with a summary of my findings, and the implications for this study. I also set out the research questions.

3.2 The link between creativity and innovation

Creativity is the cornerstone of all innovation (Amabile et al, 1996), and often the first step in an innovation process (Mumford and Gustafson, 1988; Shalley, 1991; West, 2002a, West 2002b). Indeed, it is argued that it is the creative idea, that can be translated into new products and services, and into new ways of working leading to the emergence and development of new forms and types of organisations, that holds primacy (Andriopoulos and Dawson, 2009).

For psychologists involved in creativity research, the concept of creativity is explained by the combination of novelty, or originality, and usefulness, or effectiveness (Stein, 1953; Runco and Jaeger, 2012). So, for Amabile et al (1996), when claiming that "*successful implementation of new programs, new product introductions, or new services depends on a person or a team having a good idea – and developing that idea beyond its initial state*" (p.1154), there is congruity with the prevailing standard definition of creativity (Stein, 1953).

It is also evident in Amabile's et al's (1996) research that the creativity required is necessary at the front-end of the innovation process. Little has

changed in that thinking since the turn of the twenty-first century, illustrated by the review of creativity and innovation research over the period 2002-2013 by Anderson et al (2014). Anderson et al (*ibid*) also found that extant creativity research typically examines the initial idea generation stage, whereas innovation studies focus on the later stage of idea implementation[10]. However, in spite of Anderson et al's (*ibid*) finding that multi-stage models of the innovation process, such as advocated by Amabile (1988) and West (1990), remain at the forefront of research to explain the role of creativity in the innovation process, they also note that King (1992) found support for a less well-defined initiation / implementation stage innovation process, where "*researchers and managers…[must not] assume that the natural or ideal manner for innovations to progress is in a linear sequence of discrete stages.*" (p.100).

The following two sub-sections outline two models of organisational innovation which are ubiquitous in creativity literature, and provide examples of how creativity is 'front-loaded' in the organisational innovation process[11].

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[10] West (2002a) terms these stages, the 'creativity stage' – the development of ideas, and the 'innovation implementation stage' – the application of ideas.

[11] It is noted that both of these models were produced nearly a decade ahead of the development of the first theories of service innovation.

3.2.1 Outlining Amabile's (1988) model of organisational innovation

Amabile's (1988) stage-model of the organisational innovation (Figure 3.1) is one of the earliest conceptions developed by a creativity researcher of how creativity informed the innovation process. Though Amabile (1988) accepted that her model was "*a preliminary one*" (p.151), it remains influential in creativity and innovation research (Anderson et al, 2014). The model is the product of the application of Amabile's (1983) theory of a social psychology of creativity in a workplace or organisational setting, and is informed by other multi-stage models of innovation which emerged from studies of innovation in manufacturing (Myers and Marquis, 1969; Cummings and O'Connell, 1978; Kanter, 1983; Van de Ven, 1986).

Figure 3.1: Amabile's componential model of organisational innovation
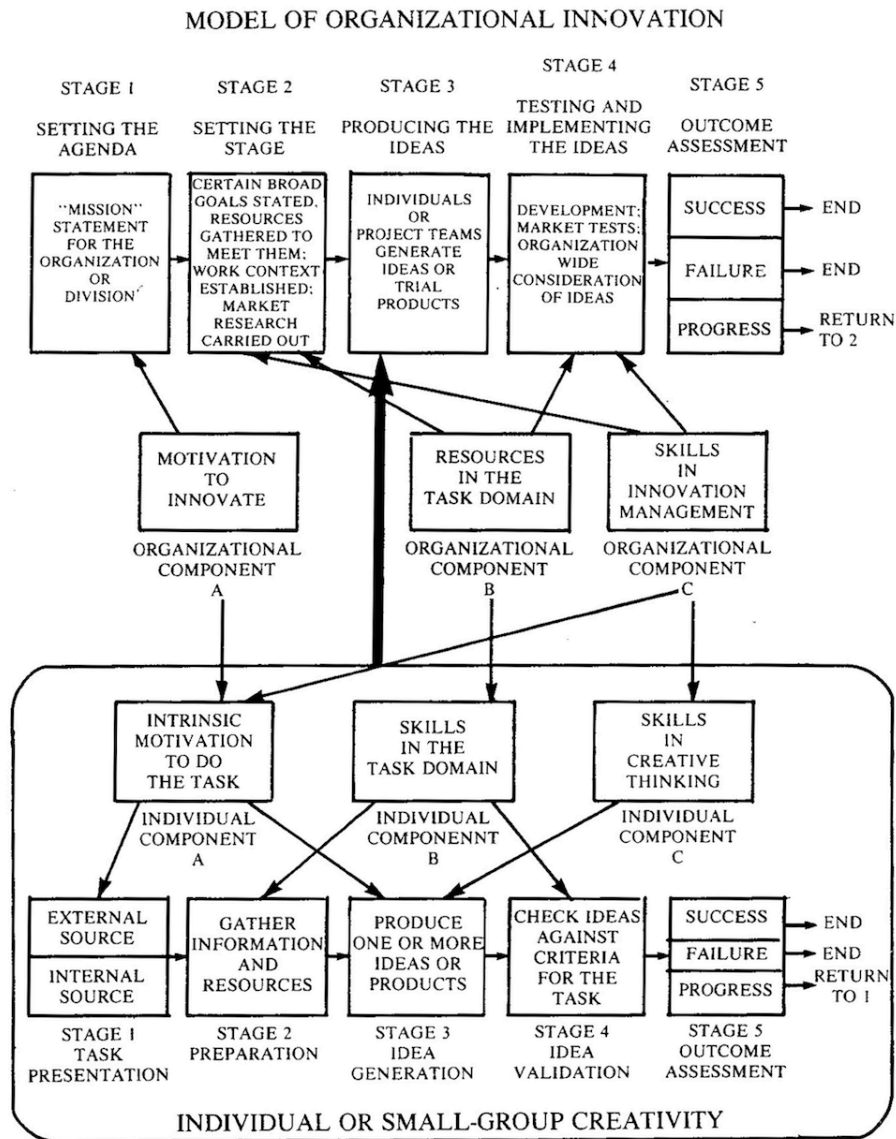
MODEL OF ORGANIZATIONAL INNOVATION

In Amabile's (1988) model, creativity is understood as "*the production of novel and useful ideas by an individual or small group of individuals working together*" (p.126), and organisational innovation is "*the successful implementation of creative ideas within an organization*" (p.126). The 'ideas' that Amabile (*ibid*) refers to include ideas for new products, processes, or services within an organisation's line of business, as well as ideas for new procedures and policies within the organisation itself.

For Amabile (1988), though, the 'initiation stage' presented is similar to the two-stage models[12] in innovation literature (Knight, 1967; Normann, 1971; Kanter, 1983). Creativity, through idea generation, is loaded at the front-end of these models. In Amabile's (1988) model, the focus for creative practices is in Stage 3. The 'implementation stage', set out in Stages 4 and 5, does not appear to account for an emphasis on workforce creativity or creative practices. Instead, Amabile (*ibid*) merely nods towards the creativity required of individuals at all stages of the innovation process, without developing that claim any further. In doing so, Amabile (*ibid*) is, perhaps unwittingly, suggesting that creativity at the implementation stage is less important to the success of an innovation.

In this context, Amabile's (*ibid*) model of organisational innovation is not as nuanced as the innovation literature suggested it might be at the time it was formulated. The model illustrates a stage-like innovation process, with discrete steps, significantly different from the complex, messy characterisation of innovation described by Schroeder et al (1986, 1989/2000). Further, the innovation literature up to the late 1980s had still not presented an account or theory of service innovation consistent with practice, and thus Amabile's (1988) model of organisational innovation is influenced by studies of industrial innovation, where the product tended towards a state of standardisation (Abernathy and Utterback, 1978). It is

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[12] Other creativity researchers have also drawn up a two-stage model, with the first stage related to the production of ideas, and the second stage related to the implementation of those ideas (for example, Oldham and Cummings, 1996; Shalley and Zhou, 2008; West and Farr, 1990).

also noted that while Amabile's (1988) research did identify a qualitative difference between radical and incremental innovation, there was an implicit assumption that the innovation process for both types of innovation was the same. Limitations of Amabile's (*ibid*) model are set out in Table 3.1.

Table 3.1: Amabile's componential model of organisational innovation – some limitations
1.   It does not depict the influence of all factors at all points in the innovation process. The arrows in the diagram capture only the major and most obvious influences.
2.   The model treats the organisation as a self-contained unit. It is recognised that external factors, such as changes in government regulations, are influential, but are not accounted for in the model.
3.   The sequence depicted in the model is limited to one 'target idea' being chosen and implemented. It does not show what happens when several ideas are produced and pursued simultaneously.
4.   The model does not show what happens after the initial target idea has been implemented.

Adapted from: Amabile (1988, pp.158-159).

The limitations of Amabile's (1988) model of organisational innovation have implications for the study of the relationship between creativity and service innovation. Though this model may continue to be influential (Anderson et al, 2014), the emphasis of creativity at the front-end of the innovation process is problematic in understanding the role of creativity in service innovation. Service innovation is the result of "*a continuous and complex interaction between many actors*" (Toivonen and Tuominen, 2009, p.892),

and additional complexities are encountered arising from the multidimensional context of public sector settings (Hartley, 2006).

Amabile's (1988) model does not account for a number of features of service innovation, for example that organisations are not necessarily self-contained units, but may rely on inter-organisational collaboration, and that several ideas may be pursued simultaneously. Neither does it account for what happens after the initial idea has been implemented, and how implementation of new services or service activities present contextual difficulties which need to be overcome.

3.2.2 West's (1990) model of organisational innovation

Anderson et al (2014) also point towards the work of Michael West (for example, West, 1990, 2002a; West and Farr, 1990) as having a significant influence on the development of theory relating to the relationship between creativity and innovation. As with Amabile's (1988) model of organisational innovation, in West's (1990) innovation cycle (Figure 3.2) creativity was identified as being at the 'front end' of the innovation process, though it is acknowledged that not all innovations required absolute novelty (West and Farr, 1990).

Figure 3.2: West's innovation cycle
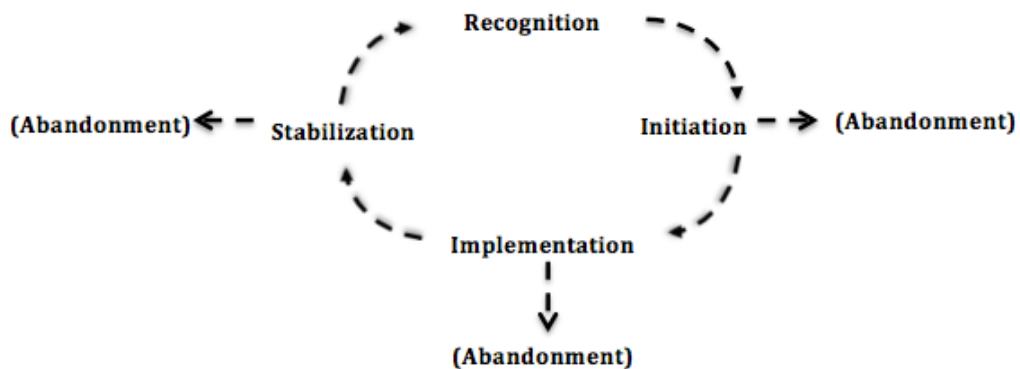
Source: West (1990, p.324)

West's (1990) innovation process model (Figure 3.2) differed from previous process models in creativity literature in that it considered the innovation process as cyclical, rather than linear, so reflecting "*the continuously evolving nature of work practices*" (*ibid*, p.325), which fail to have delineated beginnings and ends. The four phases are explained in Table 3.2

Table 3.2: West's innovation cycle – four phases
1. **Recognition** – a performance gap is recognised and ideation occurs in response, or given that innovations may be imported without prior identification of a performance gap, the value of an external innovation may be recognised, or ideation in the absence of a performance gap, or stimulus problem may lead to the recognition of a potentially useful innovation.

2.	**Initiation** – involves proposing the innovation to others in the work group or organisation. This phase includes adjustment and development of the idea in response to reactions from others in the group or organisation, and may (in the extreme) lead to abandonment of the innovation. At this stage, the proposed innovation may spawn other innovations either in addition to or instead of the original idea.
3.	**Implementation** – when the innovation is first used by the group or organisation and effects are observable in work practices, processes, products or procedures. Innovation may undergo adjustment as constraints and opportunities become apparent in the innovation process. The proposed innovation may also be abandoned at this stage.
4.	**Stabilisation** – the innovation becomes a routinized part of the system with associated standardisation and control procedures. The failure to stabilise may result in abandonment of the project or to further recognition and modification of the innovation, thus beginning the cycle again.

Adapted from: West (1990)

The first two stages in West's (1990) model, that of 'recognition' and 'initiation', are the principal areas where workplace creative practices are necessary. West (*ibid*) suggests that there may be changes during the implementation stage, and thereafter the innovation proceeds towards a state of stabilisation. The tendency towards stabilisation is characteristic of the product and process innovation models dominating innovation literature in the 1980s (for example, Abernathy and Utterback, 1978). However, not all service innovation moves towards a position of

standardisation[13] (Sundbo and Gallouj, 2000), and in public sector services attempts at standardisation can stifle future innovation (Mulgan and Albury, 2003).

West's (2002a) oft-cited '*Sparkling Fountains or Stagnant Ponds*' paper propagated the idea that creativity occurs primarily at the early stages of innovation processes, with innovation implementation occurring later. Whilst the innovation process comprises two stages: 1. Creativity, and 2. Innovation implementation, West (*ibid*) cedes that "*it can be argued that creativity is important throughout the innovation process*" (p.358). However, there is little further theoretical clarification or empirical research to develop this comment, other than to suggest "*creativity will be demanded during the innovation implementation process since unanticipated problems are likely to demand yet more creative ideas to aid in their solution*" (p.378).

Amabile (1988) and West (1990) are not the only creativity researchers to examine the role of creativity in the innovation process. Paulus (2002), in his rejoinder to West's (2002a) 'Sparkling Fountains and Stagnant Ponds' paper, acknowledges West's (*ibid*) conception of the innovation process as an idea generation / implementation sequence, though suggests that "*in more naturalistic situations, the process may be fairly recursive with a continual cycle of generation and implementation*" (Paulus, 2002, p.395). Further, Paulus (*ibid*) notes, in a group working environment, that, at times,

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[13] For West (1990) new systems are never entirely separate from existing systems, but rather evolve out of them.

an implementation / decision phase may precede the creativity, phase, as the traditional sequence of idea generation / implementation "*may be difficult to structure in the typical work life of a team*" (p.395). However, no detailed account of creativity during the implementation phase is provided, other than a suggestion that some ideas do not work, and teams may retreat to "*brainstorm ideas independent of the needs suggested by various implementation problems*" (p.395).

However, Rickards (1996) comments that the separation of the innovation process into two stages, one 'creative' and the other 'non-creative', has practical implications for the workplace. Instead of creativity being front-loaded at the beginning of the innovation process, he argues that it is "*a dynamic that can be found throughout the process*" (*ibid*, p.24). Rickards (*ibid*) is consistent with the model of the innovation process presented by Schroeder et al (1986, 1989/2000). This model portrays innovation as a series of overlapping stages, and thus indicating scope for creativity throughout the innovation process. Indeed, for Rickards (1996):

> "*...ideas and actions occur as long as innovation is being pursued. Creativity continues as long as action continues. This is not just desired, it is necessary for as long as the innovation processes continue in a competitive environment in the absence of perfect knowledge about outcomes of actions.*" (p.24).

Given that Shalley (2002) and West (2002b) have made calls for further studies of creativity in the innovation process, and in particular in the innovation implementation stage, and Rickards (1996) assertion that creativity is necessary through the process, it seems there is a recognition that the process of innovation implementation is a creative one but the means to understand how and why remains lacking from current theory.

The next section unpacks the innovation literature relating to manufacturing, and provides evidence that the nature of service innovation is different to manufacturing and technological innovation.

3.3 Innovation: from manufacturing towards services

3.3.1 The continuing influence of Joseph Schumpeter

The roots of the modern understanding of innovation lie within the contribution made by Austrian theorist, Joseph Schumpeter (1934, 1939, 1942), and his contribution to the development of innovation theory innovation. His ideas were developed at a time when manufacturing industries dominated economic growth. Schumpeter's (1934) initial treatise on economic development[14] introduced a contemporary conceptualisation of innovation and its typologies (Damanpour, 2014). His entrepreneurial model of innovation, which is also referred to as Schumpeter Mark I

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[14] Schumpeter originally published his Theory of Economic Development in 1911. The text was written in the German language.

(Fagerberg, 2005), attempted to account for the "*qualitatively new phenomena*" (1934, p.63) in an economy, which were measurably different from the normal continuous adaptations and yearly incremental improvements. For Schumpeter (*ibid*), innovation was delineated through the production of things by carrying out new combinations. Five types of innovation were identified: (1) the introduction of a new good (product), (2) the introduction of a new method of production (process), (3) the opening of a new market (market), (4) the conquest of a new source of supply (input) and (5) the carrying out of the new organisation of any industry (organisational).

Schumpeter's (1942) later views emphasised the importance of innovation in large firms. Explaining his later model of innovation, referred to as Schumpeter Mark II (Fagerberg, 2005), he stressed the notion of "*gale[s] of creative destruction*" (Schumpeter, 1942, p.84), in which radically new technologies make old knowledge, skills and organising principles redundant (Abernathy and Clark, 1985; Florida, 2004; Windrum and García-Goñi, 2008). Innovation literature classifies such change as 'radical innovation' (Ettlie et al, 1984; Dewar and Dutton, 1986; Nord and Tucker, 1987).

However, it is noted that the classic Mark I entrepreneurial model, rather than the Mark II research and development / manufacturing model, has more in common with today's theories of service innovation (Toivonen and Tuominen, 2009) with the emphasis of the entrepreneur as an "*innovative*

agent" (p.889) being one of several characteristics consistent with practice in contemporary services innovation.

The next sub-section explores the development of innovation theory in manufacturing industries.

3.3.2 Why are innovation models from manufacturing industries not relevant to the services?

Early innovation studies focused on manufacturing industries (Knight, 1967; Myers and Marquis, 1969; Utterback, 1974), with an emphasis on innovation akin to the Schumpeter Mark II model. These industries were still considered to be "*the wellspring of economic growth*" (Miles, 2000, p.372). Typically, the first stage of the manufacturing innovation process was characterised by idea generation and problem solving, followed by the more mundane implementation, and subsequent diffusion of the innovation (Utterback, 1974), with the initial stages carried out by scientists and engineers working in discrete research and development departments separate from 'using' organisations (Munson and Pelz, 1981).

During the 1960s and 1970s, much of the innovation research centred on product and process innovation. Abernathy and Utterback's (1978) life cycle innovation model [15] (Figure 3.3), with its origins in case studies of

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[15] Process innovations are concerned with the tools, devices and knowledge in throughput technology that mediate between the inputs and outputs and are new

innovation in manufacturing, sought to distinguish between product and process innovation, with the former driving the latter. Their integrative theory suggested that the rates of product and process innovations differed according the stages of development of the industry (Gopalakrishnan and Damanpour, 1997).

Abernathy and Utterback's (1978) model suggested that the character of innovation followed three distinct phases, with the initial focus on product innovation, characterised by frequent major changes in products, followed by the upscaling of product volume driven by major process changes, and then more incremental process innovation, as the product is standardised, driven by cost reduction and improvements in quality. Consistent with Utterback (1974), it is evident that creative behaviours are necessary in the early stages of the innovation process, and less so as the product and processes move towards a position of standardisation.

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to an organisation; product innovations are outputs that are introduced for the benefit of customers or clients (Gopalakrishnan and Damanpour, 1997).

Figure 3.3: The Abernathy-Utterback innovation life cycle model
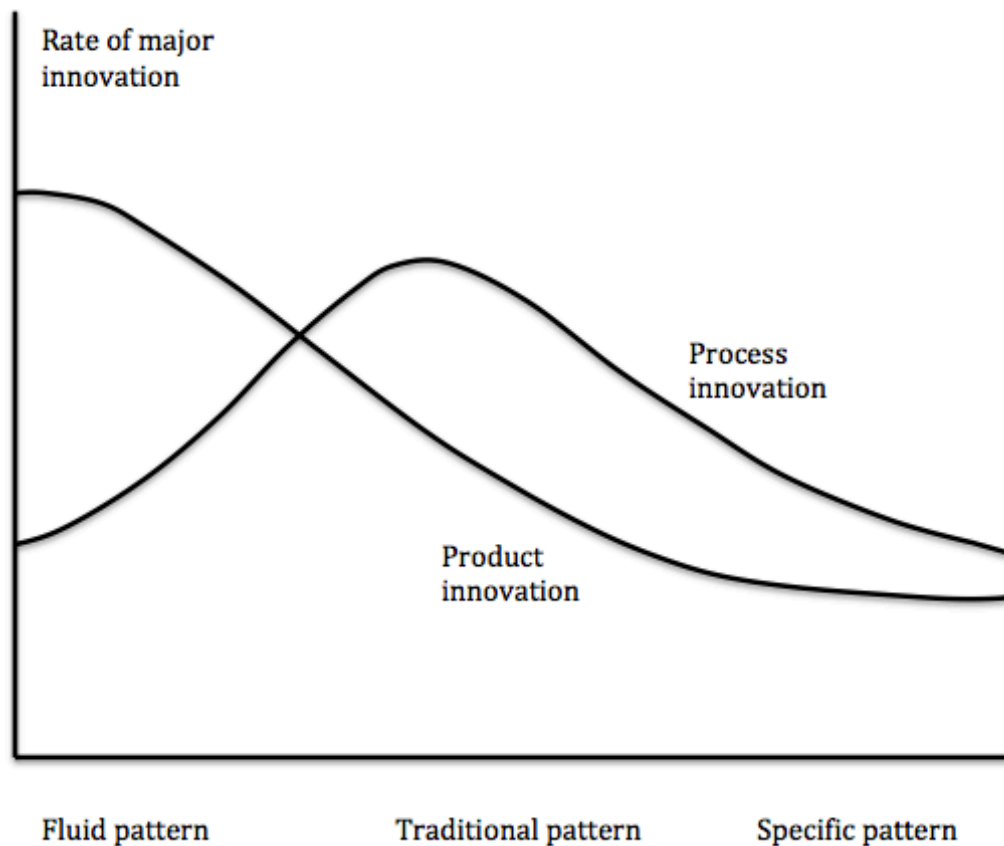
Source: Abernathy and Utterback (1978)

The purposeful academic study of the psychological concept of creativity as part of the innovation process did not emerge as a specific area of research interest until the mid to late-1980s. Though Schumpeter's Mark I 'entrepreneurial' model (Schumpeter, 1934) described "*new combinations*" (p.65) of new or existing knowledge, the field of innovation research had, largely, not explored what 'new' entailed. Mumford and Gustafson (1988) are frequently cited in academic journals as stating the importance of creativity in the innovation process, and models of the organisational innovation process which emerged in the late 1980s (Amabile, 1988; West, 1990) remain influential (Anderson et al, 2014). Whilst some research on

services innovation had already been published, for example, Kaluzny, Veney and Gentry's (1974) study of innovation in health services, it was not until the late 1990s that the first foundations for a general theory of service innovation were laid (Gallouj and Weinstein, 1997).

Amabile (1988) and West's (1990) models of organisational innovation place creativity at the front-end of the innovation process, consistent with process / product innovation models arising from studies in manufacturing industries (Utterback, 1974; Abernathy and Utterback, 1978). Though Amabile (1988) and West (1990) indicate that creativity may exist at other stages, no further detail is provided on the scale of creativity necessary, or what the creative practices might achieve. Indeed the innovation process is construed as having two distinct stages, "*creativity and innovation implementation*" (West, 2002a, p.356) – with creativity being the initial stage.

Though this thesis is focused on creativity in service innovation, a reflection on innovation in manufacturing industries reveals a direction of travel towards the standardisation of the final product. While some services may tend towards standardisation (Miles, 2010), this is not universally so (Sundbo and Gallouj, 2000; Mulgan and Albury, 2003). Indeed, while management consultants are often used to support the standardisation of work-based activities in the pursuit of efficiencies and quality (Wright, Sturdy and Wylie, 2012), this may be at the risk of not responding to the local context (Townsend, 2013).

3.3.3 Stages of the innovation process

In organisations, the innovation process is usually conceptualised as a sequence of decisions, actions and events (Myers and Marquis, 1969; Zaltman, Duncan and Holbek, 1973) leading to an innovation which, ultimately, loses its identify as such (Rogers, 1983). The definition put forward by Myers and Marquis (1969) challenged the notion, held in psychological literature at that time, that innovation was an invention arising from creativity (Steiner, 1965), akin to Schumpeterian beliefs, whereby two or more existing concepts or entities are combined in some novel way to produce a configuration not previously known by the person involved. Instead, Myers and Marquis (1969), whose study was centred in manufacturing industries, argued that technical innovation was

> "*a complex activity which proceeds from the conceptualization of a new idea to a solution of the problem and then to the actualization of a new item of economic or social value.*" (p.1).

Rather than innovation being a specific novel output or outcome, for Myers and Marquis (1969) innovation was considered to be a complex process of idea generation, invention and development behaving in an integrated fashion.

Amabile's (1988) model of organisational innovation (Figure 3.1) is not dissimilar to Zaltman et al's (1973) conception of the innovation process being comprised of the separate initiation-implementation stages[16]. For Amabile (1988), creativity is located at the front-end of the innovation process, consistent with other conceptions of innovation emerging from the study of innovation in manufacturing industries in the late 1960s and 1970s (for example, Thompson, 1965; Normann, 1971; Utterback, 1974; Pierce and Delbecq, 1977). Indeed, Amabile (1988) also cites Kanter (1983)[17] as being influential in the development of her multi-stage process model.

With five discrete stages, Rogers (1983) understanding of the innovation process also has the characteristics of a life cycle model (Van de Ven and Poole, 1995) consistent with Abernathy and Utterback (1978), with an 'end-point' as the product is standardised (Figure 3.4).

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[16] Myers and Marquis's (1969) conception of innovation as a process was influential in Zaltman et al's (1973) presentation of innovation as a two-stage process, involving an initiation stage followed by a implementation stage. Amabile's (1988) model of organisational innovation is informed, in turn, by Zaltman et al (*ibid*).

[17] Kanter (1983) defined innovation as "*the generation, acceptance, and implementation of new ideas, processes, product, or services*" (p.20).

Figure 3.4: Five stages in the innovation process in organizations

THE INNOVATION PROCESS IN AN ORGANIZATION

Decision

1. INITIATION → | 2. IMPLEMENTATION →

| #1 | #2 | #3 | #4 | #5 |

AGENDA SETTING · MATCHING · REDEFINING / RESTRUCTURING · CLARIFYING · ROUTINIZING

General organizational problems that may create a perceived need for innovation

Fitting a problem from the organization's agenda with an innovation

The innovation is modified and re-invented to fit the organization, and organizational structures are altered

The relationship between the organization and the innovation is defined more clearly

The innovation becomes an ongoing element in the organization's activities, and loses its identity

Adapted from: Rogers (1983, p. 363)

It is noted that the creativity is front-loaded in Rogers (1983) model. However, 'stage 3' represents the importation of an innovation from outside of the organisation. In relation to the service improvement model of the replication of best practice described in Chapter 2, it is noted that this stage is considered to be part of the 'implementation', suggesting that no further creative practices are necessary implement the innovation.

Whilst a conception of a stage-based model, comprising discrete activities carried out in a linear fashion, may be helpful in deriving a better understanding of the innovation process in organisations, Schroeder et al (1989/2000) cast doubt on its empirical validity. Rather, they suggest that the innovation process is much more "*messy and complex*" (p.132) (Figure 3.5), including setbacks and surprises (See Table 3.3 for an explanation of the numbers 1-6).

Figure 3.5: Schroeder, Van de Ven, Scudder and Polley's Innovation Process Model [18]
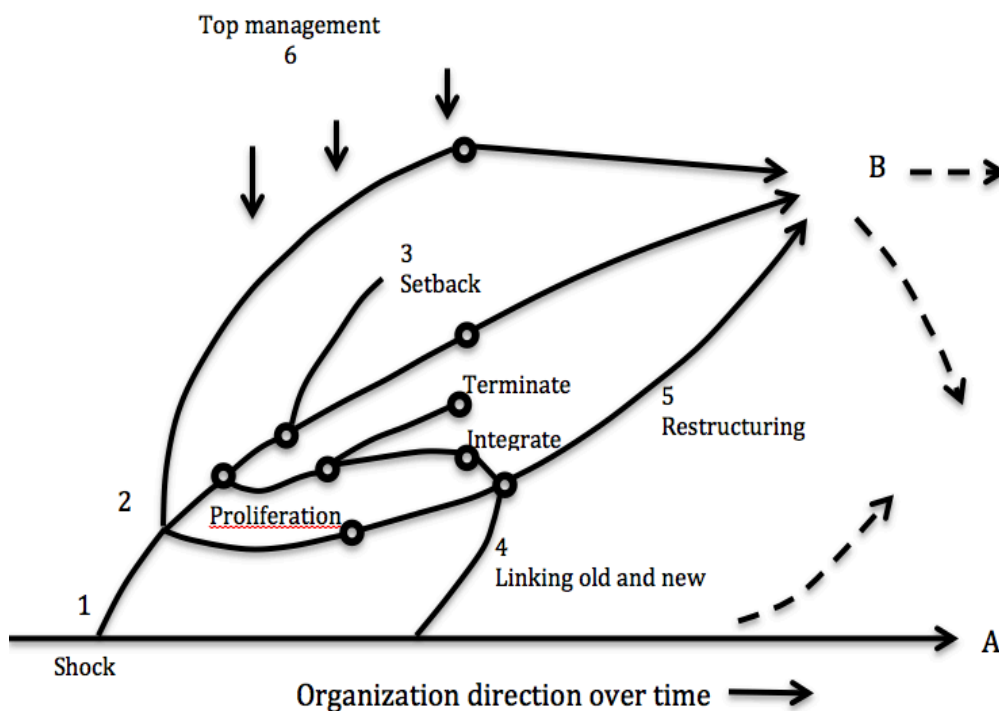
Source: Schroeder, Van de Ven, Scudder and Polley (1986)

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[18] The organization is proceeding in the general direction of point A. At a time zero, a shock occurs (e.g. budget crisis, or a change in management) that propels an idea or innovation in a new direction B.

Table 3.3 Six characteristics of Schroeder, Van de Ven, Scudder and Polley's descriptive process model of innovation	
Characteristic	**Description**
1.	Innovation is stimulated by shocks, either internal or external to the organization.
2.	An initial idea tends to proliferate into several ideas during the innovation process.
3.	In managing an innovation effort, unpredictable setbacks and surprises are inevitable; learning occurs whenever the innovation continues to develop.
4.	As an innovation develops, the old and the new exist concurrently, and over time they are linked together.
5.	Restructuring of the organization often occurs during the innovation process; this restructuring can take many forms, including joint ventures, changes in organizational responsibilities, use of teams, and altered control systems.
6.	Hands-on top management involvement occurs throughout the innovation period; several levels of management removed from the innovation itself are directly involved in all major decisions.

Adapted from: Schroeder, Van de Ven, Scudder and Polley (1989/2000)

Both Amabile's (1988) and West's (1990) models of organisational innovation follow the lead given by innovation researchers of the 1960s and 1970s (for example, Myers and Marquis, 1969; Zaltman et al, 1973). Their studies, reporting innovation in manufacturing industries, identify innovation as a multi-stage process, characterised by an initial stage

involving idea generation and problem solving, and a later implementation stage of more functional management activities. While Amabile (1988) presents her model as a life cycle design (cf. Rogers, 1983; Kanter, 1983), West's (1990) cyclical design pays attention to Schroeder et al's (1986, 1989/2000) conception of innovation as a more complex process.

3.4 Service innovation

3.4.1 The shift towards the study of innovation in service industries

This research study is concerned with the necessity of creativity through the service innovation process, and notes a lack of research in this area to date (Giannopoulou et al, 2014). Further, in recent years there has been no significant theoretical development of the models of organisational innovation (Amabile, 1988; West, 1990) which dominate creativity research (Anderson et al, 2014). The purpose of this section is to identify similarities and differences between manufacturing and service innovation processes, and to shed light on the importance of creativity and creative practices in service innovation.

Since the mid-1960s, employment in advanced economies has shifted away from construction and manufacturing and towards a variety of service activities and occupations (Urquhart, 1984; Illeris, 1989; Jones, 2013; Bryson and Daniels, 1998; Gallouj and Djellal, 2010a). Yet in spite of the pattern of employment in developed countries moving to service

occupations, service innovation remained under-researched until the mid to late 1980s, partly through difficulties with statistical measurement of innovative activity (Miles, 1993). Though there was some early scholarly interest in service innovation, such as Kaluzny et al's (1974) study of organisational variables affecting the innovation of high-risk versus low-risk health service programmes in hospitals and health departments[19], it was not until the mid 1990s that typologies and taxonomies of services innovation were first developed (Miles, 2000).

Thus, academic study of innovation has seen a shift in focus, from manufacturing industries towards services (Gallouj and Weinstein, 1997; Miles, 2000; Gallouj and Djellal, 2010a). More recently there has been increased interest in innovation in public sector services (Mulgan and Albury, 2003; Osborne and Brown, 2013a). However, having conducted a study of the nature of public sector services, Djellal et al (2013) conclude that there is no case for studying public service innovation as if it were something *sui generis*.

3.4.2 The nature of services

The distinction between goods and services in classical economics was originally made over two hundred and fifty years ago by Adam Smith (Gallouj and Djellal, 2010a).

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[19] These health service issues reported by Kaluzny et al (1974) continue to capture the attention of professionals seeking to improve health outcomes in the 2010s.

A service is something that is experienced, something intangible (Bryson and Daniels, 1998), though the ability of services to create value is not disputed (Gallouj and Djellal, 2010a). Further, Hill (1977) argues that services are not the same as goods (products) and that their characteristics differ fundamentally (see Table 3.4).

Table 3.4: Characteristics of goods and services		
Goods	**1.**	May be defined as a physical object.
	2.	Ownership need not imply formal or legal property rights of a kind found in a capitalistic society.
	3.	Most objects within ordinary human experience are capable of being goods as it is not easy to think of tangible objects which are not capable of being appropriated.
	4.	Objects which cannot be goods are mostly ones which are outside human experience or control, for example, microorganisms or particles.
	5.	Certain conditions of qualities which may be greatly desired cannot be treated as goods because they are not transferable objects, for example, good health, beauty or youth. Accumulated knowledge and acquired skills are also not goods (though a person with such skills / knowledge can provide a specialist services, for example, a surgeon, but cannot dispose of the skills as they are not transferable).

Services		
	1.	A service may be defined as a change in the condition of a person, or of a good belonging to some economic unit, which is brought about as a result of the activity of some other economic unit, with the prior agreement of the former person or economic unit, i.e. one economic unit performs some activity for the benefit of another.
	2.	Whilst the distinction between the process of production and the output of that process is quite clear for goods, in the case of services, the process of producing a service is often mistaken for the output.
	3.	When a service is provided, nothing is actually exchanged between the two parties in a way that the ownership of goods is transferred from one unit to another. So, services cannot be classified as 'immaterial goods'.
	4.	Services cannot be held in stock.

Adapted from: Hill (1977, pp.317-318)

Illeris (1989) interprets 'service' slightly differently from Hill (1977), and suggests that a service may often mean a product of an immaterial nature, for example, a concert or a consultation, and in this circumstance, the work which produces a service product is called a "*service or service activity*" (Illeris, 1989, p.9). However, the difference in interpretation of 'service' between Hill (1977) and Illeris (1989) may be semantic. For Illeris (*ibid*), service activities "*are those which do not produce or modify physical goods*" (p.10).

For the purposes of this research, the definition suggested by Illeris (1989) will be used to describe a service and associated service activities.

3.4.3 Characteristics of service innovation

Innovation in services is conceptualised by Miles (2000) as the study of service firms and industries, and their innovation processes and location in innovation systems. One of the first theories of service innovation (Gallouj and Weinstein, 1997) adopted an integrative approach, attempting to synthesize existing mechanisms for assessing technological innovation (such as goods), but in the context of a different, service situation. Other service innovation theoretical perspectives include assimilation, demarcation and inversion (Djellal et al, 2013). Windrum and García-Goñi (2008) have applied the integrative theoretical perspective to account for innovation in a hospital setting with some success. In doing so, they reflected on their neo-Schumpeterian approach, which is consistent with the notion that Schumpeter's conception of innovation is consistent with the practice of service innovation (Toivonen and Tuominen, 2009).

A challenge for academics interested in the study of service innovation lies within the nature of services themselves. In services industries, the 'product' is not always perfectly formed and laid out, *a priori*, as it is in most technological innovations (Sundbo and Gallouj, 2000). Rather, each service transaction may be considered unique, given that it is tailored specifically to a customer's demands in a particular context or location, rather than being

not only a standardisable commodity, but one that is shaped by the user too (Voss, 1992).

The 'fuzzy' nature of services, can lead to it being more difficult "*to detect a change or improvement in a service than to recognise an industrial product as a new one*" (Toivonen and Tuominen, 2009). Indeed, Toivonen and Tuominen (*ibid*) also comment that service companies often cannot tell if they have produced an innovation – innovations are either underestimated, or every service act is regarded as an innovation due to its unique nature. Further, Toivonen and Tuominen (*ibid*) note that service innovations often arise from the provision of new services on the basis of client needs. In this circumstance, innovations are recognised, if at all, *a posteriori.* The failure to distinguish service innovations from other service activity has implications for the recognition of innovation by organisations and their workforces. A further contributory factor towards 'hidden' innovation is its heterogeneous nature; thus innovations may be a naturally occurring phenomenon during service delivery but not recognised as such (Voss, 1992).

As has been noted, there has been no substantive theoretical development of creativity in service innovation, and little development of the organisational models of innovation (Amabile, 1988; West, 1990) in spite of progress made in general service innovation literature.

3.4.4 Service innovation in the public sector

In spite of the field of service innovation having reached some maturity now (Djellal et al, 2013), literature on public sector innovation is sparse (Hartley, 2010). There is some guidance, with the recently published *Handbook of Innovation in Public Services* (Osborne and Brown, 2013a), providing a little depth to the subject, in addition to a previously published series of case studies found in *Innovation in Public Sector Services: Entrepreneurship, Creativity and Management* (Windrum and Koch, 2008).

It is noted that whilst Djellal et al (2013) suggest that the integrative theoretical perspective developed for services innovation [20] should be adopted for the study of public services innovation, both Hartley (2010) and Osborne and Brown (2011b, 2013a) argue for a more robust theory of innovation derived directly from public sector experiences. Osborne and Brown (2011b) suggest that public policy makers (such as Mulgan and Albury, 2003; Albury, 2005; Mulgan, 2007) have, hitherto, adopted an inappropriate model of innovation, direct from the manufacturing innovation literature rather than the service sector[21]. A further area of

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[20] The integrative perspective seeks to provide the same analytical frameworks for both goods and services product, for manufacturing and service industries, and for both technological and non-technological forms of innovation (Djellal et al, 2013).

[21] Whilst Osborne and Brown (2011b, 2013a) note that the work by Mulgan and Albury (2003) and Albury (2005) draws on innovation theory derived from studies of technological innovation in manufacturing industries, in Osborne and Brown (2013b) they draw on Michael West and James Farr's (West and Farr, 1990)

dissonance between Osborne and Brown (2011b) and Hartley (2010) on one side, and Djellal et al (2013) on the other, is that the former academic theorists do not conceptualise continuous improvement as innovation. Instead, for example, Hartley (2010) distinguishes between innovation and improvement (see Figure 3.6), citing Moore, Sparrow and Spelman (1997) definition of innovation:

> "*Those changes worth recognizing as innovation should be…new to the organization, be large enough, general enough and durable enough to appreciably affect the operations or character of the organization*" (Moore et al, p.276).

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definition of innovation, which was also prepared at a time of dominance of technological innovation, and certainly in advance of any purposeful theory development in relation to service innovation.

Figure 3.6: Innovation and improvement in organisations
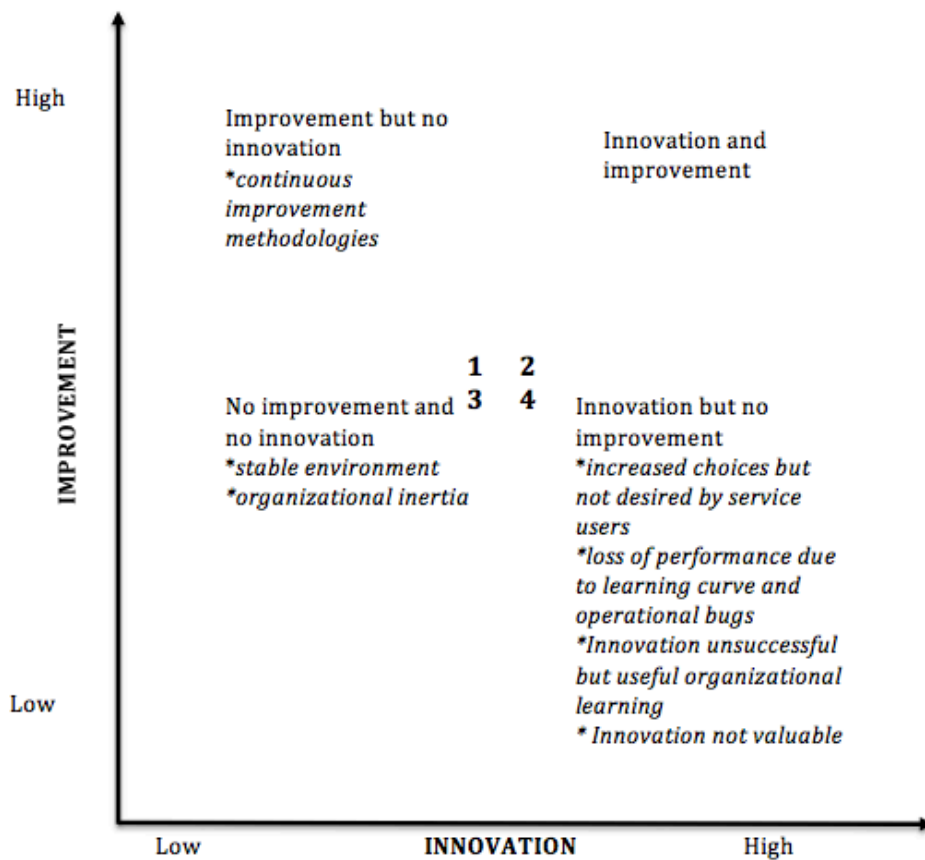
Source: Hartley (2010, p.31)

Osborne and Brown (2011) concur with Hartley (2006), and suggest that what lies at the core of innovation is 'newness' or discontinuous change; for them there is a risk of the conflation of 'incremental innovation' with 'incremental service development', with the inherent loss of concepts of management of risk, uncertainty and failure, all key challenges of innovation.

However, others argue that public sector innovation embraces both incremental innovation and, though less frequently, radical innovation[22] (Mulgan, 2014; Harris and Albury, 2009; Mulgan, 2007; Albury, 2005; Mulgan and Albury 2003). Indeed, it is noted that the majority of public sector innovations are "*vitally important incremental changes*" (Albury, 2005, p.52). Whilst Harris and Mulgan (2009) call for a greater emphasis on achieving the necessary conditions for larger-scale, radical innovation, Mulgan (2007) recognises that the organisational structure of the UK public sector presents challenges in this respect.

For Mulgan (2007), radical innovation occurs in sectors which are more like oligopolies, dominated by a small number of big companies, surrounded by highly competitive smaller ones. The organisational structure of the UK public sector is different, with Mulgan (*ibid)* noting that there is just one monopoly overseer, in the form of a national department. In England, for example, the Department of Health oversees 209 NHS clinical

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[22] During the 1970s and 1980s, the dominant paradigm of innovation being characterised by large-scale change was challenged. Instead, the importance and value of continuous improvement through incremental innovation was recognised (for example, Munson and Pelz, 1981; Rosenbloom and Abernathy, 1982; Nord and Tucker, 1987). Whilst Ettlie et al (1984) describe the separation between radical and incremental organisational innovation as a 'dichotomy', others saw it as existing on a theoretical continuum (Hage, 1980), characterised by degree of risk (Dewar and Dutton, 1986). Sundbo (1997) also ventured that radical and incremental innovation may be better represented on a scale, with one end being represented by radical innovation, and the other end being framed as organisational learning, with incremental innovation lying in the centre of the scale.

commissioning groups (Health and Social Care Information Centre, 2015a) covering nearly 8000 GP practices (Health and Social Care Information Centre, 2015b). Inevitably, the relatively small size of the NHS CCGs means that none have the financial capital to see through large-scale radical innovations.

Mulgan's (2014) model of service innovation is not dissimilar to the 'messy', complex conception of Schroeder et al (1986, 1989/2000). Mulgan (2014) suggests that the process is spiral in nature across seven stages, with loops back, detours and jumps (Figure 3.7).

Figure 3.7: The innovation process in the public sector
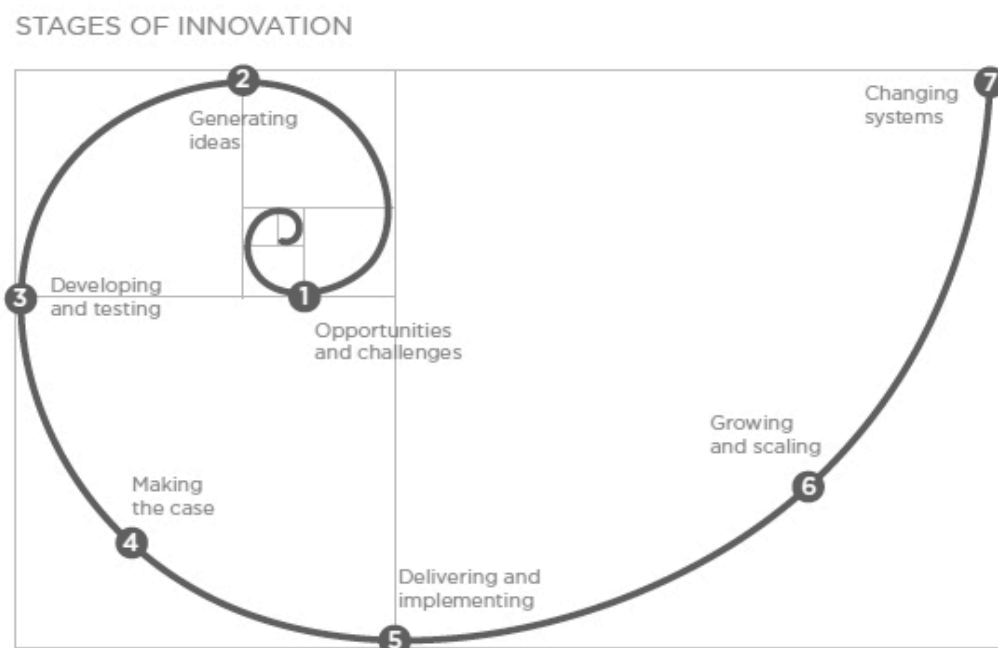
Source: Mulgan (2014, p.7).

The locus of the research is in an English NHS organisation. If the position taken by Osborne and Brown (2011) and Hartley (2006, 2010) in so far as the scale of change needs to be of a radical nature is accepted, then the creative practices of the large majority of the workforce will be denied – since there are few opportunities to achieve innovations based on absolute novelty in public services. Instead, the understandings of public sector innovation advocated by Mulgan (2014), Harris and Albury (2009), Mulgan (2007), Albury (2005) and Mulgan and Albury (2003) are more in line with other general service innovation literature, which supports incremental innovation through a programme of continuous improvement.

Mulgan's (2014) innovation process model for the public sector is consistent with Schroeder et al (1986, 1989/2000). Mulgan (2014) has chosen a spiral design to represent the loops back, detours and jumps. However, Mulgan (*ibid*), too, draws on previous stage models of innovation and emphasises the idea generation phase early in the innovation process.

3.4.5 Creativity in service innovation

Theoretical development of creativity in the organisational innovation process has been limited in recent years (Anderson et al, 2014). The dominant models, which remain in current use to explain the locus of creativity in the innovation process, were initially developed by Amabile (1988) and West (1990), in an era when industrial and technological innovation were the dominant paradigms.

Noting a paucity of creativity research in service innovation, Giannopoulou et al (2014) explored capabilities for reinforcing creativity in service innovation, in particular exploring how organisations are able to attract employees who are creative people, and how to create a stimulating organisational environment. Though their research did not address the necessity and scope for creativity in the service innovation process itself, Giannopoulou et al (*ibid*) draw on classical creativity and innovation literature (for example, Mumford et al, 2012b) which locates the necessity for creativity at the front-end of the innovation process.

Indeed, there has been scant attention to the innovation process relating to services. Consistent with Amabile et al's (1996) conviction that creativity is cornerstone of innovation, Zeng et al (2009) find similar - that creativity is "*an essential and integral part of service development*" (p.143), and cite Lubart (2000-2001) as informing their four-stage model (Figure 3.8), as being representative of the creative process in service development. This model also locates creativity at the front-end of the service development process, in the 'ideation' and 'evaluation' phases, and its cyclical nature is consistent with West's (1990) model of organisational innovation.

Figure 3.8: Zeng, Proctor and Salvendy's model of the creative process for service development

Ideation strategy: conceptual expansion, conceptual combination, analogical thinking

Ideation

Analysis strategy: abstraction, multi-perspective

Analysis

Evaluation

Evaluation criteria: novelty and appropriateness

Implementation

Acceptance finding, persuasion, marketing, Meta-design
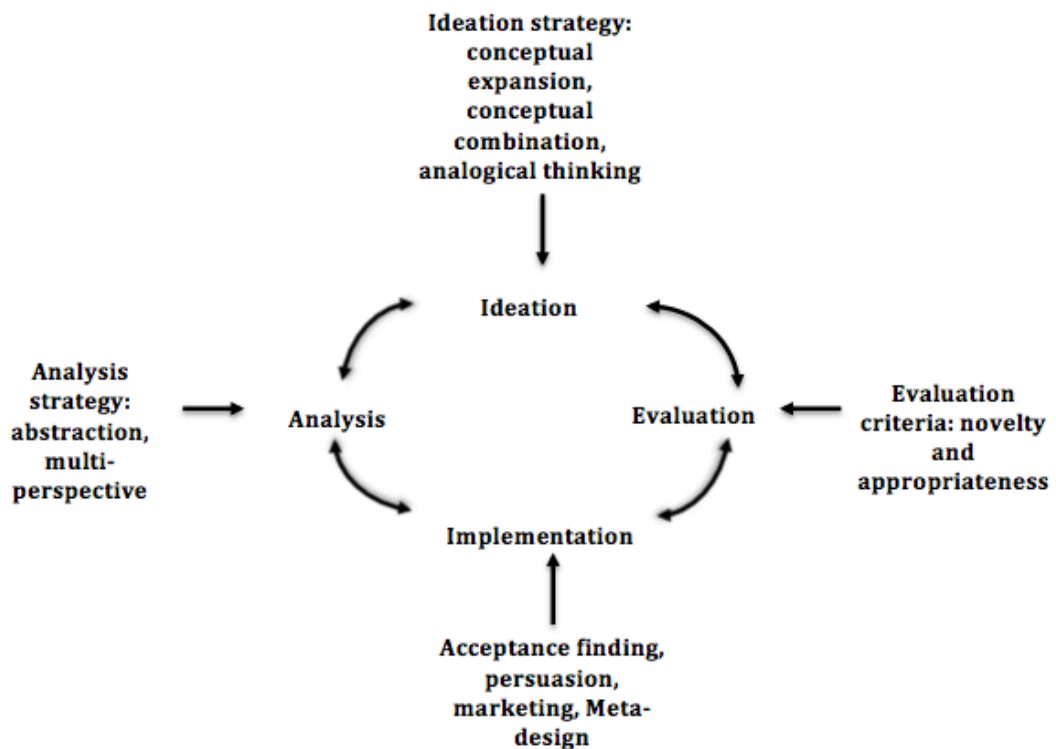
Source: Zeng et al (2009)

In summary, while service innovation appears to be more complex than manufacturing and technological innovation with a greater number of actors involved (Toivonen and Tuominen, 2009), or as a result of it being located in multidimensional public sector operations (Hartley, 2006), the extant literature continues to identify that creativity and creativity practices are primarily necessary in the early stages of the service innovation process.

3.5 Conclusion and research questions

Organisational innovation theory locates workplace creative practices in the front-end of the innovation process. This is especially true of stage models, whereby the initial stage is centred on creativity, and the final stage is focused on the implementation of the innovation. There is also a dearth of empirical research relating to the role of creativity in service innovation. This means that creativity researchers and practitioners continue to rely on models of organisational innovation (Amabile, 1988; West, 1990) developed nearly three decades ago, even though there are differences between innovation in manufacturing and services.

While an understanding of manufacturing and service innovation has been established, there is still doubt over the role of creativity in the service innovation process. Some authors recognise creativity might be necessary throughout innovation processes (for example, West, 2002a; Rickards, 1996) but how to account for this theoretically is still lacking.

To help develop understanding this chapter has outlined the crucial definitions for conducting research into service innovation processes and developed understanding of the terms 'service' and 'service activity'.

It is now possible to explore the research questions of this thesis (Table 3.5).

Table 3.5: Research questions	
RQ1	To what extent does the replication of best practice require creativity when there is contextual novelty?
RQ2	Do service innovation models need to take into account the role of creativity during the implementation phase of service innovations?

Chapter 4 – Research Methodology

4.1 Introduction

The examination of the literature in Chapters 2 and 3 revealed two inconsistencies between theory and practice in relation to creativity and service innovation.

First, a review of the extant creativity literature failed to account for the human creativity and creative practices necessary when organisations seek to improve services through copying and implementing best practice from another organisation. Applying the standard definition of creativity, which historically has been used to determine if a product or outcome is creative, is insufficient to account for contextual novelty, that is the creativity necessary to implement service innovations from elsewhere into a new organisational context or setting.

Second, a review of the extant creativity and innovation literatures revealed that though some creativity researchers acknowledge that creativity may be necessary in the later stage of the innovation process, a theory to account for this has not been developed. Instead, models of organisational innovation derived nearly three decades ago, which locate the necessity for creativity at the front-end of the innovation process, continue to dominate the creativity literature relating to innovation. Further, there is a paucity of

literature relating to creativity and service innovation more generally, with little based on empirical research.

These considerations have led to the construction of the research questions, RQ1 and RQ2, set out in Table 3.5. This chapter will outline the methodology and method employed to enable examination of these research questions.

4.2 Research philosophy

Much creativity research is undertaken through a positivist lens, utilising experimental research methods and analysis of quantitative data, techniques commonly used in the field of psychology (Plucker and Makel, 2010; Long, 2014). The research methodology used for innovation studies has been more varied, with academics variously taking either a positivist or social constructionist viewpoint. Both of these philosophical positions have merit, and their use has advanced our understanding of creativity and innovation.

This research study takes a critical realist viewpoint (Bhaskar, 1975/2008, 1998). A critical realist stance is taken because it is argued that the object of investigation, employee creativity and creative practices, are likely to exist unrecognised due to the clash between theory and practice previously identified. If this were the case then neither positivist nor social constructionist epistemologies would be able to account for its presence. This is for two reasons. First, it is suggested that power and political issues

may obscure employee creativity (Martin, 2009), thus it may not be directly observed. Second, the locus of the research study is the English NHS. NHS guidance and support for employee training in relation to creativity and innovation locates creative practices, such as problem definition and idea generation, at the front-end of the innovation process. This means that while there may be creative practices in the later stages of the innovation process, the workforce may not be aware of them given a lack of appropriate language and workplace practice.

This means that using positivist (it needs to be measured to exist) and social constructionist (it needs to be made sense of or be part of existing sense-making practices) methodologies may restrict what can be said about creativity in these contexts. It is for this reason that critical realism has been selected as it has a set of meta-theoretical principles that are consistent with the research questions posed.

4.3 Critical realism

Critical realism is a philosophy of science; its development and progress initially steered by Roy Bhaskar and Rom Harré (see, for example, Bhaskar 1975/2008, 1998; Harré and Madden, 1975; Archer et al, 1998; Collier, 1994). It is often termed an "*under-labourer, and occasionally as the mid-wife, of science*" (Bhaskar, 1975/2008, p.10), reflecting its status as an approach rather than a theory. The main characteristic of critical realism, as

opposed to its rivals, such as positivism and social constructionism, is its primacy of ontology[23] over epistemology (Ackroyd and Karlsson, 2014).

An essential feature of the critical realist philosophy is that a world exists independently to and external from our knowledge of it (Sayer, 1992). This argument is a fundamental difference with empiricist and constructionist ontologies. Critical realism also recognises that part of that world consists of subjective interpretations which influence the ways in which it is perceived and experienced (O'Mahoney and Vincent, 2014). For a critical realist researcher, a fundamental question is "*what concepts do I need to understand and explore more fully the social mechanisms under investigation?*" (Ackroyd and Karlsson*,* 2014, p.21). In answering this question both sense data and concepts derived from experience are necessary, thus rendering the 'numbers and facts versus meaning systems' dichotomy of objectivist approaches versus subjectivist approaches inappropriate in critical realism.

Instead, critical realists share both a realist commitment with empiricists and positivists to an objective world (Bhaskar, 1975/2008), and also a relativist notion of the role of social processes in constituting the social

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[23] Ontology – the study or theory of 'being'. In critical realism, the term 'ontological' is used to mean something akin to 'real' or 'existing' (Fleetwood, 2004). Applied critical realism allows for ontological questions to be asked, such as: '*what are organizations and what does management do?*' ahead of epistemological ones, such as '*how can organizations and management be studied?*' (Ackroyd and Karlsson, 2014, p.21).

world with constructionists (Bhaskar, 2011). The difference, though, is that an empirical ontology limits the world to empirical 'facts' yielded from laboratory experiments in 'closed systems', paving the way for researchers to quantify or correlate in an attempt to generate universal statements, or 'laws', about the world. So, for a positivist or an empiricist researcher of social science, "*things cannot be real if we cannot observe them*" (O'Mahoney and Vincent, 2014, p.3).

Nevertheless, for critical realists numbers do 'count', and provide useful, if incomplete, data. Critical realists also share some common ground with social constructionists, both ontologies being sceptical of claims of 'truthfulness' and objectivity. However, constructionists reject the possibility of a non-subjective, non-discursive reality, in favour of taking narratives at face value, and rejecting any possibility that science (natural or social) may provide a better understanding of the world.

Critical realists, though, recognise that while 'open systems' do not offer the precision afforded by laboratories, in practice explanatory theories can offer a better understanding of social phenomena. However, a critical realist's privileging of ontology over epistemology enables a separation between people's beliefs from the reality they represent, and so avoids another form of thin explanation. It is the critical realist's position to search for a better truth that distinguishes that form of realism from social constructionism. A realist position is that through research activities, ontological realism and epistemological relativism go hand in hand, and with use of both sense data

and experience, it is possible to develop a reliable account of the complexity of organised social life.

Sayer's (2000) recognition that "*much can happen which is unacknowledged*" (p.14) is one of the drivers for using a critical realist approach in this study. A positivist account would purport a lack of creativity, or creative behaviour, in the workplace if such creativity, or creative behaviour, was 'unacknowledged', or not recognised. Indeed, Amabile's (1982) concept of creativity being "*something that people can recognize when they see it*" (p.1001), appears to close down the possibility that creativity may also exist unrecognised; a claim also contested in Martin's (2009) critical realist examination of creativity. Thus, the research questions in this thesis are focused on discovering a truth in practice combined with a falsity in theory, also termed a TINA formation (Bhaskar, 1993)[24].

Whilst positivism's notion of causation is determined on the basis of the gathering of observation of regular successions of events (see Figure 4.1a), Sayer (2000) suggests that what causes something to happen has nothing to do with the number of times it has been observed to happen. Instead, an explanation rests on understanding the causal mechanisms and how they work, and discovering if they have been activated and under what

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[24] Martin and Wilson (2014a) have also used successfully Bhaskar's (2008) concept of a TINA formation to examine the role of discovery in the creative process, which otherwise may remain undetected using an empiricist ontology.

conditions[25]. O'Mahoney and Vincent (2014) elucidate critical realism's difference to positivism and constructionism:

> "*The potential of entities to posses, exercise and actualise powers provide critical realists with a more sophisticated and nuanced representation of social reality which is in stark contrast to flattened empiricist or constructionist approaches where things either are, or are not*" (p.8).

The critical realist view of causation is illustrated in Figure 4.1b.

Figure 4.1a: Positivist view of causation

cause > effect

regularity
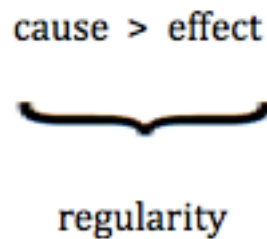
Source: Sayer (2000, p.14)

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[25] It is noted that a critical realist view holds that a causal power may not always produce the same outcome, due to different conditions and contexts. Also, sometimes different causal mechanisms will produce the same result. Events are not pre-determined, so the outcome depends on contingent conditions (Sayer, 2000). Also, given that causal powers are dependent on the nature of objects of which they are properties, or structures, it is contingent as to whether or not they are exercised at any particular time, or place. For example, an organisation may have the power to fire workers, but mainly it does not exercise this power. Thus activation of causal powers need not be regular (Sayer, 2004).

Figure 4.1b: Critical realist view of causation
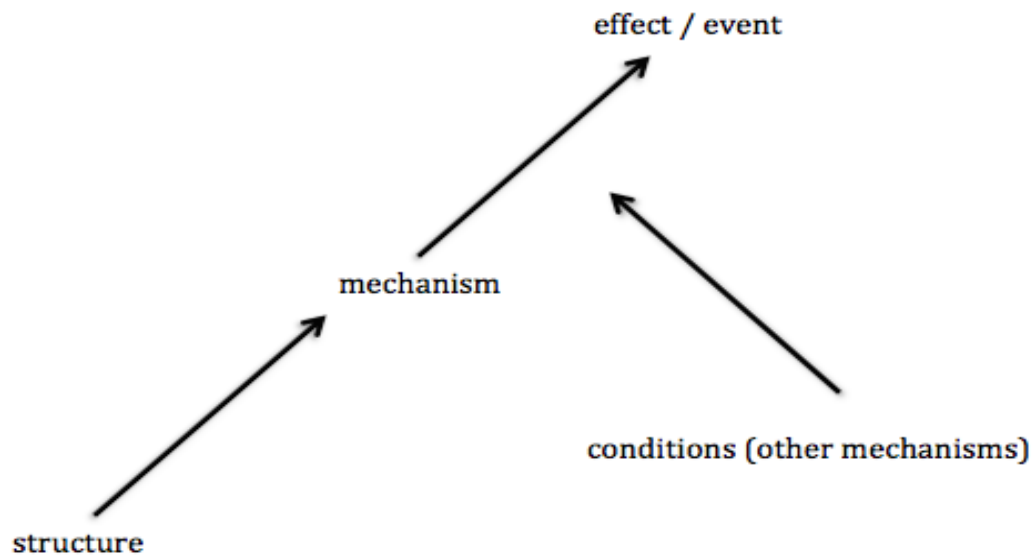
Source: Sayer (2000, p.15)

4.3.1 A stratified ontology: the domain of the real, the actual and the empirical

Bhaskar's (1975/2008) argument is that there is more to the world than patterns of event – there is ontological depth. This means that through its application, critical realism can offer an explanation of events, even though they may not be directly observable. Critical realists may carry out research (which may or may not include gathering or assessing numerical data), typically looking to identify, discover, uncover structures, blocks and causes, and particularly sequences, combinations and articulations of them at work in specific times and places. The real world consists of *"real things and structures, mechanisms and processes, events and possibilities"* (Bhaskar, 2008, p.22) and is, for the most part, independent of our knowledge of them.

This is what Bhaskar (1975/2008) describes as the 'intransitive' dimension. It is characterised by different layers (see Table 4.1a), and is termed stratification, or depth ontology.

Table 4.1a: Domains of the *real*, *actual*, and *empirical*			
	Domain of the Real	**Domain of the Actual**	**Domain of the Empirical**
Mechanisms	✔		
Events	✔	✔	
Experiences	✔	✔	✔

Source: Bhaskar (1975/2008, p.56)

A distinction is made between three levels – the 'empirical', the 'actual' and the 'real' (see Table 4.1b, for a description). Appendix 2 provides examples, in the natural and social worlds, of the nature of types of observations and underlying mechanisms which provide some insight into how to develop a critical realist explanatory account.

Table 4.1b: Description of domains of the real, actual and empirical	
<u>Domain</u>	<u>Description</u>
Real	The mechanisms and structures which generate the actual world, together with the empirical.
Actual	The events that occur in space and time, which may be different to what we perceive to be the case.
Empirical	What we perceive to be the case: human sensory experiences and perceptions.

Source: O'Mahoney and Vincent (2014, p.9).

Thus, Bhaskar's (1975/2008) account of critical realism, when applied to the social world (Bhaskar, 1998), suggests that reality is much more complex than an account put forward through the utilisation of Humean theory of causal laws. Instead, a realist explanatory account is multiply determined; multiple causes need to be disentangled through careful examination of the setting. The nature of a stratified ontology leads us to a reality that 'potential actions' may also influence what might be identified as mechanisms which influence what is directly observed[26]. So, critical realists recognise that causal powers may exist unexercised or unrecognised

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[26] For example, in 2009, the National Institute for Health and Clinical Excellence published a guide for commissioners of health care services (National Institute for Health and Clinical Excellence, 2009). Though the guide was aimed at those involved in commissioning, attention is immediately drawn to the role of health boards "*to manage risks*" (*ibid*, p.8). There is no mention of the value of a creative workforce which is highlighted in similar governmental policy and guidance documents in use at that time (for example, NHS Institute for Innovation and Improvement, 2005, 2007; Department of Health 2008; Department for Innovation, Universities and Skills, 2008). Consequently, there is the potential for commissioners to be more concerned about 'managing risks' rather than improving services through drawing on the creativity of the healthcare workforce.

(Bhaskar, 1975/2008), yet still have an impact on empirical observations.

4.3.2 Human reflexivity

Archer's (2007, 2012) notion of human reflexivity provides a platform for an account for the theory-practice contradictions that have influenced this research study. For Archer (2007), reflexivity is "*the regular exercise of the mental ability shared by all normal people, to consider themselves in relation to their (social) contexts and vice versa*" (p.3). It is through the conscious deliberations that take place through internal conversations that inform people's future courses of action.

Archer (*ibid*) argues that reflexivity is necessary alongside embodied knowledge, tacit routines and traditional custom and practice. Indeed, Archer's (*ibid*) clarion call for "*everyone to exercise more and more reflexivity in increasingly greater tracts of their lives*" (p.4) is a challenge to the routinisation that otherwise exists.

Archer's (*ibid*) proposition is that "*the subjective powers of reflexivity mediate the role that objective structural or cultural powers play in influencing social action and are thus indispensable to explaining social outcomes.*" (p.5). Applied to the theory – practice inconsistency, for example in relation to the necessity of creativity for the replication of practice, this means that:

Condition 1:

Structure (English NHS) = No creative practice (by NHS employee(s)) in the replication of best practice when copying and implementing a service innovation from another organisation.

Condition 2:

Practice (NHS employee(s)) = Creative practice (by NHS employee(s)) in the replication of best practice when copying and implementing a service innovation from another organisation.

Human reflexivity makes a significant contribution to the workplace. Workers involved in creative practices do not have a rulebook to follow, thus draw upon their internal conversation about the subject in relation to the object to answer the internal question, 'What do I do next?'

Thus critical realism, when used as an under-labourer provides the necessary philosophical underpinning of the notion that creativity and creative practices may exist unrecognised in the workplace. Archer's (2007) conception of the importance of human reflexivity through internal conversations makes employees active, rather than passive, agents, who exercise some governance over their lives.

4.4 Research method: qualitative research

In noting the multi-dimensional nature of objects of social sciences, Sayer (1992) also comments:

> "*Social scientists are invariably confronted with situations in which many things are going on at once and they lack the possibility, open to many natural scientists, of isolating out particular processes in experiments*" (p.3).

However, Sayer (2000) also states, "*the particular choices [of research method] should depend on the nature of the object of study and what one wants to learn about it*" (p.19). The study seeks to conduct research to further develop an understanding of the concept of creativity in relation to two aspects of service innovation. The drivers for the research, based upon the author's previous work experiences, and set out in Chapter 1, revealed two instances whereby there exists an apparent truth in practice / falsity in theory in organisational practices.

First, the application of extant creativity theory to organisational practice appears to obscure workplace creativity, in the circumstance of the replication, or copying, of best work practice from one organisation into another organisation. An examination of the literature suggests that work practices, in this circumstance, cannot involve creativity. The second instance of dissonance between theory and practice relates directly to

innovation in services (as distinct from industrial or technological innovation). A review of the literature posits creativity as the key 'first stage' of the innovation process[27], with little impact or utility in the subsequent second 'innovation implementation' stage.

Those involved may not recognise their work practices, outputs or outcomes being creative. Consequently, the research design utilises a one-site, longitudinal case study in order to develop a view of the practice of creativity in the workplace. Using critical realist ontology as an under-labourer enables research to be carried out to find evidence of workplace creativity, which may otherwise exist unrecognised, in relation to the replication of practice and in the later stages of the service innovation process.

In order to tease out a better understanding of workplace creativity, a qualitative research design was used. Qualitative techniques, including practices such as undertaking observations of people at their place of work, and interviews are appropriate research methods for getting close to the action. Relevant documents were also collected.

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[27] It is noted that the innovation literature supporting this view was published in the mid to late 1980s and early 1990s at a time when such research was informed by technological innovation in manufacturing industries, rather than in service organisations.

4.5 Research context

The research took the form of a case study of a NHS Clinical Commissioning Group (NHS CCG)[28], located in England[29]. NHS CCGs were formally constituted on 1 April 2013, through enactment of the Health and Social Care Act 2012. As part of their formal authorisation process, the Department of Health (NHS Commissioning Board, 2012) required NHS CCGs to demonstrate evidence of innovation across a series of domains. Site-specific authorisation to conduct the research was sought from University and NHS organisations, and awarded on 7 February 2012. The duration of the research was for up to 14 months, until 30 April 2013.

4.5.1 The English NHS: the national context

The NHS is one of the world's largest publicly funded health services. Launched in 1948, it provides free healthcare[30] to every United Kingdom resident. Responsibility for healthcare in England rests with the UK Government, and organised through NHS England. NHS England organises healthcare services which may be accessed by upwards of 53 million people, and has a budget in excess of £100 billion. NHS England employs over 1.5

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[28] An overview of the role of NHS CCGs may be obtained through the short guide, '*NHS in England*' (NHS, 2015).

[29] Essentially, the NHS CCG I was located with was a 'new organisation', with activities occurring in a new situational context.

[30] With the exception of prescription and some dental and optical services.

million people, of which there are more than 40,000 general practitioners (GPs) and 350,000 nurses (NHS, 2015).

Radical changes to the organisational arrangements for the NHS in England were introduced in 2012 (Health and Social Care Act, 2012) shifting responsibility for commissioning away from managers in primary care trusts to general practitioner-led 'clinical commissioning groups' (CCGs). 209 CCGs are in place across England (Health and Social Care Information Centre, 2015a), and these organisations control the majority of the NHS budget to be spent on locally commissioned services, for example most services in local hospitals (such as, emergency care, outpatient services and elective surgery), mental health and learning disability services and community health services (beyond GP services).

The current organisational arrangements reflect a continuing shift away from the "*old-fashioned demarcations between staff and barriers between services*" (Department of Health, 2000a, p.10) underpinned by a system of earned autonomy through the devolution of power from the centre to the local health service. The NHS Plan (*ibid*) set out a blueprint for the NHS for the following ten years, including the provision of "*the chance for health professionals to innovate*" (*ibid*, p.56) and the setting up the NHS Modernisation Agency to spread best practice. Complementary to this activity was a call for nursing staff to draw upon their creative skills, and to be innovative (Department of Health, 2001).

Further reform followed in the late 2000's, with the publication of the NHS Constitution (Department of Health, 2009a; Department of Health, 2009b) reinforced the NHS's "*commitment to innovation*" (2009a, p.6), and the government's five-year plan for the NHS (Department of Health, 2009c). Lord Darzi's 'NHS Next Stage Review' (Department of Health, 2008) had been instrumental in centre-placing 'innovation' as one of the principal themes of the NHS, citing innovation as a driver of 'best practice', and "*a pioneering NHS*" (*ibid*, p.49). Indeed, Lord Darzi explained that innovation in practice is beyond research: "*service innovation means people at the frontline finding better ways of caring for patients – improving outcomes, experiences and safety*" (*ibid*, p.55). Darzi, in relation to the workforce, also made the connection between creativity and innovation, seeking to "*continue the journey of setting frontline, both providers and commissioners free to use their expertise, creativity and skill to find innovative ways to improve quality of care for patients*" (*ibid*, p.60). Similarly, in meeting the aspirations set out within the NHS Constitution, the government announced that the NHS would "*draw on the creativity and ingenuity of its staff*" (Department of Health, 2009c, p.11).

In order to support innovation, improvement and the adoption of best practice, in 2005 the Department of Health established the NHS Institute for Innovation and Improvement. Accordingly, the Institute published a number of guides related to innovation and improvement aimed at the NHS workforce, focusing in particular on processes (NHS Institute for Innovation and Improvement, 2008), tools (NHS Institute for Innovation and

Improvement, 2010), organisational culture (Maher, Plsek, Garrett and Bevan, 2010) and problem formation and problem solving (Maher, Plsek, Price and Mugglestone, 2012). Indeed, parallels are drawn with the use of creativity and innovation in the 'commercial sector' to develop market share or transformation into another market. The problem that creativity may be "*derided and not seen as a positive attribute*" (NHS Institute for Innovation and Improvement, 2008, p.8) in healthcare settings is also raised. However, the guides draw heavily on the work of Paul Plsek and Edward De Bono (NHS Institute for Innovation and Improvement, 2010) in so far as the use of popular creative thinking techniques, such as brainstorming or 'six thinking hats' should be used to support design or redesign improvements.

Innovation in the NHS continues to be a recurring theme in national guidance, with further attention to the duty to promote innovation in the provision of health services (Department of Health, 2012a), that innovation should be "*an integral part of the daily work of every member of staff*" (Department of Health, 2012b), that the success of innovative care models is dependent upon "*a workforce with the right numbers, skills, values and behaviours*" (NHS, 2014b, pp.29/30). Further, Health Education England has a remit to invest nearly £5 billion of public funding in training and education, to help embed research and innovation within the NHS (Health Education England, 2014), and NHS Improving Quality, which is hosted by NHS England and has succeeded the NHS Institute for Innovation and Improvement, is also working to support local innovation and improvement (NHS Improving Quality, 2013).

In spite of the focus on innovation in the planning, commissioning and delivery of NHS services, the literature, both academic and guidance and training materials, relating to the English NHS, and UK public services more generally, appears underdeveloped in relation to workplace creativity associated with innovation[31].

4.5.2 Research site: an NHS CCG

In practice, the selection of the case was opportunistic. I had previously worked for a nearby local government organisation in the area, and had some contacts in the local NHS. My work had crossed the boundaries between local government and health services, and I had formed an extensive network of contacts.

At times I was located in the NHS CCG Headquarters offices, and at other times I visited GP practices and other places where healthcare services were being provided or meetings were held. The research study could not be considered an ethnography, as at no time was I permanently located with a specific group of people. Due to the developing nature of the NHS CCG as an

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[31] Innovation and the improvement process rather than creativity is the pricipal focus of academic papers (for example, Greenhalgh et al (2004), Mugglestone, Maher, Manson and Baxter (2008) and Mulgan (2014)). There is a similar focus in government policy guidance guidance and training materials (for example, Department of Health (2011)), and though support for idea generation is given, it is positioned at the fron-end of innovations (for example, Maher et al (2010; 2012).

organisation recruiting new staff, there was insufficient office space for me to have a permanent desk, though I was welcomed to 'hot-desk' around the office.

4.6 Data collection: observations and interviews

4.6.1 Observations

I attended nearly 70 NHS CCG events where there was a tabled agenda. Appendix 3 sets out the nature of the meetings attended during this period, including a brief description and the approximate total duration in hours. I also attended the NHS CCG Headquarters on numerous other occasions for research purposes, or for conversations with specific individuals.

Attendance at 'project meetings' gave me an insight into specific working practices on operational projects. From time to time, these projects would have also been the focus of Board, Commissioning Delivery Group and Senior Management Team meetings, and conversations in the office. Board meetings were attended by 20 to 30 people, Commissioning Delivery Group meetings by about 20 people, and the Senior Management Team meetings would involve around three to four senior managers and two to three senior clinicians.

Following guidance offered by Emerson, Fretz and Shaw (1995), I wrote field notes into a simple notebook during the meetings I attended. Initially, I

considered sitting away from the table, but the lack of a hard surface on which to place my notebook was problematic. Also, having attended meetings on an informal basis for some months, it felt inappropriate. As they were aware of my previous work experience, at times I was asked for a view on a specific issue, and in response I politely offered 'neutral' advice, or suggested a contact that they may follow their enquiry up with.

In the Commissioning Delivery Group, Senior Management Team, and Project Team meetings, my writing of field notes was more consistent with the guidance offered by Emerson et al (*ibid*), in that I took open notes from the very start, and people often joked about what I wrote down. I attempted, where possible to capture raw data, in the form of quotes, rather than my own interpretation of what was being said, in an effort to avoid contaminating the data through projecting my own assessment of the conversations and discussions (Boyatzis, 1998).

On occasion, at the start of the data collection process, a meeting participant might ask to see my notes, and in response I would choose a section where they had spoken, and read to that person what I had written down. I was conscious of the need to strike a balance between a degree of openness as a guest at their meetings, and the need to retain confidences about notes I had made about others. From time to time, during detailed conversations about complex issues, I would take fewer notes, and observe the scene being played out in front of me. At an appropriate time thereafter, I would retreat to the toilet or corridor and write contemporaneous notes of the exchanges.

My previous work experience involved the application of detailed knowledge of governmental health policy and guidance. I also drew on my experience of managing a number of themed health service improvement reviews to understand the nuances of the practices of health service improvement through the examination of 'good / best practice', and the challenges of translating those practices into a new situational context. Such *"extensive local knowledge"* (Emerson et al, *ibid*, p.141) proved advantageous. Only on rare occasions did I need to ask what a particular health service or procedure was (for example, a D-dimer test in support of the identification of deep vein thrombosis).

On reflection, the writing of the field notes did more than record the observations (Emerson et al, *ibid*) – they also revealed something of the structure of meetings, such as who spoke, and who didn't, and who commented on certain projects and issues. Generally, I did not record office conversations at the time, as it was more important to listen, and enquire. If pertinent issues arose, contemporaneous notes were made discretely as soon as possible thereafter.

The Telehealth project was not pursued any further after three meetings, as technical problems outside of the control of the NHS CCG led to the postponement of the project. However, my involvement with the three projects relating to Self-Care / Diabetes, Virtual Ward and the Diagnosis of Dementia in Primary Care continued through to the end of the data collection period in April 2013. The log of meetings in Appendix 3 illustrates

my presence in over 150 hours of active meetings, over a period of 14 months. Drawing on my work experience, the projects I chose to observe were those service innovations that offered the most scope for the creative input of the local workforce. Table 4.2 describes key features of the projects.

Table 4.2: Key features of NHS CCG service innovation projects	
<u>**Project**</u>	<u>**Key features**</u>
Self Care / Diabetes	Multi-disciplinary, multi-level, multi-organisation workshop used to decide the project priorities. Researcher observed the commencement of the project. Researcher interviewed key staff involved in the design and implementation of the project.
Virtual Ward	Service innovation achieved across the NHS CCG area through the replication of practice. Researcher observed the implementation of the project. Researcher interviewed key staff involved in the design and implementation of the project.
Diagnosis of dementia in primary care	Service innovation in a general practice area through 'in-house' design. Researcher observed the implementation of the project. Researcher interviewed key staff involved in the design and implementation of the project.

<u>4.6.2 Interviews</u>

Towards the end of the data collection period, between November 2012 and April 2013, I also conducted 31 semi-structured qualitative interviews with 30 people[32] (Appendix 4) working for the NHS CCG or one of the local general practices, or associated with the NHS CCG through some form of working collaboration. All of the interviewees were chosen on the basis of their direct involvement with one or more of the service innovation projects, or their leadership and decision-making role within the NHS CCG. This means that their interview transcripts were likely to yield useful empirical evidence of the creative practices in each of the service innovations, thus helping to provide information in support of answering the research questions.

The scope of the interview was similar for all interviewees[33]. It was estimated to last between 45 mins and 90 mins, depending on the role of the interviewee and their involvement in the service innovation projects. Consistent with Yin (2009), I felt it was important to keep the research design flexible. Thus, secondary, probing, questions were adapted according to the interviewee's role and experience, and if involved in a project, the nature of their involvement. The content of the interview questions was theory-driven (Braun and Clark, 2013), and with the knowledge that

[32] One interviewee was interviewed twice, as the person was called away during the first interview.

[33] First-order interview questions are set out in Appendix 5.

evidence of creative practices would be sought. The structure of the interview was carefully planned (King and Horrocks, 2010). For example, the room layout was open, without a desk between interviewer and interviewee, and the interviewee chose the time and place of the interview. The first question was intended to be relaxing and easy to answer – I asked the interviewee to tell me about their work.

One of the challenges I faced in the design of the interview questions was related to the need for me to enquire about the interviewee's understanding of creativity and innovation without revealing directly that I wanted to learn more about their experience and practice of creativity and innovation. Inevitably, the participant information sheet shared in advance to interviewees (Appendix 6) provided clarity about the scope of the research, so it was evident that my interest was centred on workplace creativity. The process involved in the gaining of informed consent is covered in section 4.8.

Immediately after each interview, I checked again that the interviewee was happy with their contribution and that they did not want to withdraw their informed consent. No one did. Each of the interviews was recorded onto an electronic device and fully transcribed. However, not everyone I asked to interview agreed. Some made it difficult to be interviewed or cancelled at short notice. In these circumstances I reassured the potential interviewees that they were under no obligation to speak with me, and that I wouldn't

share it with anyone if they didn't. If someone refused to be interviewed, I also did not share this knowledge with anyone else at the NHS CCG.

I was also concerned to be satisfied with the quality of the data I was gathering. I used the process of triangulation (Braun and Clarke, 2013) not only to corroborate observations and interviews, but also to understand the role of specific actors, and to put the whole situation into context (Fetterman, 2010). Thus, I focused on attending as many NHS CCG Board meetings, Commissioning Delivery Group and Senior Management Team meetings as I could (it was at these meetings the Board members and senior managers influenced discrete projects) as well as the project team meetings. The project meetings were led by a senior manager or an external consultant, and though these meetings secured the active involvement and participation by senior clinicians, they were also attended by more junior staff. Members of the project teams involved in the 'Self Care / Diabetes', 'Integrated Care' and 'Diagnosis of Dementia in Primary Care' projects were invited to be interviewed as part of the research study.

4.7 Data analysis

The research design was seeking evidence of otherwise unrecognised creativity and creative practice as part of the implementation of service innovation projects. A review of the extant literature suggests there is no substantive attention to creativity or creative practice in the later stage of organisational innovation. However, through previous work experiences, I

have witnessed such creative practices in the workplace. In order to tease out and find evidence of this workplace creativity, a theory-driven set of qualitative research techniques was engaged.

The research design resulted in the collection of a lengthy series of jotting field notes and the transcription of recorded interviews, providing a "*richly textured accounts of events, experiences, and underlying conditions or processes*" (Smith and Elger, 2014). In sum total, over 150 hours of observations in meetings were made, supplemented with interviews with 30 actors. Each interview, on average, lasted just over 60 minutes.

The framework for assessing the responses to the interview questions is set out in Appendix 1. The observational data was examined using the same framework which identifies measures of creativity and innovation which can be captured in empirical data. This practice is consistent with techniques supporting the assessment of creativity (Mumford et al, 1991; Mumford et al, 2012a; Sawyer, 2012). Key characteristics of creative problem solving in innovation were identified, including: 1. Problem definition (Sawyer, 2012; Mumford and Gustafson, 1988), 2. Information gathering (Sawyer, 2012; Mumford et al, 1991), 3. Idea generation (Sawyer, 2012; Puccio and Cabra, 2012; Mumford et al, 1991; Paulus, 2000; Anderson et al, 2004; West, 2002a), 4. Idea evaluation (Sawyer, 2012), Puccio and Cabra, 2012).

Evidence of reflexivity (Archer, 2007) was also sought in order to attempt to account for the theory – practice inconsistency arising through developing an understanding of the structures in the NHS CCG that are contributing to a failure to recognise employee creativity.

4.8 Ethical considerations

In management research, whether qualitative or quantitative in nature, the design of the study has to take into account a number of ethical considerations, such as personal confidentiality, an inadvertent sharing of gossip, respect, honesty etc., that if not planned for might otherwise put participants at risk of harm (Easterby-Smith, Thorpe and Jackson, 2012).

4.8.1 Securing a NHS letter of access

The process of securing permissions to study in an NHS organisation is complex. Having identified the sites for my data collection (initially, permission was sought for two sites in different geographic locations), I was required to gain a 'Good Clinical Practice' certificate (NHS National Institute for Health Research, 2011a) and make an application for a NHS Research Passport (NHS National Institute for Health Research (2010a, 2010b). The formal process to secure a 'letter of access' was started in March 2011. By November 2011, I had received 'favourable ethical opinion' for my research from the Nottingham University Business School Ethics Committee (University of Nottingham, 2010), and submitted my application to the NHS

National Institute for Health Research (National Patient Safety Agency, 2007; Department of Health, 2005; NHS National Institute for Health Research, 2011b).

The final University of Nottingham approval was secured on 25 January 2012, and a NHS 'letter of access' was granted on 6 February 2012. The scheduled date for the completion of the data collected was 30 April 2013.

Though the process of securing formal permissions to conduct research in the NHS was lengthy, the detail required by the NHS National Institute for Health Research not only focused attention but also required some personal reflexivity. Though none of the data collection involved speaking to or observing patients, necessarily some of the content of meetings and some of the information shared during interviews could unwittingly refer to individuals or groups.

4.8.2 Informed consent

Initially, participants were recruited through sending an email from my university email account to their work email address, introducing myself and setting out some background information to the research study. A detailed participation information sheet (Appendix 6) was also attached to the email, as was a form requesting permission to observe the individual in meetings associated with work (Appendix 7) thus securing informed consent if they signed and returned it.

I also shared the (same) participation information sheet (Appendix 6) with potential interviewees in advance of carrying out a semi-structured interview. I had previously met all but one of the interviewees, and had secured informed consent from them for observations. However, I wanted to be certain that they understood the nature of the project, and about key issues such as confidentiality and anonymity. A separate informed consent form was signed in advance of the interviews. The consent form (Appendix 8) included permission to record the interviews, and noted the researcher's commitment to confidentiality. Interviews were held at a time and in a place determined by the interviewee. One interview was carried out using Skype software over the Internet, at the request of the interviewee.

4.8.3 Anonymity and confidentiality

Though no patients were observed, nor interviewed, it was essential that participants' names were anonymised (in my observational data they were recorded as 'numbers'), and most job titles were generalised (for example, senior manager, senior nurse). It was not possible to generalise the role of a general practitioner, though the general practice they were involved with is not named. Names of organisations were omitted, though, for context, the type of organisation is described, for example, "mental health trust" and "voluntary organisation".

4.9 Reflexivity

The importance of the researcher being able to critically reflect on the knowledge produced, and the researchers own role in producing that knowledge cannot be understated – this is known as reflexivity (Symon and Cassell, 2004).

In this research study, I decided not to interview key actors in the early part of the data collection phase, as I recognised they were in the early stages of establishing a new organisation, and I wanted to capture decisions about working on service improvements through observations at a range of formal meetings. It is recognised that the researcher also has a continuing presence through the research process, thus it is impossible for the researcher to be completely removed from the locus of the research (Willig, 2008). For example, early in the data collection stage I also made a conscious decision not to make notes of conversations with people in front of them, but find a quiet area, and make such notes contemporaneously.

It is the role of the researcher to "*explore the ways in which a researcher's involvement with a particular study influences, acts upon and informs such research*" (Nightingale and Cromby, 1999, p.228). Though King and Horrocks (2010) suggest that reflexivity is "*particularly relevant to a social constructionist epistemology as it requires researchers to consider their contribution to the construction of meaning*" (p.22), Smith and Elger (2014) note the importance of reflexivity in critical realist research too:

"interviewers should always be interested in listening to and exploring the subjective experiences and the narrative accounts provided by interviewees...knowledge about event and processes, let alone causes and underlying conditions, is not simply the transparent product of a conversation between interviewer and interviewee." (p.119).

Smith and Elger (2014) also note that the 'informants accounts' need to be scrutinised through triangulation with other qualitative research methods, such as observations and document review. In response, I attended the wider Board meetings to develop a sense of what was happening across the patch of the NHS CCG, and to develop an awareness of what was important to them, during the time of the research study, and what was less important. This knowledge helped shape secondary interview questions, enabling probing to take place on a person-by-person basis, thus aimed to yield a richer, and more contextual, source of data.

A further aspect of personal reflexivity relates to the researcher's prior knowledge of the circumstances surrounding the research study. One of the challenges for a researcher embarking on a programme of qualitative research, through observations and interviews, is to guard against the negative aspects of "*preunderstanding*" (Gummesson, 2000, p.57). In my own case, while I had a solid understanding of the way the NHS and Department of Health operated, I was also aware that I had worked alongside people working for NHS organisations in the immediate local area.

However, to the best of my knowledge I had not worked directly with anyone directly associated with the NHS CCG[34]. In practice, this meant that I had a strong sense of the ways and patterns of working, but no prior knowledge of any of the individuals involved. Similarly, to the best of my knowledge, the participants in my research study had no experience of working with me, directly or indirectly. However, the situational context was novel for myself and for the NHS CCG team, managers and clinicians. The Government's White Paper (Department of Health, 2010) on the future of the NHS had proposed a shift in the balance of power away from the managerial cadre, though they still operated as an executive, towards clinical leadership by general practitioners, through the creation of NHS CCGs and the dissolution of primary care trusts (PCTs). In that regard, having delivered training sessions with a range of bodies, on the changing organisational structure of the NHS, in my capacity as an independent consultant, I knew as much about the new arrangements as the senior managers and clinicians. I had also a successful track record of working with other clinicians and managers in the nearby geographical area. On balance, the 'preunderstanding' knowledge was vital to me, as it lent me credibility

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[34] There was one indirect contact. I had previously worked with a senior local authority social services manager, nearly six years earlier. Our working relationship at that time was such that we would usually meet once or twice a week to discuss common projects and share information. The manager eventually joined the Board in a formal capacity, and participated in the Integrated Care project. Aware of the potential for me to influence the senior manager's contribution, I triangulated my findings, in relation to the role of the local authority in that project, through interviewing another social services manager who I had not met before the research study.

with clinicians and managers, and also meant that there was no need for me to "*learn the ropes*" (Watson, 2011).

4.10 Conclusion

The ontological perspective of a critical realist approach has been outlined, identifying that the stratified ontology that underpins critical realism accepts that a world exists independently to and external from our knowledge of it (Sayer, 1992). In this regard, the search for unrecognised employee creativity and creative practices within replication procedures and during the later stages of innovation implementation has been demonstrated to be possible. Further, Archer's (2007) account of human reflexivity is used to further develop an understanding of structures and active actors, and why such creativity and creative practices may exist unrecognised.

It was decided that a case study approach was considered the most appropriate design as it enabled a focus on understanding organisational processes as they occur in their situational context (Hartley, 2004). It also allowed for the production of evidence for creativity and creative practice (Mumford et al, 1991; Mumford et al, 2012a; Sawyer 2012) to help to provide answers to the research questions set out in Table 3.5 and repeated below.

RQ1. To what extent does the replication of best practice require creativity when there is contextual novelty?

RQ2. Do service innovation models need to take into account the role of creativity during the implementation phase of service innovations?

To be clear, this thesis is making no attempt to explain the causal mechanisms that underpin the use of creativity during replication of best practice or the later stages of innovation management. Due to the lack of theory in this area, a contribution can be achieved through identifying cases where creative practices are demonstrably used within these stages. The findings are therefore structured to provide sufficient evidence of the need to re-think creativity and innovation theory to take into account these currently unrecognised practices.

Chapter 5 – The Case For Creativity in the Replication of Workplace Best Practice

"It's never static. In many ways I think you can never have an endpoint to this, it has got to be evolutionary all the time. It's got to be flexible and active, anything is … you can't have the thing set in stone."
- GP #36, NHS CCG / General Practice (Chairman of a NHS Clinical Commissioning Group)

5.1 Introduction

The purpose of the next two chapters is to move towards an explanatory account of workplace creativity associated with the implementation of service innovations.

This chapter explores the specific issue of the use of human creativity when organisations seek to introduce or improve new services through a management tool know as the replication of best practice. It is speculated that creative workplace practices are necessary in the reproduction of what works in one organisation, or place, into a different organisation, or place. Chapter 6 also explores human creativity in a workplace setting, but additionally examines if creativity is necessary for the successful implementation of service innovations, which are not limited to replications alone, and may include the introduction of new services.

A review of the relevant and extant creativity and innovations literatures in Chapter 2 and Chapter 3 raises, at least, two pertinent issues. Firstly, that, theoretically, replication is not associated with human creativity. Rather, there needs to be some 'distance' between the original and the reproduced product (Stein, 1953), and that without a clear operational definition of creativity, and an assessment methodology, then what is or is not creative is a matter of judgement by "*appropriate observers*" (Amabile, 1982, p.1001).

Secondly, though creativity has been associated with the implementation of innovations (West, 2002a; Rickards, 1996), the literature remains scant on the nature, scope and extent of creativity in later-stage innovation. Rather, emphasis in the literature is given to the importance of ideation in the front-end of the innovation process (Amabile, 1988; West and Farr, 1990; West, 1990; Woodman et al, 1993; West, 2002a).

The analysis that follows in this chapter and in Chapter 6 is inductive in nature. However, a number of signifiers of creativity, in relation to creative problem solving in an organisational setting, have been identified. Table 5.1 offers these 'activities' as characteristic of creative problem solving associated with the early stage of innovation (Mumford et al, 1991; Mumford et al, 2012a; Sawyer, 2012).

Table 5.1: Key characteristics of creative problem solving in innovation	
Activity	**Key Characteristics**
Problem definition	Mumford et al (1991); Mumford et al (2012a) Identify and formulate the problem in such a way that it leads to a creative solution (Sawyer, 2012) Integrate, reorganise, or restructure existing understandings (Mumford and Gustafson, 1988)
Information gathering	Mumford et al (2012a) Be aware of unexpected and apparently unrelated information (Sawyer, 2012) Availability of well-organized, extensive and diverse knowledge structures (Mumford et al, 1991)
Idea generation	Mumford et al (2012a) Unconscious incubation, conscious attention, combination of ideas in unexpected ways (Sawyer, 2012) The production of original mental images, and thoughts that respond to important challenge, an interplay exists between idea generation and idea evaluation (Puccio and Cabra, 2012) Combination and reorganisation of knowledge (Mumford et al, 1991) Two or more individuals, divergent thinking, fluency (generating a large number of ideas), team sessions (Paulus, 2000) Ideation (the generation of ideas) (Anderson, De Dreu and Nijstad, 2004) Idea generation as a creative process (West, 2002a)
Idea evaluation	Mumford et al (1991); Mumford et al (2012a) Select which ideas to pursue further (Sawyer, 2012) Assessing the reasonableness and quality of ideas in order to develop workable solutions, an interplay exists between idea generation and idea evaluation (Puccio and Cabra, 2012)

The NHS CCG was formed from a cluster of local general practices that had been collaborating since the mid-2000s. Senior manager #35, experienced in leadership in primary care organisations, set the scene in facing general practitioners and senior mangers working in primary care services:

> *"Let's get the best practices together and let's show what can be done by general practice."* **Senior Manager #35, NHS CCG**

The decision by the Government to create NHS CCGs (Department of Health, 2010) was seen positively by local senior clinicians, as an opportunity to improve health care through the introduction of service innovations:

> *"...suddenly, I felt empowered to actually exert my influence in this equation, and it was an opportunity for clinicians to be more proactively involved in setting the agenda, and setting the future for primary care in a way that's never been possible before..."* **GP #36, NHS CCG / General Practice**

GP #36, the NHS CCG Chair also described how he viewed his role in the new organisational arrangements:

> *"In many ways I always draw on my non-medical leadership roles to inform me on how I personally sort of drive that dynamic [encouraging*

the development of ideas]…so as Chair, you define a task and you've got the team to find and you look after the individuals within that team, you give them the task…and you basically let the team generate ideas and to come together for a plan and you just simply oversee that plan, and certainly as Chair really it's empowering individuals to come forward with ideas, to link up with other individuals within the team and to keep generating plans and ideas and just overseeing that is the focus of their attention, so it's team, task, individual - that triangle, and pretty much as Chair that's what I'm trying to do is to encourage the team effort, make sure the individuals are catered for within that team and empowered and make sure that the task is well defined and they are focussing on the objective." **GP #36, NHS CCG**

Indeed, towards the end of the data collection period commenting on the necessity for new ideas to drive service innovative, senior manager #57 reflected at a meeting with healthcare staff across the NHS CCG area:

"The focus is putting into practice what former CCG Chief Officer #35 has developed. The feedback from the authorisation panel was "The Virtual Ward is excellent, roll it out as quickly as you can". We're now in a position where you don't have to limit yourself on innovation; it is about what you can do. We don't have a bottomless pit, but we do have £2.6m to help you put your ideas into practice, not just now, but in the future." **Senior Manager #57, NHS CCG**

Senior manager #57 also spoke of the challenges facing NHS organisations on a local basis:

> "*What I'm not sure I've ever seen is an industrialisation of an operating model, and I almost think that's quite right really, because we're not TESCO's, we're not dealing with tins of beans, we're dealing with individuals who are different with different socio-economic backgrounds...*" **Senior Manager #57, NHS CCG**

The comments are indicative of a refocusing of organisational aims and priorities away from a goal of health service standardisation (National Audit Office, 2011) and towards an emphasis on local context and communities healthcare needs. They also represent an engagement with the need to support the local workforce in generating ideas as part of the service improvement process. However, while issues such as 'innovation' and 'ideas' were shared as being important, attention to 'creativity' was less frequently mentioned, if at all.

5.1.2 Is there a discourse of creativity and innovation in the NHS?

Whilst the NHS policy guidance and training manuals emphasise innovation, and the generation of new ideas, including those by the workforce working on the frontline, in roles such as GPs and nurses, an understanding of creativity in the context of driving service innovation was less clear. Senior clinicians and a social care manager shared their understandings of the term

'creativity' in so far how it might support service improvement through innovation:

> "*Well yes, I think it does. I think it [the service innovation] continues to require creativity, and therefore the people that are leading that project need permission to be creative, which sounds a strange concept. But the NHS is a born bureaucracy and actually people often feel comfortable working in that boundaries way…So you have to give permission for people to be creative. I think, yes, through the life of that project you need creativity, but I think you then need creativity as the project focus almost changes. So we will get to a point, just actually now beginning to get to a point, with that project where we are trying to understand, 'so what is the implication of this out into the rest of the CCG area, to the rest of [the sub-region], is there an appetite for this? Will it apply [elsewhere]?*" **Senior Manager #77, Mental Health Trust**

> "*I think you need scope for creativity. Unless you lock something, you implement it and lock it down then you need some form of, you still need to have the scope in the system to cope with someone coming back and saying 'I know we are delivering this and this is what you've asked us to do but actually now we've done it, this way would actually be better than the way we are doing it now', and I think the linear model you've got that ends with stabilisation I think isn't it? I don't think we ever reach a point of complete stabilisation. We've got a kind of*

constant revolution. Constant change is probably a key aspect of how we are, of the work across health and social care." **Senior Manager #56, Local Authority**

Both of the foregoing quotes point towards the importance of creativity in service innovation in health and social care, though are limited in their full understanding of the practise of creativity as a series of discrete steps in a creative problem solving process (Mumford et al, 1991; Mumford et al, 2012). The first of the two foregoing quotes reveals something about the hierarchy in the NHS, that staff need 'permission' to be creative. This statement sits alongside another, earlier, foregoing comment by senior manager #57, who, at a NHS CCG training event, similarly appeared to 'give permission' for the workforce to be innovative. The second quote reveals a deeper understanding of the contemporary nature of creativity in the context of service innovation in the NHS and local authorities, consistent with West (1990), in that new systems evolve out of existing systems. The literature review set out in Chapter 3 revealed that product innovation is characterised by a tendency towards standardisation (Abernathy and Utterback, 1978), whereas a position may never been achieved in delivering service innovation (Sundbo and Gallouj, 2000). Indeed, in public sector services attempts at standardisation can stifle future innovation (Mulgan and Albury, 2003).

Nevertheless, there is not universal clarity on the inter-relationship between creativity and innovation:

For example, on creativity:

> "*Being creative, thinking outside the box, just having free thought and doing things differently, producing things in a different way.*" **GP #14, General Practice**

And on innovation:

> "*I think as a practice we're innovative. To me it's changes, changing things, looking, identifying need, identifying where things aren't working as well as they could be, using the evidence, using evidence particularly in the work that I do patient cases, looking at case histories for different patients. And we've introduced a lot of changes as a result of cases, looking at case studies. You just look at what happened too - a patient, their journey, what went wrong in that journey, why you think that went wrong and then solving it. And to me, that innovation, doing things in a different way, not for the sake of it either. I think that's wrong, if you just want to do, that's wrong, you know. If it ain't broke, don't fix it.*" **GP #14, General Practice**

In this instance, in sharing an understanding of innovation, a senior clinician is largely describing the front-end of the creative problem solving process, with activities including problem identification, information gathering, idea

generation and idea evaluation (Mumford et al, 1991; Mumford et al, 2012). However, the understanding of creativity is much more akin to one of Sawyer's (2012) (false) beliefs that "*the essence of creativity is the moment of insight*" (p.405).

5.1.3 NHS CCG approaches towards creativity, creative problem solving and service innovation

Within a few months of the creation of the shadow NHS CCG organisation (in 2011), the change of emphasis from 'top-down' to 'bottom-up' in the development of local health care services could be seen in a two-day research and development workshop held in March 2012. Led by senior manager #26, and encouraged by the NHS CCG Chairman (GP #36), over twenty clinicians, managers and administrative staff, from a range of organisations, took part in an 'innovation cell', aimed at identifying problems, sharing information and generating ideas in relation to ways to improve the health of local people with adverse long-term health conditions.

While this activity provided evidence of a typical approach to creative problem solving (Mumford et al, 1991; Mumford et al, 2012a; Mumford and Gustafson, 2012; Sawyer, 2012), there were minimal mentions of the words 'creativity', 'creative' or 'creative practices' over the two days:

> "*[Innovation is] important, particularly in our new world of health care, and our new model of health care, to capture good ideas, to bring*

them in and make them mainstream. The difficulty has always been testing them to see if they work, and certainly within our CCG one of the areas I've encouraged historically is the idea of an innovation cell and getting someone with an enquiring, open mind from a non-clinical side to make that happen and we've got someone like senior manager #26 who is ideal for that, who's got a very flexible agile mind, who is receptive to ideas who can bring out the best from clinicians to make these sort of things happen, and certainly I've encouraged senior manager #26 to run with the idea of an innovation cell, like a 'skunk works', and he's done that on a number of occasions quite successfully, to generate the ideas and see if they work and bring them in mainstream." **GP #36, NHS CCG / General Practice**

Instead, the focus was on the term 'innovation' – though the necessity for the generation of ideas was recognised. Over the next two days, participants took part in a number of sessions, both participative and directed, aimed at the creative problem solving practices of problem identification, problem definition, idea generation and idea evaluation (Mumford et al, 1991; Mumford et al, 2012). Towards the end of the workshop, the participants were put into three groups, and asked to prepare and present short and long-term action plans, consistent with designing or redesigning diabetes-related services aimed at improving self-care[35].

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[35] Photographs illustrating attendees participating in the creative problem solving practices may be found in Appendix 9.

The innovation cell was the idea of senior manager #26:

"Actually I read a book called 'Adapt' by Tim Harford, and it was about adaptive organisations, innovative organisations. I know it's common but it talked about skunk works, which we then called an R&D cell. The idea being that in innovative organisations you get groups of experts who have a view, and that what you need to do is nourish that and foster that, even if it's a counter to, or perhaps especially if it's counter to the general view…So our idea was to see whether there were enthusiasts in our organisation who had ideas that they wanted to put forward and they wanted to develop, not just one person's pet project but a group of people with some kind of coherent view about a problem that we had. So that was the idea, could we look at a problem and get a small group of people who were genuinely interested in solving that problem together." **Senior Manager #26, NHS CCG**

Thus, senior manager #26's perspective demonstrates knowledge that creative problem solving practices, such as information gathering and idea generation, in a group setting is better than by individuals acting alone (Mumford et al, 1991; Mumford et al, 2012a; Mumford and Gustafson, 2012). GP #36 is also aware of the opportunity of working with a wide range of experienced professional staff to aid information gathering (Mumford et al, 1991):

"[Insofar as clinical commissioning goes] I think the assumption has always been it's GPs, but actually looking at it, you look at clinicians in a very broad perspective, certainly from primary care, from nurses, even from practice staff who really are your front line in terms of meeting the public, meeting patients and pointing them in the direction of clinical care. So you can draw from the grass roots at its broadest point…" **GP #36, NHS CCG / General Practice**

The work of the NHS CCG innovation cell resulted in the identification of three health care projects aimed at improving diabetes services across the patch: motivational interviewing, flexible appointments and a buddy system for diabetic patients. The NHS CCG established a Diabetes / Self Care Project Group, led by senior manager #26, to oversee and give direction to work activities arising from the projects.

Indeed, the type of creative problem solving activity carried out by the innovation cell is distinctive of creativity found in the early stages of the innovation process (Mumford et al, 2012; Mumford and Gustafson, 2012; Shalley and Zhou, 2008), and consistent with the problem solving activities identified in Table 5.1.

Finally, though a discourse of creativity in the NHS CCG may be inconsistent, and perhaps curtailed, in practice, the above quotes reveal an appetite and culture consistent with organisations supportive of stimulating a creative workplace, as identified in the literature review, such as leadership

(Basadur, 2004; Shalley, Zhou and Oldham, 2004; Reiter-Palmon and Illies, 2004; Hargadon and Bechky, 2006; Tierney, 2008) and psychological safety (Shalley, 2008). Further, senior clinicians recognise that creativity is not limited to a few, but is a universal feature in humans (Boden, 2004; Richards, 2007; Wilson, 2010; Florida, 2012).

5.2 Is creativity necessary when replicating best practice in the context of a service innovation?

When ideas, processes, services, changes in practice, and ways of doing things are translated to other workplace settings or contexts, then it could be that the novelty within the new context is what drives the need for creative behaviour. Such 'contextual novelty' may produce 'creative replication' if creative behaviour is necessary during the replication of workplace practice into a new organisational context.

5.2.1 The Virtual Ward project: a service innovation achieved through the replication of best practice?

The 'Virtual Ward'[36] project arose from a commitment by the NHS CCG Board to roll out a long-term conditions programme across all of the general

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[36] A Virtual Ward is similar to a hospital ward but the 'bed' is in the community, usually in the patient's own home. It is a whole-system approach including all those patients with long-term adverse health conditions, albeit with different levels of dependency and complexity. It involves all of a general practice team working in a way that is proactive. Patients are admitted to, and discharged from, the Virtual

practices in its area. Two of the larger general practices in the NHS CCG had run Virtual Wards as pilot projects for approximately two years. These general practices had succeeded in improving patient care, principally through avoiding unnecessary admissions of patients to hospital and, in doing so, achieved cost savings. Indeed, the Virtual Ward project was seen as the type of health care improvement scheme that the Department of Health (2011) advocates as being implemented through the replication of best practice:

> *"[Innovation] is happening anyway, for example the Virtual Ward. That's an idea that one practice within our [NHS CCG] group had piloted and run well, and it was captured. [It is an] innovative model for the whole CCG, and of course now it's currency if you like within the CCG, and is a pilot for the whole of the PCT cluster to roll out beyond our borders. So that's a really good example of how we've captured innovation. We tested it within one practice, we've tested it, we've hard tested it against challenge and brought it in as a mainstream piece of work for the CCG and as sort of flagship for our CCG to the extent that it's going to be copied across the PCT footprint area, but to make that happen you need key people, and for that you need people like senior manager #35 who sees the value in working differently."* **GP #36, NHS CCG / General Practice**

Ward as their situation stabilises, and they can be stepped down from the specialised care required during periods of high dependency. The aim is to support patients to remain as independent as possible, and to achieve their optimum quality of life for as long as possible. Source: CCG Board report, June 2012

The foregoing quote, by the Chairman of the NHS CCG, illustrates that the roll out of the Virtual Ward across the NHS CCG area was consistent with the definition of an innovation, which is "*any idea, practice, or material artifact perceived to be new by the relevant unit of adoption*" (Zaltman et al, 1973, p10).

Senior nurse #70, one of the architects of the Virtual Ward, spoke about the project drivers, and early investigations:

> "*[We wanted] to look at ways in which we could continue to build on and deliver a joined up way of working…I had a look round the country to see what was happening with regards to community matrons, long term condition management, complex condition management, and came upon Virtual Wards, initially the ones in Croydon…so from that point we [in the general practice] decided that it was a model that we really liked. We liked the idea of having a social worker [working with us] and having much closer links with social services, and also having a care co-ordinator.*" **Senior Nurse #70, General Practice**

It is evident that, even with the lack of a consistent discourse of creativity, the early stages of the innovation process are being discussed here: problem definition and information gathering (Mumford et al, 1991; Mumford et al, 2012).

Long-term conditions management and complex conditions management are highly specialised health services, designed to keep patients with multiple adverse health conditions out of hospital, so they can remain in their own home. The evidence is also confirmatory that the Virtual Ward is a collection of services and service activities (Illeris, 1989), and the implementation of such a scheme across a number of general practices would certainly satisfy West and Farr's (1990) additional condition of an innovation in that it would be "*designed to significantly benefit the individual, group, organization or wider society*" (p.9). Consequently, it is suggested that the Virtual Ward is an example of a 'service innovation'.

The comments of senior nurse #70 were affirmed through triangulation in an interview with GP #14, the NHS CCG's clinical lead for the Virtual Ward:

> "*The Virtual Ward came about...because we had a community matron who was, not dissatisfied, but appreciated that she could actually be, rather than working in the conventional way that community matrons had been encouraged to do, she appreciated that actually she could be more effective if she worked as part of a multi-disciplinary team and was more reactive, and can react, respond to patients needs very quickly...and it was around the time that the Virtual Ward model was starting to take off [around the country], and we learned about the model in Croydon, so we visited Croydon, had a look at their model, liked the idea...it was in Croydon, so obviously it's an urban area, work in a different way, small, single-handed practices...we liked the*

components of their ward and we could see how that would work...then

we got opportunity to, because of the efficiency, you know, of scale and

we got opportunity to set up our own [Virtual] Ward, so...wrote up a

business case...approached the PCT...applied for some 'Invest to Save'

money..." **GP #14, General Practice**

Thus evidence has emerged that the introduction of the Virtual Ward was the outcome of a copying of best practice from elsewhere. In taking two colleagues with her on the visit to the Croydon Virtual Ward, senior nurse #70's approach was also consistent with the creative problem solving step of information gathering, thus having access to "*extensive and diverse knowledge*" (Mumford et al, 1991, p.92). The government's approach to public sector service innovation had long promoted 'bottom-up' support for change through continuous improvement, involving "*people who do the job to identify and implement appropriate changes*" (Hill and Wilkinson, 1995, p.9). Senior nurse #70's approach was also consistent with the established practice of finding out where best / better / good practice existed and that she was aware that best practice could be replicated it into new settings (Zairi and Whymark, 2000b; Horbar et al, 2001), including in UK public sector services (Newman et al, 2000), and in particular the NHS community (Department of Health, 2000b; NHS Beacon Services, 2000).

The research and activities undertaken by senior nurse #70 appear to confirm that her organisation's problem involved the need for a new system of integrated health care also was consistent with Mumford et al's (2012a)

taxonomy of five characteristics of a problem calling for creative thought: that it was ill-defined, novel, demanding, complex and exploitable. Certainly, the problem was <u>ill-defined</u>, with the possibility of no single solution being sufficient. The Virtual Ward is a multi-organisation, multi-profession, multi-discipline approach to keeping people out of hospital – there is no single solution. Secondly, the problem demanded a <u>novel</u> solution - that is one that is novel from the perspective of the person(s) working on the project, which was the case. Thirdly, the problem was <u>demanding</u>, given the copying of the Croydon scheme, set in an urban environment, would need adapting to the context of a rural location in which senior nurse #70 was located. Fourthly, the involvement of a number of different organisations, and the necessity to seek approval for funding from the PCT suggests that the problem is <u>complex</u>. Finally, the evidence that the Virtual Ward service innovation is <u>exploitable</u> arises from the further replication of the best practice across the whole NHS CCG area.

Yet the review of current creativity literature, set out in Chapter 2, suggests that the replication of the Virtual Ward, that is the copying of a set of services and service activities from one organisational situation into another organisational situation, does not produce a creative outcome (Mumford et al, 2012b; Caroff and Lubart, 2012). For it to be accepted as creative, it must satisfy a combination of the two constructs of standard definition of creativity (Stein, 1953; Runco and Jaeger, 2012) – 'novelty' and 'usefulness'. Given the professional status of GP #14 and senior nurse #70 involved in the decision to replicate the Virtual Ward, for one organisation into another

organisation, and the need for the general practice to prepare a business case for decision by the primary care trust, it may be accepted that the replication of the Virtual Ward succeeds in one aspect of creativity, in that it is 'useful', and has some 'utility'.

However, it appears that the idea is not sufficiently original to be considered a creative outcome. Caroff and Lubart (2012) suggest that produced work "*must be novel in the sense that it goes beyond a replication or copy of that which exists*" (p.13). Sternberg et al (2002) also reason that replication or copying lacks novelty, since for an idea to be original, it should "*(a) reiterate a known idea in a new way; (b) move a field forward along its current trajectory, (c) move a field forward in a new direction, or (d) lead to an integration of diverse trends in a field*" (Caroff and Lubart, 2012, p.13).

Thus so far it has been established that the Virtual Ward is a service innovation, and is also the product of the replication of best practice. It has also been determined that the Virtual Ward is not sufficiently original for it to be considered a creative outcome. The 'original' Virtual Ward, operational in Croydon, London, could be considered to be the product of creativity, but not a copy of it. Indeed, in the organisational innovation process (Amabile, 1988; West, 1990), the 'creative input' would have been made during the initial ideation stage, in Croydon, rather than in the new location. The nature or extent of any creativity required during the latter innovation implementation stage (West, 2002a) is not adequately accounted for or explained in the extant literature.

It is argued in this thesis that any workplace creative practice necessary during the implementation of a service innovation is driven by the new context, rather than the production of a creative outcome. So, 'contextual novelty' necessarily supports a system of 'creative replication'.

5.2.2 The Virtual Ward project: is human creativity necessary for the implementation of a service innovation involving the replication of best practice?

The Virtual Ward pilot schemes in two of the NHS CCG's general practices were considered a success. The combination of a multi-organisational, multi-profession, multi-disciplinary teams, involving primary care clinicians, a community matron working for the local community health trust, a care co-ordinator and a local authority social worker working collaboratively had led to reductions in vulnerable patients being admitted to hospital and instead being supported to stay at home and recover there. Given that one of the NHS CCG's first major change programmes was the roll out of the Virtual Ward scheme across the rest of the NHS CCG area, the workplace creative practices supporting the further 'spread' of the Virtual Ward across all of the general practices in the area are now discussed.

5.2.2.1 The Virtual Ward project: creative problem solving - problem definition

During a meeting between the external management consultants and the senior management team in September 2012, it was evident that a number of the conditions of a 'creative problem' (Mumford et al, 2012a) were present. A review of the meeting notes illustrates the complex and ill-defined nature of the problem (*ibid*), involving multiple organisations, and the eventual goal of having a 24 hours, 7 days a week 'single point of access' Virtual Ward service.

Rather than plainly accept the proposed implementation project plan for the Virtual Ward model suggested by the consultant, NHS CCG Senior Management Team members were focused on how it might work locally, suggesting improvements, thus providing evidence of problem definition through a restructuring of existing understandings (Mumford and Gustafson, 1988), to suit the local context:

> "*An arrow back and forward between the Care Manager and District Nursing team. Maybe having the arrows to illustrate fluidity? Could the Case Manager be the community matron?*" **GP #14, General Practice**

The enquiry by GP #14 was emblematic of the NHS CCG's approach to health care service improvement, and consistent with the principals of organisational creativity, in so far as GP #14 is "*finding or solving problems*"

(Basadur, 2004, p.104). Other NHS CCG Senior Management Team members continued this thread of challenging the consultant, continuing to reframe the problem in a local context:

> "*If you are selling this to [general] practices, what is the key difference between the case manager in a Virtual Ward and a community matron?*" **GP #39, General Practice**; and

> "*How this is different in our Virtual Ward is that the community matron is part of a team, rather than an add-on. Previously, our community matron was not working as part of a team.*" **GP #14, General Practice**

The conversation provided further evidence of the practise of problem definition associated with creativity as being the "*iterative process, involving reflection and action, seeking feedback, experimenting, and discussing new ways to do things in contrast to just relying on habit or automatic behaviour*" (Shalley and Zhou, 2008, p.4).

Following these contributions, the external consultant adapted the project management plan to reflect the NHS CCG's project aims:

> "*Every practice is different...we have created some common tools, common processes, so the fundamentals, principles are the same across each practice, so whether, when they're doing a Virtual Ward team,*

they're using the same kind of meeting principles, or the agenda templates or the reporting…but every need of every practice is slightly different…And it's kind of what the needs are are dependent on the practice population sizes. But every practice is different, and that, I think, has been the slight challenge because you are creating, you tried to reinvent this model across a huge number of practices, who have a different need, so the principles are there." **Senior Manager #68, External Consultancy**

Thus, the consultant had recognised the need to strike a balance between the standardisation of the Virtual Wards in general practices across the NHS CCG, that is what needed to be replicated, and the importance of maintaining a local context, thus identifying and formulating the problem so that it leads to a creative solution (Sawyer, 2012).

By October 2012, evidence started to emerge that while the two NHS CCG pilot schemes, both in larger general practices, had been the driver for the roll out of the Virtual Ward across all of the NHS CCG's practices, a straightforward 'copy' of that model was not going to work across a local context. Further, senior manager #68's experience of implementing a model of integrated care (similar to a Virtual Ward) in another location was helpful, but the direct 'copying' of that model, or either of the two NHS CCG pilot schemes, across the rest of the NHS CCG did not work. At a project meeting, senior manager #68 commented:

"The CCG's model [for Integrated Care] is different to what we have done before. What is it that you want to achieve?" **Senior Manager #68, External Consultancy**

The opportunity was taken to further redefine the problem (Mumford and Gustafson, 1988).

A further problem that had emerged related to the role of the adult social care department and the difference between the larger size of the two pilot scheme general practices, and the smaller other general practices in the rest of the NHS CCG area:

"There are problems with Adult Social Care regarding the Single Point of Access. We have been told by the Director at the Council that involving social care directly is a no-go, we have to use their call centre." **Senior Manager #68, External Consultancy**

"[I've met] with Senior Manager #56 (Local Authority). The Council has raised the issue that all the CCGs in the [wider] area are delivering the Virtual Ward in different ways. It is a sticking point...the Council are thinking that this is an additional resource, whereas we are trying to say it is the same staff." **Senior Manager #68, External Consultancy**

Once again, there was an attempt to reframe the issue (Sawyer, 2012). The problems were crystallised, needing a restructuring of existing understandings (Mumford and Gustafson, 1988). This presented a real barrier to further progress. Without access to local authority adult social care support, the roll out of the Virtual Ward scheme across smaller general practices would not be possible:

> "*It's not the Virtual Ward [that] you have piloted in two practices.*"
> **Senior Manager #68, External Consultancy**

> "*These Virtual Ward roll out plans are different.*" **GP #14, General Practice**

A separate problem arose with the electronic system of data collection across the general practices in the NHS CCG. One of the challenges related to the different IT systems used by the general practices. Administrative / technical officer #74 discussed the issue with a colleague:

> "*I have been asked to find out how much saving has been made. I don't know how I'm going to do it at this stage.*" **Administrative / Technical Officer #74, NHS CCG**

> "*Yes. It is not just the referral to the Virtual Ward, but we wanted to add subsequent information to it.*" **Administrative / Technical Officer #54, General Practice**

In a subsequent interview, administrative / technical officer #74 shared his outlook on problem definition. His insight revealed that the implementation of a major scheme of change, such as the Virtual Ward service innovation, requires attention to the local context, and a realisation that a restructuring of existing understandings (Mumford and Gustafson, 1988) is sometimes necessary.

> *"It's the world we're in because we are working with. In the CCG, there are lots of different independent businesses. And that's the crux of it. If you work for BT for example, BT have one system in place. It might be a bespoke system, but it's one system in place, so anything you create or whatever, everybody within that business will have a basic knowledge of it because you're going to create it for that system that they're already experienced in. And they all work under the one umbrella, and they all work to the same philosophy. With general practice, you've got many individual businesses that all have their own."* **Administrative / Technical Officer #74 NHS CCG**

Given the Virtual Ward system of healthcare is a replication of what exists elsewhere, it is evident that its implementation in a different setting to that in which it originally existed posed a number of unforeseen problems. On a number of occasions, members of the project team had to examine what was working, and what was not working, and revise the implementation programme.

5.2.2.2 The Virtual Ward project: creative problem solving – information gathering

During the period between the start of the implementation of the Virtual Ward in September 2012 and the roll out by March 2013, the project steering group met on a regular basis. Meetings were attended by a range of people, including the external consultant, senior NHS CCG managers, senior clinicians (GPs and community matrons), general practice managers, and administrative and technical staff. Given that the meetings included representatives from a range of organisations across the health and social care spectrum, they provided a forum for information gathering, drawing on the availability of well-organised, extensive and diverse knowledge (Mumford et al, 1991).

At the first project steering group meeting, in response to external consultant asking what the participants wanted to achieve with the Virtual Ward, senior manager #26 responded:

> "*The Virtual Ward means that the patient is at the centre, and the integrated care team wraps around the patient. The District Nurse should be able to join the team with no barriers arising from contracts.*" **Senior Manager #26, NHS CCG**

Other participants shared the issues that were relevant to them, for example, the number of emergency admissions, the role of community

matrons, names and job role of contacts, the role of care co-ordinators and the role of practice managers. All of this input is consistent with 'information gathering', and given the diversity of the people at the meeting included, at times, what might be considered as 'unexpected and apparently unrelated information' (Sawyer, 2012), that proved useful in later meetings.

Administrative / technical officer #54, one of the experienced care co-ordinators from one of the two pilot schemes, also made a telling and useful contribution at the first meeting, outlining the types of information that would be important for others to consider:

> "*The Virtual Ward template. We've gone from masses of information to little information. It doesn't tell a story anymore. Referral to assessment – timescale? Where the referral is from? We were doing a pilot and needed this information – is it still useful? How was the case managed? Have hospital admissions reduced? End of life, did people die where they wanted to? Discharge – flow? If you're on SystemOne, it picks up the code and you can get an overview. We were hoping to get reports from this. As well as using the template, which is helpful for others in the practice to see, we also use a spreadsheet which has a little more personal information on it, e.g. if admissions were appropriate or not. Administrative / Technical Officer #74 will give us headline figures, but this gives us more qualitative data.*"
> **Administrative / Technical Officer #54, General Practice**

This helped senior manager #26 frame further questions requesting information from others at the meeting, consistent with Sawyer's (2012) notion that such information gathering sessions may yield unexpected information. In this instance, senior manager #26 was able to make those enquiries directly, rather than contacting people after the meeting.

At the second project steering group meeting, the problem raised in the previous sub-section relating to the possible withdrawal of the adult social care support from the Virtual Ward was discussed.

"*It's their starting position.*" **Senior Manager #26, NHS CCG**

"*Let's find a work-around.*" **Senior Manager #68, External Consultant**

"*What is their response time?*" **GP #14, General Practice**

"*A number of people who come into the system have a social worker so we can contact them if it is an open case, so we can circumvent it. But for those who don't have a social worker, you have to phone [the call centre], type in 1 or 2 or the other, who will then put the call through, say to [a local adult social care office].*" **Administrative / Technical Officer #54, General Practice**

"*They're putting barriers in front of us.*" **GP #14, General Practice**

"It is not the Virtual Ward that you have piloted in two practices."

Senior Manager #68, External Consultant

"This [meaning the Virtual Ward plans for roll out] is different." **GP #14, General Practice**

The foregoing exchanges illustrate how members of the project steering group engaged in information sharing to help overcome the problem which put the Virtual Ward project at risk. The conversation continued for several minutes, as options and names of contacts were discussed. Eventually they settled on inviting a senior adult social care manager to visit one of the pilot schemes to see how the Virtual Ward operates in practice[37].

The other steering group meetings followed a similar pattern. Exchanges of information were at times perfunctory, and at other times dealt with problems that had arisen, which required attention. After a problem had arisen, the starting point was always to gather information before moving onwards.

5.2.2.3 The Virtual Ward project: creative problem solving – idea generation

One of the challenges of the study design was to identify opportunities to observe idea generation and idea evaluation. In practice, due to time

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[37] The idea generation and idea evaluation steps in the creative problem solving process relating to this problem are discussed in subsequent sub-sections.

pressures and an attention to the operational nature of the implementation of the Virtual Ward, idea generation took place in a variety of settings. At times, at the project steering group meetings, and at other times, in other less formal settings away from a larger group. It was not possible to observe smaller, less formal meetings, so enquires were made about idea generation and idea evaluation during interviews conducted with key actors towards the end of the study period.

The NHS CCG Chairman, GP #36, commented on the creative practice of idea generation, and the importance of contextualising the Virtual Ward to suit local circumstances:

> *"Creativity is basically generating the ideas. The thing about this new model of working [the NHS CCG] is clinicians on the ground operationally always come up with ideas about how things should work, what things are working well and what things are not working well and how we would fix them. You sort of need to be able to capture those ideas of how a system can be fixed or worked differently, not just within their own setting but more broadly within our area and even more broadly still within our region, and the Virtual Ward is a good example of those I think."* **GP #36, NHS CCG / General Practice**

The previous two sub-sections have examined the issue relating to the concern that adult social care department might not engage with the roll out of the Virtual Ward in relation to problem definition and information

gathering. At the same meeting, a number of ideas were generated and shared:

"We need to move forward...we need to look at the two pilot schemes and look how much money they saved, and at least we get 'link' people [from the adult social care team] into the practices." **Senior Manager #26, NHS CCG**

"*Get the social workers into practices, and get them talk about it, get a groundswell [of opinion]."* **GP #14, General Practice**

"*Yes, we can call it a pilot. I can talk to senior manager #56 [from the adult social care department] at our senior management team meeting."*[38] **Senior Manager #26, NHS CCG**

"Perhaps we should move away from the Council as a body, and look for a name, even fairly low [in terms of seniority]. They could contact the Council's call centre for you. You're on a hiding to nothing if you want a body." **Administrative / Technical Officer #54, General Practice**

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[38] It is suggested that this an example of the type of meeting that takes place when problems arise during the implementation of innovations, reflecting the type of interplay between idea generation and idea evaluation suggested by Puccio and Cabra (2012).

"We are a big practice, but you are not going to get a body – but you need a link who can access Framework-I [the adult social care IT database], and they can come to Virtual Ward meetings. You need to show social services how it works, get them to talk about it." **GP #14 General Practice**

"We can meet with senior manager #56...we can take him to [one of the pilot scheme general practices] to meet social workers there, and find out, even the Director? **Senior Manager #26, NHS CCG**

Though there were a relatively small number of people in the meeting (eight), it is still sufficient for the purposes of securing divergent thinking (Paulus, 2000).

During an interview, I asked senior manager #56, who was the principal link between the NHS CCG and the local authority, how he dealt with the need to generate ideas arising when faced with problems arising with partner organisations:

"Most of the ways we think about things, we draw on our experience. But sometimes, I think the creativity can be if you put, you can have some individuals who are very good at it, but often it is about groups where they will spark off each other in the thinking process that takes you from where you might have expected to be to someone saying 'hold on', having heard what you are just saying, 'just a minute, have you

thought about it from my experience, this angle'...you've got people who put together their different professional experiences and actually what comes out of that is something that neither of their professional experiences but is a new answer, new way of constructing the world if you like or responding to the world as a result of that." **Senior Manager #56, Local Authority**

I pressed senior manager #56 about where attention to creative practices might be in the innovation process. He confirmed that the idea generation stage (Paulus, 2000; Anderson et al, 2004) that he had referred to in the above quotation could be in connection with the design of the innovation as well as the implementation of the innovation:

"Well because it [the organisational innovation process] is assuming that there's a process that, I mean, there's a prior step saying, 'something we want to look at because you've got to apply the creativity to something', then you apply the creativity, that comes out with an answer that then becomes the innovation, and sometimes I think the creativity may come further down track as part of the innovation process almost." **Senior Manager #56, Local Authority**

One of the challenges that the implementation of the Virtual Ward service innovation presented was the incompatibility of IT systems in general practices across the NHS CCG. Whilst each general practice is a free-standing business, contracted to the NHS to provide a range of health care services

and activities, the NHS CCG also employed a technical officer, to, among other things, address NHS CCG-wide IT issues. I asked administrative / technical officer #74 about his approach:

> "*[The external consultants] brought their experiences and their knowledge over and the idea was to move it from being two practices, just that we'd got working, all individually, to then make it a project that could be shared with all practices and that anybody could use. And that was the challenge then, because you'd got different IT systems, different clinical systems, you'd got different ways of working, you've got different mentalities, you've got GPs with different thoughts and beliefs in how they work, and all these individual things had to come together. And they had to work with informatics to be able to provide the analysis, and us to be able to put it into a useable format to then cascade down, and to be able to report on research and measure against. So there was quite a lot of challenges, it's been a massive project.*" **Administrative / Technical Officer #74, NHS CCG**

I also asked how he approached problem solving, including idea generation:

> "*So we generally worked with practices, for want of a better phrase, attack them from both ends, so [my colleague, who was a senior manager], would work from the top down, so the policies, procedures, that sort of thing, and I'd work from the bottom up. So we'd go in and do the practical stuff, so do some data analysis or some practicalities*

on how they send for their asthma referrals and that sort of thing, the

asthma clinic, how they get patients in. So it might be just discussing

putting up a new, writing a new letter or telephone instead, so the nitty

gritty sort of stuff from the bottom, and my colleague would come from

the top. So we'd work with practice at both ends, which I think worked

very well on it." **Administrative / Technical Officer #74, NHS CCG**

While the problem definition and information gathering aspects of the creative problem solving processes associated with the implementation of a service innovation are consistent with extant creativity theory, albeit conducted in a different forum (meetings rather than events), attention to idea generation appears inconsistent to what theory might suggest. Some practices of idea generation occur outside of formal settings of gathering of groups of people. Commentaries from senior manager #56 and administrative / technical officer #74 reveal that there is a calling on human reflexivity, drawing on individual experience and expertise (Archer, 2007).

Whilst this practice is a departure from that expected on a review of creativity literature, it appears consistent with Sawyer's (2012) notion of unconscious incubation, and Puccio and Cabra's (2002) interplay between idea generation and idea evaluation. It is as if idea generation and idea evaluation are taking place concurrently, and, for example, the ideas that emerged in a meeting conversation about how the adult social care issue was resolved, were resolved into an agreed position in a relatively short space of time.

However, it is also noted that senior manager #56 concurs with West (2002a) that creativity is a fundamental part of the early stages of innovation, but he (senior manager #56) makes a case for creativity during the later innovation implementation stage.

5.2.2.4 The Virtual Ward project: creative problem solving – idea evaluation

The initial meeting between the external consultancy brought in to implement the Virtual Ward service innovation and the NHS CCG senior management team, in September 2012, provoked this comment:

> "*It is really good that you've got our ideas on paper. The fact that you've made sense of it and it can work across the patch is great.*" **GP #21, General Practice**

GP #21 shared his view on seeing the presentation and outline project implementation plan prepared by the management consultants. The comment suggests that the creative problem solving process that led up to the design and presentation of the implementation plan to the NHS CCG had been successful, and that the implementation of the proposed solutions would be successful. This conception of the innovation process is consistent with extant theory (Amabile, 1988; West, 1990, West, 2002a). In practice, this was far from the case, as initial problems arising from a failure to adapt the Virtual Ward to the local context came up within a matter of a few weeks.

But it was not until much later in the implementation of the Virtual Ward did opportunities arise to evaluate and select which ideas to pursue further in resolution of those problems. One of the problems had been a reluctance of the adult social care team to commit to the Virtual Ward, fearing that they would not be able to sufficiently resource it in the same way that had been the case with the two local pilot schemes. However, by December 2012, the problem was resolved:

> "*The Director of Adult Social Care has written to CCGs saying there will now be a fast-track to social care in relation to the 'Single Point of Access'* [the gateway to the Virtual Ward]*. This is a really positive communication sent out from him. There have been lots of internal meetings. One of the social care manager's has sent over a list with who is the social care link for each practice. Another is to do the same for her area. I have also had contact with an adult social care manager about access to Framework-i, and there is no problem with read-only access. It is already happening in two other local CCGs.*" **Senior Manager #68, External Consultancy**

This issue was one of the most challenging problems during the implementation process. Though it required a creative solution, the process by which that solution was achieved is different to the process suggested in creativity theory. Extant theory emphasises and locates creative practices in the early stages of the innovation process, rather than in the later stages. Without the support of the adult social care department (access to the social

care team was a part of the original scheme in Croydon), the Virtual Ward would have taken on a different shape and role. I asked the clinical lead for the NHS CCG for her views on the process leading to the decision by the local authority to engage:

"Well, one of the problems that I think we didn't really work through [at the beginning] was social care not engaging, and not, maybe the people who'd probably got the power to be able to make this happen, getting them on board, or thinking we'd got them on board early enough. And, so that was a potential block for us and I think that set everybody back when we didn't think social care were going to buy into the model and people got quite down and despondent at that point. And because it's essential, it won't work without social care being an integral and central part of the whole thing. I think because the CCG, along with another CCG, had the foresight to employ people [the external management consultant] to specifically look at this, drive this project forward, then I think we got over that problem." **GP #14 General Practice**

I wanted to know more of the detail, and persisted:

"By talking to people, I think. Helping them to understand what we were trying to achieve, so they didn't feel [it was different to their aspirations]. Understanding their fears as well, because, I think there were some fears there, and a lot of things were assumed that weren't

actually correct...I think it was the fear that made them react in the way they did. Senior manager #68 didn't give up, and by getting the right people together at the right time, and there was a lot of discussion at the time about how we should approach the problem, you know should we go banging on the Director's door, but because people were able to have these discussions, and talk about should we do that, should we not, I think lots of people were brought in the conversation. We actually got through it and came out with the right answer. **GP #14 General Practice**

I asked GP#14 if creativity played a role:

"*Yeah. There were lots of discussions about different ways about approaching the problems, the pros and cons of all those different approaches.*" **GP #14 General Practice**

Certainly, I had witnessed the problem being identified, described and defined (section 5.2.2.1), information being gathered (section 5.2.2.2) and an exchange of ideas about how to engage with the adult social care department (section 5.2.2.3). The description provided by GP #14 is on the same trajectory as those that were discussed in my presence, suggesting that the idea evaluation is consistent with Sawyer (2012). Puccio and Cabra's (2012) notion of tensions between idea generation and idea evaluation is also pertinent: the solution arrived at was assessed for its reasonableness and developed into a workable solution. However, until

pressed on the need for creativity, it wasn't mentioned by GP #14, suggesting an inconsistent discourse of creativity in the practice of the implementation of service innovation[39].

The discussions between the NHS CCG team and representatives from the adult social care department on this matter were reported at a later meeting of the project steering group in December 2012:

> *"We agreed shared targets, risks and access to information with the Director [of Adult Social Care] and senior manager #56. The Director offered more too, about supporting the Virtual Ward to help keep people out of hospital."* **Senior Manager #26, NHS CCG**

IT issues were also problematic. Overcoming a barrier to determining the financial costs/ savings to the NHS CCG through the operation of the Virtual Ward was important. During an interview, I asked senior manager #68 about the challenges brought about by the need to harmonise the IT systems across the general practices, in particular the scale of the task. Senior manager #68 reflected on the opportunities of working with a diverse group

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[39] GP #14 was the most senior clinician who attended the 'innovation cell' held in March 2012 (described in section 5.1.1), and was familiar with the creative problem solving process. The workshop had covered the creative practices necessary in the design of an innovation. Though the workshop had problematised the issue of long term conditions, and through information gathering had generated dozens of ideas, and refined these down through evaluation to just three specific projects, by the end of the research study some 13 months later, none had been fully implemented. (See Appendix 9 for exemplar photographs).

of people, and how that shapes the decisions to go ahead with certain projects (Sawyer, 2012):

> "*I suppose what's innovative here is that we've now, and again it's not up-and-running, but we've been given access to Framework-i…You're bringing different skills sets to the table and a different viewpoint to the table. What a nurse will think and what a GP will think, and a therapist will think, is very separate. It's very different views. And I think we see that in the Virtual Ward team meetings…multi-disciplinary teams are quite common practice in health care. To then bring in social care and bring in different systems and have your clinical system up and running on a monitor, and have your social care system up and running and decide on the patient, and even invite that patient in to that meeting, that's powerful.*" **Senior Manager #68, External Consultancy**

I also wondered how administrative / technical officer #74 evaluated ideas:

> "*Well in my job that's pretty much what I do on a day to day basis. A lot of what I do is not only making sure that the practices understand what's happening from a CCG point of view, but also try, we're constantly trying, to think of ways of changing how the projects are working, how do we improve the figures, how do we improve things. So we're constantly, my job in particular is doing that, and as an individual that's what I do anyway. So just recently I've been working*

with the health checks on it, so I've had to, up towards the end of last

year I've had to be going round to every practice and saying right how

do we increase these health check figures, how do we get the patients

in, what are the problems you're facing at the minute, is there any IT

issues, is there anything we can do to get them in. Do we do telephones,

do we do letters, what do we do? So creativity is a massive part of what

my job is." **Administrative / Technical Officer #74, NHS CCG**

I was aware that administrative / technical officer could look to a sub-regional team for support and guidance, and so discuss problems and generate ideas in a group setting (Paulus, 2000), but, once again, there is evidence of human reflexivity (Archer, 2007) rather than a more formalised process over a period of time.

5.3 Conclusion

The purpose of this chapter was to focus on addressing the research questions (RQ1 and RQ2) (Table 3.5) relating to the necessity for creativity for the replication of workplace practice, and the necessity for creativity in the implementation of service innovation.

It has identified that the creative problem solving sequences of problem definition and information proceed consistent with extant creativity theory. While no large-scale workshops are held during the implementation phase of a service innovation (as they might be in earlier the creativity / ideation

phase), these discussions take place in formal meetings, and involve a range of people, representing different organisations, different professions and different disciplines. The later idea generation and idea evaluation steps in the creative problem solving process appear less formalised. Problems were resolved using creative problem solving techniques (Mumford et al, 1991; Mumford et al, 2012a) and the project proceeded in the same direction, suggesting that the ideation and selection of appropriate ideas was sufficient for the purpose.

That it has been shown that human creativity is necessary during the implementation of a service innovation through the process of the replication of best practice demonstrates that the extant understanding of creativity, based upon concepts of novelty and usefulness (Stein, 1953; Runco and Jaeger, 2012), is not sufficient to explain creativity in a new context. This issue is discussed further in Chapter 7.

Chapter 6 – The Case for Creativity in the Implementation Stage of Service Innovation

"The reason it's working, I think, is it's because we are prepared to…instead of saying of we've done it now, this is the way it should work, we are prepared to be constantly resolving issues."

– General Practitioner

6.1 Introduction

This chapter is the second of two data analysis chapters. It also seeks to report on a further inconsistency between theory and practice in creativity and innovation literatures, and builds upon the data analysis presented in Chapter 5. It explores the possibility of creativity and creative practices in the later stages of the innovation process being necessary for the successful implementation of a service innovation. Data collection was carried out in the same NHS CCG as described in the previous chapter.

Whereas the previous chapter led to a construct termed in this thesis as 'contextual novelty', and thus stakes a claim for the necessity of creativity in the replication of workplace practice, this chapter explores the nature of creative practices in a workforce tasked with implementing service innovations. The chapter draws on the literature reviews of the concept of creativity, set out in Chapter 2, and creativity associated with innovation, set

out in Chapter 3. In order to contextualise the design and implementation of the service innovation observed as part of the data gathering, it was necessary to deepen, and so nuance, the understanding of innovation, thus providing knowledge of the dimensions of innovation.

The review of the current innovation literature revealed that the practice of workplace creativity is 'loaded' at the front-end of the innovation process (Amabile, 1988; West and Farr, 1990; West, 2002a), with some acknowledgement of, but little attention or description given to, creativity during the later implementation stage. Rickards (1996) is among few voices suggesting that creativity is necessary through the innovation process.

This chapter seeks to address research question 2 set out in Table 3.5.

6.2 Is creativity necessary when implementing a service innovation?

The lack of a significant body of creativity research associated with service innovation (Zeng et al, 2009; Giannopoulou et al, 2014) is problematic for theory development and for practice too, in terms of drawing on theory to inform awareness and appropriate training programmes. Reliance on aged theoretical concepts of creativity being front-ended in the organisational innovation process (Amabile, 1998; West, 1990; West and Farr, 1990) is also problematic[40] (Anderson et al, 2014). In the context of the English NHS,

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[40] This comment is not a criticism of the work of Teresa Amabile or Michael West, merely a reflection consistent with Anderson et al (2014) that their theories of

whilst there is a demand for innovative approaches to drive healthcare service improvements (Department of Health, 2011), there is little practical guidance in how to do this, other than written handbooks which promote idea generation and selection (Maher et al, 2010; Maher et al, 2012), and are directed at the early stages of an innovation. Senior nurse #78, an experienced senior clinician, reflected:

> *"I've been in the NHS now for twenty-three years, and I've seen a lot of changes, and to be perfectly honest a lot of them have all come back round again [laughs]. The frustrating thing with change in the NHS is when management come up with plans of action. In theory, they sound absolutely fantastic, but they don't involve people on the front line, as to how these changes are going to take place. They are forced upon us, and we are expected to just take it and work with it, whether we feel that it's right or wrong or whatever, but at the end of the day, we are the ones that are out there with the patient, and we can see, obviously, we, we know how we work to get the best out of ourselves, and obviously, using our time efficiently to then have something else put in that we can see is just going to be a paper exercise but yet we still have to do these things. So, it is very frustrating...nothing runs smoothly. If it did then the NHS would have been left alone working perfectly twenty*

creativity and innovation in organisations continue to dominate creativity literature, yet there has been little attention to finding out if their concepts of creativity continue to hold in the relatively new field of service innovation.

three years ago, wouldn't it?" **Senior Nurse #78, Community Health Trust**

The comment reveals not only an interest in driving improvement, but also that the nurse may be able to make a positive contribution in developing new services. However, it also suggests that there has been little attention in relation to organisations drawing on human creativity in relation to the issue of 'how to implement a service innovation'.

Empirical data gathered during the implementation of two service innovation projects feed into this chapter: (1) the Virtual Ward project, and (2) the Diagnosis of Dementia in Primary Care project. Each project required different degrees of workplace creativity at varying stages of the implementation process.

Theoretical evidence in support of the Virtual Ward project being a service innovation has already been provided in Chapter 5. The nature of the dementia diagnosis project confirms that it, too, is an innovation (Zaltman et al, 1973; West and Farr, 1990). Further it may be classified as a service innovation, as the project involves the planning and delivery of a range of services and service activities (Illeris, 1989) in support of improving the health and well being of the local population.

Concepts of radical and incremental innovation pertain to distinctions along a theoretical continuum of the level of knowledge embedded in an

innovation (Sundbo, 1997), with middle values difficult to interpret (Dewar and Dutton, 1986). The scope of the dementia diagnosis service innovation satisfies Hage's (1980) concept of radical innovation in so far that it requires both process – the way in which the activity is carried out - and output – the way in that the service is experienced – are different from existing models of dementia diagnosis. In this case, the diagnosis is made by a community psychiatric nurse informed by a general practitioner in a primary care setting (rather than by a doctor in a secondary – hospital – setting), and that patient treatment pathways that follow are different too as a direct consequence of the diagnosis in primary care.

6.2.1 The Virtual Ward / Dementia Diagnosis projects - problem definition

Within a few weeks of the start of the implementation of the Virtual Ward service innovation, an unforeseen problem arose with differences between the scale of the Virtual Ward in the two NHS CCG pilot schemes, and a number of the other small general practices. One of the key components of the Virtual Ward is the community matron service. Without access to the knowledge and skills of a community matron, who would be providing care in a patient's home, the Virtual Ward scheme would not be viable in the proposed format. Though senior nurse #78 had been involved in briefing the external consultants and taking part in implementation meetings outside of the project steering group meetings, it was not until she joined the project steering group meetings in November 2012 that the

implementation of the Virtual Ward picked up pace again. I asked senior nurse #78 about her contribution to the project:

> "*This is a new project so we don't particularly have the evidence to back it up. All we've got is the evidence of seeing it work practically at the two CCG pilot schemes but, obviously, this is a different model. So, it's like we're having to rework this to work differently. So I've taken it from when I spent quite a bit of time at one of the Virtual Ward pilot scheme practices where I was placed for my induction [as a community matron], looking at how that works, to how we can then make that work within five practices. Originally, they were the whole five practices to be one Virtual Ward. I did discuss that with a few of the GPs, separate GPs from different practices, and asked their opinion of [that plan]. Their main concern was that they didn't want other practices knowing about their patients…And so, I then took it and said we can't do this as one big Virtual Ward for various issues, but we have to do it as five separate ones. And that's when it came about them having five separate care co-ordinators in each practice to do it. Then obviously, we worked out the hours and things from there.*" **Senior Nurse #78, Community Health Trust**

In response, (unwittingly) she focused on problem definition, using her reflexivity (Archer, 2007) to restructure existing understandings (Mumford and Gustafson, 2012).

Senior nurse #78's contextualisation of the local situation was significant in the course of the project, leading to a reframing of the problem, and set in train a process of information gathering and idea generation leading towards a creative solution (Sawyer, 2012).

The Diagnosis of Dementia in Primary Care project was carried out in one of the NHS CCG's larger general practices. Overseen by a project steering group chaired by senior manager #26 and operationally led by GP #39, the project was aimed at meeting the needs of patients with cognitive impairment. Though the project had been in the planning and development stage for nearly three years – a process that followed the classical creativity stage of the innovation process (West, 2002a) – problems arose within two months of the implementation of the project. I asked GP #39 about her experiences:

> "*How we dealt with problems? The first problem was that nothing was happening so I suppose I knew enough people to get people into the room. I had enough influence and that was really important. So that was the first problem solving strategy, I suppose. I think there were multiple problems...I mean I could talk for hours about the problems we've had, I don't know where to focus.*" **GP #39, General Practice**

I also asked GP #39 to identify a specific problem within the dementia diagnosis project, and she raised the issue of records management by senior nurse #45, the community psychiatric nurse employed by the mental health trust, who was the senior clinician who carried out the patients' diagnosis:

"Initially we had senior nurse #45 starting with us, and the first month was absolutely great. Suddenly you've got somebody to discuss things with. You've got someone to refer people to. Everything was hunky dory until July when senior nurse #45 sort of disappeared. Then we got these lengthy letters so that everybody [patients] that was asked an opinion about was being treated as if that was a referral into a community psychiatric nurse in the mental health team. {This means that] you'd get the full seven page risk assessment, two page letter, even if you'd asked somebody for a bit of advice about sleeping tablets...{senior nurse #45] was working from home spending hours writing these enormously long reports and I thought 'this is not what we planned, we didn't envisage this at all'. We envisaged somebody buzzing around seeing patients, writing in the records, talking to us but not formally processing through the various systems that we had hoped to avoid and some of the reports were so long that you had to wait four hours to get them back down off the spine [the GP IT system]" **GP #39, General Practice**

I sought to corroborate the version of events shared by GP #39 in an interview with senior nurse #45:

"The main problem I've had with this project has been trying to reconcile the admin demands of my organisation with the volume of work that I have, which is much more than I would normally have. At

first, I tried to fulfil everybody's expectations, so whenever I picked somebody up [a patient added to the list], I basically generated two lots of paperwork, two lots of input onto electronic systems. Eventually, well after…I wanted to try and do that if I could to see if it would work, but it became obvious that I couldn't do it, not enough hours in the day.

Senior Nurse #45, Mental Health Trust

In reframing the problem (Mumford and Gustafson, 2012), GP #39 and senior nurse #45 were able to address the challenge associated with the contrast between the strict approach to record keeping required by the mental health trust, and the less rigorous approach in a general practice located in primary care. Without a resolution of this issue, the dementia diagnosis project would have ceased as the financial model was predicated on achieving a significantly higher rate of patient diagnosis than could be reached using the existing dementia diagnosis services.

6.2.2 The Virtual Ward / Dementia Diagnosis projects - information gathering

In conversation with senior nurse #78, I asked about the role of a community matron:

"*Sometimes when you come out of patient's house and you don't feel that you've actually done anything as such, you feel like 'I must have*

missed something because there generally is something every time you go". **Senior Nurse #78, Community Health Trust**

Senior nurse #78 explained that it required problem solving abilities, and attention to information gathering (for example, Mumford et al, 1991). I also asked about how she responded to problems such as the issue with the implementation of the Virtual Ward and the difficulties associated with its introduction into smaller general practices:

"*Do you see a point where all of the problems will be stabilised and the Virtual Ward will run smoothly?*" (Interviewer).

"*No. [laughs]. Nothing goes without a problem. There's always going to be something, some spanner in the works that's going to come up, and my thing that I said from the start almost. I said it to each of the practices, that, you know, you're on a steep learning curve. All of this, it is a pilot still and basically you are doing this now to find the problems, to find the faults to then rectify them to make it work better. So, because it hasn't been done before, we have to find the problem. I said it's almost like we're being set up to fail to start off with, and then we have to turn it round and succeed with it.*" **Senior Nurse #78, Community Health Trust**

Senior nurse #78's reflections also shined light on the importance of experience and expertise achieved through learning new ways of doing things.

One of the NHS CCG senior managers (senior manager #35) corroborated senior nurse #78's attention to information gathering as an important step in problem solving:

> "*And we were trying to get to a point where people were learning from each other. So senior nurse #78 had spent some time with senior nurse #70 [senior nurse #70 identified the Virtual Ward scheme through a study of best practice] and she knew how things worked at one of the Virtual Ward pilot sites, but she needed to make it work in five practices. And that was pretty challenging.*" **Senior Manager #35, NHS CCG**

In relation to the dementia diagnosis service innovation, senior manager #77 and GP #39 both shared information on the necessity of information gathering during the early stages of the development of the implementation, consistent with creative problem solving practices (Sawyer, 2012; Mumford et al, 1991). I was invited to observe the first clinical diagnosis session involving GP #39 and senior nurse #45[41]:

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[41] Steps were taken by GP #39 and senior nurse #45 not to disclose any patient information that could lead to their identification by the researcher.

"The hospital. It's primitive. They do cognitive screening on people that are quite poorly, suggesting a diagnosis of dementia, and it is really unsatisfactory. They should be referring their patients to their GP for that assessment." **Senior Nurse #45, Mental Health Trust**

"How did you find this out?" **GP #39, General Practice**

"I visited two ladies on a ward at the hospital. The staff in the ward were raising no cognitive concerns, so they were going to discharge the patients" **Senior Nurse #45, Mental Health Trust**

"How did you find out that the test was primitive?" **GP #39, General Practice**

"I saw the information on the ward in patient notes. It is just ten questions – that doesn't give you a basis for diagnosing anybody [with dementia]" **Senior Nurse #45, Mental Health Trust**

"Was there any benefit?" **GP #39, General Practice**

"I spoke to a daughter and it opened up a can of worms. When on the ward you can speak to staff, to see what they've done...the big thing for the hospital is the safe discharge. These are new referrals [to me]" **Senior Nurse #45, Mental Health Trust**

While the exchange reveals that no specific problem is being addressed on this occasion, the dialogue illustrates the importance of information gathering, particularly about the detail of the different approaches taken by different health care organisations and disciplines.

Some months in advance of learning about the problem identified above in relation to the challenge faced by senior nurse #45 in relation to record keeping, and set out in section 6.2.1 above, I listened to a conversation between GP #39 and senior nurse #45 on the advantages of a less rigorous system of recording being used in the dementia diagnosis service innovation:

"*How do you record?*" **GP #39, General Practice**

"*Everything on Care Notes. I'm meant to write sentence based notes rather than bullet points.*" **Senior Nurse #45, Mental Health Trust**

"*General Practice is very patient [record] light. We maximise patient contact and minimise notes.*" **GP #39, General Practice**

"*My colleagues dream of what I can do. I have almost wholesale ditched all recording. Initial assessments [of patients], allowed 4 ½ hours by the Trust, but when filling forms in, that would take an hour. I have twenty more patients on my books [now], but I have to trim notes to*

avoid a nervous breakdown. I checked with my manager and it is fine. It is the freedom I have." **Senior Nurse #45, Mental Health Trust**

"Your role is now patient-centred rather than audit cultured, which is what we want." **GP #39, General Practice**

"Some of my documents can be transferred to System One. You have 15,000 patients and you can't write everything." **Senior Nurse #45, Mental Health Trust**

The above information exchange wasn't part of a deliberative problem solving step, but fitted in as part of the overall plan to implement a successful dementia diagnosis scheme in primary care. Nevertheless, when issues of recording were raised some weeks later, GP #39 had a better understanding of the mental health trust's approach to record keeping, and how it differed from her own in primary care. Thus, she was better able to problematise the issue when it arose later. Similar conversations regarding patient care plans were heard in project steering group meetings.

6.2.3 The Virtual Ward / Dementia Diagnosis projects - idea generation

Further to the problem definition and information gathering by senior nurse #78 in relation to the difficulties with small general practices engaging with the Virtual Ward scheme, I asked senior nurse #78 about how she raised

these issues with other members of the project steering group outside of the formal meetings:

> "*Senior Manager #68, will say…'this is how I was thinking about this and then I or the care co-ordinator, depending on what the issue is, will say 'ah, I can see that, it sounds like a good idea. But how about if it's done this way?' You know, and we do, we discuss it and then we come up with 'Well yeah, it's a good idea, so if we do it this way, then hopefully this will achieve this'. It's how it's been all the way through. So, it's been good.*" **Senior Nurse #78, Community Health Trust**

The example of ideation shared by senior nurse #78 is inconsistent with creativity theory. Instead of sharing of ideas, combining them, and cross-referencing them against each other, ideas were suggested singly, in a linear fashion, and accepted or rejected by the external consultant. However, senior manager #26 has a different view of senior nurse #78's activity in relation to ideation. He described an interplay between idea generation and idea evaluation, which is more consistent with Puccio and Cabra (2012). (His comments are explained further in the next sub-section).

In relation to the dementia diagnosis service innovation, I asked senior nurse #45 about the challenges he faced regarding the record-keeping issue, and how he had attempted to generate ideas to circumvent the problem:

"Yeah, yeah I'd … I thought about it, I generated some possible ideas that I thought would help me achieve more efficiency in terms of the paperwork, and I sent them off and had a chat with the management. Because they were … they were just glad that I was accepted here and things seemed positive, they didn't want to … I don't think they wanted to rock my boat, didn't want to make it difficult for me, so they just rubber stamped everything and said that's fine, you go ahead and do that. And as time went on I continued to chip away…you know, just kept reviewing it, thinking actually no, I'm still doing too much, and I got rid of a bit more, until in the end I…I'd got rid of everything virtually. So for about 95% of the people I've got I don't do any Trust paperwork whatsoever, they're invisible as far as the Trust is concerned, because it was the only way to manage the work." **Senior Nurse #45, Mental Health Trust**

Senior nurse #45 is drawing on his human reflexivity (Archer, 2007) in order to continually develop ideas which overcome problems he faces. I enquired further about the process he used to evaluate ideas:

"I don't generally…I don't generally write pros and…I don't generally brainstorm or thought shower. I don't normally do that, I just write. I do…I suppose I do it in my head, I do it abstractly. I don't need to see it on paper. I mean I'm dealing with things that I'm very familiar with…but I've found over the years…and this is sort of something outside of work, I do a lot of … I've done a lot of house renovating, and

if there's a big problem I just know if I just keep looking at it and looking at it, and thinking and thinking and thinking and thinking I'll get some inspiration. And I'm comfortable with that, I'm comfortable with the idea of looking at things a long time...because something will come up. So I think I've got a high tolerance for frustration in terms of problems. I know that if I just keep looking at it I'll get some inspiration. If I try thinking down one path I know that if I keep thinking something else will appear, I'll think down another thought train and I'll be creative." **Senior Nurse #45, Mental Health Trust**

In spite of the problems faced in the implementation of the Virtual Ward service innovation and the dementia diagnosis service innovation, key actors used reflexivity (Archer, 2007), drawing on personal experience and expertise, rather than formal ideation techniques (Anderson et al, 2004; Paulus, 2000; Sawyer, 2012). It is noted that in the creative problem solving process, reflexivity is more relevant to the information gathering stage (Mumford et al, 1991).

6.2.4 The Virtual Ward / Dementia Diagnosis projects: idea evaluation

Senior manager #26 suggested that senior nurse #78's less formalised contribution to the idea generation and idea evaluation stages was not only welcome, but also illustrative of creative practice:

"I think there's a couple of interesting things about that [a variation in the project management plan arising from senior nurse #78's contribution to the project steering group] actually now you've said it. I think, (1) is that we think that we bring in clinicians to be "creative", but actually why we're actually bringing them in is to bring the creativity back down to ground. (2) The project manager and the rest of us can come up with some elaborate creative, complicated system, but it needs sense checking, and that's what senior nurse #78 is doing. She's saying 'yeah, but that won't work if I don't have a job, or that won't work if you can't sort out my contract, or if we haven't got enough staff, or if you're wanting me to meet every week and I've got five practices to get round'. Which is perhaps, it's a blackout thing isn't it? It's not a creative thing but it's part of the [way things are done]…in the way people talk about creativity, they think about blue sky thinking and sitting in a room and throwing ideas about and not being criticised, and brain storming and all of that stuff. But actually what senior nurse #78 is doing is part of this creative thing" **Senior Manager #26, NHS CCG**

Here, it is observed that senior manager #26 describes senior nurse #78's role as "*sense-checking*"; using her front-line, operational experience, and thus reflexivity, to determine if something will work in practice or not.

Senior manager #23 also described something very similar about GP #39's contribution in the dementia diagnosis service innovation:

"Yes, and actually what doesn't work tells you a lot of things. So, for example, GP #39's view that she wanted to be able to do diagnosis and it's turned out she's not been able to do diagnosis. All the things of why that is are quite important because they've now become the things that we now need to solve. We'd never have known that unless we gave it a go. You know, there is this guidance [that] we've got to come to conclusions with; there is this clinical set of stuff [that] we need to think through. There is this training and supervision [that] we've got to think about. There's a whole host of things, but they weren't apparent to start with. So that's what I'm saying, you weren't going to know how a project has been unless you gave it a go and you did that iterative learning" **Senior Manager #23, NHS CCG**

Senior manager #23 is suggesting that the process of applying creative problem solving techniques only takes you so far, as there are some problems that are not resolvable. Thus the activity from problem definition to information gathering to idea generation to idea evaluation is cyclical, but rather than remaining stationary, it moves forward at the end of every phase of problem solving.

6.3 Conclusion

The purpose of this chapter was to focus on addressing the research question 2 (RQ2) alone, relating to the necessity for creativity in the implementation of service innovation.

While the empirical evidence presented in Chapter 5, in the context of the implementation of a service innovation, identified that the creative problem solving sequences of problem definition and information gathering proceed consistent with extant creativity theory, there were similar findings in the data presented in this chapter. However, the nature of idea generation and idea evaluation in this chapter is not consistent with the nature of these activities when they are carried out in the earlier creativity stage of the innovation process (West, 2002a; Anderson et al, 2004). As in the case reported in Chapter 5, there was more attention to individual human reflexivity, rather than group activity in the idea generation and idea evaluation stages of the creative solving process.

This chapter brings an end to the presentation and analysis of the empirical data. The following chapter will examine and discuss the issues raised in the two empirical chapters relating to creative replication and the location of creativity in the implementation stage of service innovation.

Chapter 7 – Discussion and Conclusions

7.1 Introduction

This chapter brings together the empirical findings presented in the two previous chapters in relation to the creativity and service innovation literatures discussed in the opening chapters. The research study challenges existing conceptions of creativity as a teleological outcome. The study also explores the human creative practices within an English NHS organisation, and also makes a contribution to service innovation literature.

Rather than creativity being the production of something conceived of in terms of novelty and value, and reliant on being classed as a 'creative' outcome through the recognition and judgement by others, it is argued that novelty may exist in a situational context. Instead, it is the new context, perhaps a different organisational setting, in which work is being produced that demands creative behaviours. This led to the construction of RQ1. A second line of enquiry relates to the necessity of creativity throughout the design and implementation of a service innovation, rather than creativity being loaded at the front-end of the process, as suggested in extant literature. This led to the construction of RQ2.

RQ1. To what extent does the replication of best practice require creativity when there is contextual novelty?

> **RQ2. Do service innovation models need to take into account the role of creativity during the implementation phase of service innovations?**

These two issues arise from the identification of theory-practice inconsistencies relating to creativity theory and the practise of service innovation. Knowledge of these inconsistencies arose during discussions with the researcher's doctoral supervisors. The researcher's work experiences had involved the implementation of schemes of best practice, which had been identified as such in other service organisations and, for the purposes of increased efficiency and effectiveness, were copied into his own organisation. The researcher had noted that workplace creative behaviours, such as problem definition, information gathering, idea generation and idea evaluation, were necessary to successfully reproduce services and service activities in a new organisational context.

However, a review of creativity literature suggested that the replicated services and service activities were not sufficiently original for those creative practices to be recognised as employee creativity. Further, it was noted that attention to creativity was required throughout the implementation stage of the service innovation process. Though there was no discourse for creativity in the researcher's organisation, there was a focus on securing improvement through service innovation, sometimes through locally determined schemes of services and, at other times, through replicating best practice from elsewhere.

Section 7.2 introduces the context for the research study, and highlights the theoretical tensions. The empirical evidence is discussed in section 7.3. Section 7.4 summarises the thesis and identifies the contributions to theory and to practice, and section 7.5 concludes the thesis by speculating on future avenues of research.

7.2 Research context and theoretical tensions

7.2.1 Research context: an English NHS organisation

The research was conducted in an English NHS organisation, known as a clinical commissioning group. The NHS CCG is a clinically-led membership organisation which is statutorily responsible for the commissioning of a range of hospital and community based health care services, and given it is comprised of a group of general practices, it also is able to design and implement new schemes of primary care. The NHS CCG had a notional, and not insignificant, revenue budget in excess of £100m during the financial year 2014/2015.

The NHS CCG was constituted as an NHS organisation on 1 April 2013, and had to provide evidence of achieving service improvement through innovation as part of the formal authorisation process. The NHS CCG is required to promote innovation in the planning and delivery of health care services (NHS Commissioning Board, 2012). In doing so, it has access to Department of Health and NHS guidance relating to innovation. Within this

guidance there is a call for the implementation of best practice, identified in other organisations, and introduced into the NHS CCG to support aims of health care service improvement. Further, the NHS CCG has built strong working relationships with the local general practices, which are themselves NHS CCG members, as well as with local hospitals, the mental health trust, the community health trust and the local authority adult social care department. The NHS CCG holds regular area-wide training events, attracting representatives from all these organisations.

The NHS CCG represents a working environment where service innovation projects are part of an annual programme of work.

7.2.2 Theoretical tension: the necessity for creativity in the replication of best practice

A significant contribution of this study lies in extending the theoretical understanding of creativity so that creativity may be recognised in new contexts or situations. It is argued that the standard definition of creativity (Stein, 1953; Runco and Jaeger, 2012) relies too heavily on the third-party recognition of creativity, for example, through the affirmation of a creative product (for example, Amabile, 1982, 1983, 1996; Csikszentmihalyi, 1988, 1999). That creativity has always been understood in terms of a product, process, person or place (Rhodes, 1961), and as a teleological outcome with little attention to situational context has contributed to the failure to recognise the existence of creativity in workplace settings, where power and

politics are important considerations (Martin, 2009; Martin and Wilson, 2014a).

7.2.3 Theoretical tension: the necessity for creativity in the implementation of service innovations

A further contribution is made to creativity literature in relation to the process of service innovation. In spite of the growing importance of service innovation, in business and in the public sector, this is an under-researched area of creativity study (Anderson et al, 2014; Giannopoulou et al, 2014; Zeng et al, 2009). Whilst it is accepted that creativity is a pre-requisite factor in all innovation (Mumford and Gustafson, 1988; Amabile et al, 1996) and that models of organisational innovation accurately identify creativity and creative practice occurring during the early stages of innovation (Amabile, 1988; West, 1990), these theoretical positions were adopted nearly three decades ago when creativity theory relating to organisational innovation was informed by practice in manufacturing and technology.

Since that time, the economic importance of the service industry has further increased (Jones, 2013). Also, though theories of service innovation have been developed (Gallouj and Weinstein, 1997; Gallouj, 2002; Djellal et al, 2013) and applied (Windrum and Garciá-Goñi, 2008), there has been little development of models of organisational innovation which illustrate the role of creativity in the innovation process (Anderson et al, 2014; Giannopoulou et al, 2014).

In sum, this means that a more nuanced appreciation of the important role of creativity in the service innovation process is required. Without a broader, empirical examination of service innovation practices, creativity literature is at risk of conflating the design and implementation processes of technological innovation (manufacturing and technology) with non-technological innovation.

7.2.4 Theoretical tension: the English NHS: a place for creativity and service innovation

Though the English NHS is one of the world's largest employers, with a workforce of over 1.5 million employees (NHS, 2015), in practice the vast majority of these people are employed across a multitude of organisations, many of them with aims and objectives consistent with a local focus, given that different communities experience, on a macro level, different adverse health conditions and challenges (Public Health England, 2015). Policy and practice guidance is primarily provided by the Department of Health. Access to training materials and similar support to guiding health service innovation is within the remit of Health Education England (Health Education England, 2014) and NHS England (NHS, 2015).

While the Department of Health advocates a goal of standardisation of healthcare services to reduce unwarranted variation (National Audit Office, 2011), the data has revealed that the local NHS leadership, in the form of the

NHS CCG, welcomes a 'bottom-up' (rather than 'top down') approach to the commissioning and delivery of local healthcare services. This is achieved through designing services to complement the local situation and need.

Now, as part of the NHS CCG authorisation process (NHS Commissioning Board, 2012), NHS CCGs are required to demonstrate evidence of plans for 'innovation'. Amongst, the policy guidance documents that senior NHS managers and clinicians draw upon for this purpose is *Innovation. Health and Wealth* (Department of Health, 2011). Within this guidance, there is a clarion call for innovation:

> "*We need to radically transform the way we deliver services. Innovation is the way – the only way we can meet these challenges. Innovation must become core business for the NHS*" (p4).

The document seeks to engage with those involved in "*the rapid adoption and diffusion of the best, transformative, most innovative ideas, product, services and clinical practices*" (p.5). It appears that a number of facets of innovation are bound up here in one statement, including: originality, and replication, or copying, of best practice, radical and incremental change, and products and services. In practice, the use of innovation to drive improvement may require different approaches depending on the nature of the innovation itself (Miles, 2000; Gallouj and Djellal, 2010b). For example, it is recognised that services are distinct from goods (Hill, 1977; Illeris, 1989) and that service innovation is non-technological in nature (Drejer,

2004), and does not tend towards standardisation (Sundbo and Gallouj, 2000). The literature is also divided as to whether service innovation in the NHS, as a public sector organisation, is akin to innovation in private sector businesses (for example, Djellal, Gallouj and Miles, 2013) and whether public sector innovation should be radical alone, and incremental innovation be discounted (for example, Mulgan, 2014 Hartley, 2010; Osborne and Brown, 2011, 2013b). Indeed, Mugglestone et al (2008) note that in relation to improving services, "*creativity may be derided and not seen as a positive attribute in the more transactional realm of healthcare*" (p.22). This situation has the potential to contribute to a general lack of clarity over what creativity and service innovation may mean 'on the ground'.

Certainly, there is no single approach to identifying and implementing service innovations, though NHS training manuals and guidance (for example, Maher et al, 2012) do promote a somewhat classic two-stage approach, illustrated by Maher et al's (*ibid*) "*idea funnel*" (p.116), to addressing innovation. This approach is consistent with innovation processes outlined by theorists including innovation theorists, such as Rogers (1983) and Kanter (1983), and creativity theorists, such as Amabile (1988) and West (1990; 2002a), and applied in a service innovation scenario. For Maher et al (2012), creativity, in this case the 'thinking differently', is positioned at the front-end of the service innovation process, and the implementation of the innovation is represented by 'doing and changing'.

In both creativity and service innovation literatures, the necessity for addressing problems during the implementation phase of innovations appear largely overlooked. Emphasis is given to the more mundane task-focused operations (West, 2002a) seen in the implementation of product innovations (Utterback, 1974).

7.3 Discussion of the empirical evidence

The research findings set out in Chapter 5 are used to inform responses to research question 1 and to research question 2. The service innovation under study, the implementation of an integrated health care service, termed locally as the Virtual Ward, was a replication of best practice, rather than a scheme designed from scratch by the NHS CCG. All internal discussions and decisions to implement the Virtual Ward service innovation across the general practices in the NHS CCG area took place in advance of the commencement of the study period. This means that the data collected relates directly to the implementation stage of the innovation process. However, the interviews captured some useful information relating to the pre-observation period.

The research findings set out in Chapter 6 are aligned to research question 2 alone. The diagnosis of dementia in primary care service innovation was understood, by those involved in its design and implementation, to be the first time this service had been configured in this form in England. Given it is

not a replication of what exists elsewhere, any data cannot be used to inform research question 1.

Senior managers in the NHS CCG were supportive of the research study, and enthusiastic about the NHS staff across the patch having the freedom to contribute ideas about how to deliver health care services in new and innovative ways.

7.3.1 Evidence: the necessity for creativity in the replication of best practice

A review of the empirical findings presented in Chapter 5 illustrates that the creativity and creative practices of the NHS employees involved in the implementation of the Virtual Ward are not explained by the extant literature. Research question 1 is:

RQ1. To what extent does the replication of best practice require creativity when there is contextual novelty?

During the interview with senior manager #57 from the NHS CCG, I enquired about his outlook on the use of the replication of best practice as a tool to support health service improvement. Senior manager #57 reflected that in his previous job he had organised regular network events aimed at sharing best practice across the region, and found it a stimulating exercise. However, he recognised that implementation of a replication, such as the Virtual Ward, requires attention to local context, rather than a generic top-

down approach. Whilst senior manager #57 recognises that service innovation may be achieved through the replication of best practice, he also noted the importance of contextualising such 'best practice'. Rather than seeing the innovation through replication as a homogeneous management practice, instead he recognised the necessity to adapt the new service to the local context using creative problem solving techniques.

I also interviewed one of the clinicians from a general practice who had identified a Virtual Ward system of care in London, and decided to emulate it in their own area as a pilot scheme. Senior nurse #70 described the process of the replication of best practice, which highlighted the importance of techniques of problem definition and information gathering.

Given that the implementation of the Virtual Ward is the reproduction of a scheme of best practice copied from another organisation, it should be expected to rely on minimal workplace creativity, merely dealing with minor problems which may have been overlooked in the project management plan. In this case, another team of people, located in Croydon where the Virtual Ward was originally conceived, would have contributed the human creativity required to develop the Virtual Ward, some period of time before it was reproduced in the NHS CCG area.

However, early in the implementation of the Virtual Ward service innovation, a number of significant problems arose, which had not been foreseen in the planning process, either by the NHS CCG with experience of

the local context and which had experience of two similar, local pilot schemes, or by the external management consultants, who had previously introduced a system of integrated health care into another organisation.

Given the complexity of the implementation of the project, involving multiple organisations, multiple professions and multiple disciplines, the problems that arose with implementation could be considered to be 'ill-defined' (Mumford et al, 1991; Mumford et al, 2012a). These problems appeared to arise as early as October 2012, just a few weeks into the implementation programme[42].

I spoke to senior nurse #78 who had identified one of the problems, who met with the project manager and another colleague to discuss the way forward. During our conversation, it was evident that the senior nurse was unaware of the creative contributions that she described herself making in attempting to resolve an issue related to the context of the implementation of the service innovation. The model of healthcare being replicated was suitable for larger-sized general practices, but not for small single-handed practices where senior nurse #78 worked. It was evident that idea generation and idea evaluation practices were taking place in support of resolving the problems, though not in the same way that they might in the earlier 'creativity' stage of the innovation process.

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[42] The external management consultants leading the implementation of the Virtual Ward were using a PRINCE2 project management model.

Further, a number of the interviewees, across different organisations involved in the project, pointed towards the nature of health care services, such as the Virtual Ward, as always being in development rather than reaching a point of standardisation. Their comments relating to non-linear nature of service innovation are consistent with the different nature of services when compared to goods (or products) (Hill, 1977; Illeris, 1989).

However, observations at project meetings and the interviews revealed a different approach to the resolution of problems during the implementation stage. Interviews with and observations of senior clinicians and managers had revealed that the focus of the NHS CCG included a fresh approach to creativity and innovation, with both being welcomed and encouraged (Hunter et al, 2007). However, it is noted that the word 'innovation' was used more frequently that 'creativity'. Further, when interviewees were asked to explain their understanding of 'creativity' and 'innovation', their descriptions of innovation were more consistent with current theoretical conceptions in that field than were their understandings of creativity. Generally, it was suggested that innovation led to the production of a 'thing' arising from ideas, whereas creativity was considered to be related to the production of new ideas. For many, workplace creativity wasn't conceptualised as having value or utility, nor was it a structured process. It is noted that Mugglestone et al (2008) comment that creativity may not be seen as a positive attribute in healthcare settings. Also, the term 'creativity' is not foregrounded in formal guidance and training materials.

Indeed, the field notes taken during the project steering group meetings reflect the issue of creative problems arising during the implementation of the Virtual Ward, and attempts to define such problems. The process of the implementation of an innovation is pressurised (West, 2002a) with time constraints and a need to work within available resources. Creativity theory suggests that when such problems arise, then there is a step backwards in the innovation process (Amabile, 1988). West (1990) suggests the same, though describes the process as cyclical, and, like Amabile (1988), locates it during the earlier 'creativity' stage.

However, in the practise of the implementation of service innovation the process followed by those engaged in the Virtual Ward was different. First, the nature of the implementation of a service innovation, supported by a detailed project plan, is that there are multiple activities happening coincidentally, which may or may not impact upon other activities. This is consistent with Schroeder et al's (1986, 1989/2000) notion of a messy innovation process. Second, it was evident that creative problem solving was taking place in between meetings, on an informal basis rather than in structured sessions (cf. as described by senior nurse #78). The NHS training manuals and guidance relating to service innovation and service improvement suggest structured processes focused on ideation take place at the beginning of the process of innovation, that is during the initial creativity stage (West, 2002a), but are quieter on what to do in the event of problems arising during the implementation. Further, it is difficult, in an operational setting, to schedule the same type of creative workshop that the

NHS CCG delivered to help direct their planning of health care services in the later, implementation stage of a service innovation.

The interviews revealed that problems were addressed on a local basis, involving only those with a direct connection to the matter. The vignettes in Chapter 5 identified problems in the implementation of the Virtual Ward associated with the local authority adult social care department, the IT data recording systems and the nature of smaller general practices. These were resolved through individuals' strong, human reflexivity (Archer, 2007), rather than purposeful and structured ideation activities. Instead, the actors involved drew on their experience and expertise (Mumford et al, 1991; Mumford et al, 2012a) to gather the appropriate information, and develop ideas but did not engage a wider group of people in that process. Practices of idea evaluation and decision-making on the way forward were carried out in consultation with the leadership of the project steering group, and reported at subsequent meetings. Indeed, Lynne Maher, one of the principal authors of NHS training manuals and guidance relating to innovation (Maher et al, 2010; Maher et al, 2012), notes the capability of nurses to have a wealth of ideas to contribute to health service innovations (Maher, 2006).

So, while there is considerable evidence of creative practices on the part of those directly involved in the implementation of the Virtual Ward, much of that practice was carried out away from the gaze or involvement of others. Instead of a large-scale workshop being organised in the implementation phase, one that is aimed at gathering and sharing information, producing

multiple new combinations of ideas, and a consensual approach to idea evaluation, a smaller group involving the project leadership and those with specific experience and expertise regarding the problem met on an *ad hoc* basis.

This activity reveals the necessity of creativity to not only support the implementation of a service innovation, but, more importantly, to support a service innovation based upon the replication of practice. The extant creativity literature does not explain the creative practice associated with the replication of practice, as it is not sufficiently different from what existed in the original service design (Caroff and Lubart, 2012).

Accordingly, the understanding of creativity needs to be further developed to account for creativity in a new situational context. This issue is addressed in section 7.4.

7.3.2 Evidence: the necessity for creativity in the implementation of service innovations

A review of the empirical findings presented in Chapter 5 and in Chapter 6 illustrates that the creativity and creative practices of the NHS employees involved in the implementation of the Virtual Ward and the dementia diagnosis service innovations are not explained by the extant literature. Research question 2 is:

RQ2. Do service innovation models need to take into account the role of creativity during the implementation phase of service innovations?

Given that the Virtual Ward described elsewhere is an example of the implementation of a service innovation, all of the evidence provided in section 7.3.1 may also be used here. Additionally, I am able to draw upon a second service innovation project relating to the diagnosis of dementia in a primary care setting. The implementation of this service innovation started shortly after the commencement of the study period.

Senior managers and senior clinicians revealed that the project had taken about two to three years in planning and negotiations to get to the implementation stage, starting with problem definition and information gathering. The planning phase included problematisation and workshop session involving a range of NHS clinicians and managers, representing a range of organisations. This type of activity is also consistent with the nature of problem identification and creative problem solving (Mumford et al, 1991; Mumford et al, 2012a) which takes place at the front-end of the organisational innovation process (Amabile, 1988; West, 1990, 2002a). However, in interviews with senior managers involved in the process, it is evident, that in terms of the implementation of service innovations, the creative process is continuous. Senior manager #77, who had oversight of the dementia diagnosis project, noted two key issues: firstly, that NHS staff need "*permission to be creative*" and, secondly, that there constant attention

to the fluidity of healthcare service innovation, and how it might apply elsewhere.

One of the problems, which arose early into the implementation of the service innovation, related to the different working environments of GP #39 and senior nurse #45. Though the nurse was located into the general practice, his employer remained the NHS mental health trust. The original plans, put in place in advance of the nurse's involvement in the project, meant that the nurse would have fewer, and less detailed, patient records to complete. However, this new way of working, which was in line with custom and practice in a primary care setting, soon fell by the wayside. Without a resolution to this issue, the project may have collapsed, as it was the nurse who was authorised to make the diagnosis of dementia, rather than the GP.

Given the complexity of the arrangements involving different organisations, and different operational working cultures, this constituted an ill-defined problem, a characteristic of creative problem solving (Mumford et al, 1991; Mumford et al, 2012a). It reflected the messy and complex nature of the implementation of an innovation (Schroeder et al, 1986, 1989/2000), and there were different possibilities ahead of a resolution of the issue. In explaining his role in seeking a resolution to the problem, senior nurse #45 demonstrated a strong personal reflexivity, noting the internal conversations in his head (Archer, 2007), drawing on experience and expertise, characteristic of creative problem solving (Mumford and Gustafson, 2012).

A community matron illustrated further evidence of the sense of personal reflexivity as a stimulant to creative practice in the Virtual Ward project. The interview was full of references to problem solving, much of which could be considered to be creative problem solving. Yet, the nurse had no reference for creative practice, and just saw it as part of what she brought to the job.

7.3.3 Evidence: the English NHS: a place for creativity and service innovation

The empirical evidence reported in Chapters 5 and 6 revealed some consistency with the creative problem solving approach (Mumford et al, 1991; Mumford et al, 2012a; Sawyer, 2012). There is evidence, through interviews, that both of the innovation projects, the Virtual Ward and the Diagnosis of Dementia in Primary Care scheme, arose from deliberate and purposeful activity to identify, define and attempt to resolve important healthcare problems. These activities were conducted in first stage of the innovation process, consistent with extant innovation theory (Rogers, 1983; Kanter, 1983) and creativity theory relating to innovation (Amabile, 1988; West, 1990, 2002a). It is noted though that the study fieldwork was conducted during the implementation phase of the service innovations of both projects. The direct observations relate to creative behaviours in this later stage of the innovation process.

However, the literature review in Chapter 2 and Chapter 3 failed to identify any meaningful research on the nature of creativity and creative practise in

this later phase of service innovation. Nevertheless, using extant literature relating to 'markers' of the creativity, as set out in Table 5.1, attempts were made to explore creative behaviours of the workforce[43].

Through observations, and later confirmed in interviews, it was found that creativity and creative behaviour is a factor in the successful implementation of service innovations. Hitherto, there has been an emphasis in creativity and innovation literatures on the practical, perhaps mundane, functional steps necessary to successfully implement a service innovation. This approach is also a feature of NHS guidance relating to designing new services. Indeed, in the Virtual Ward scheme, a PRINCE2 project management plan, listing activities to be undertaken within a finite timescale, was foremost at all project meetings, and progress towards implementation was assessed using this management tool. It is not argued here that project management plans are unnecessary, nor that they become a major obstacle to progress. Rather, it is that, at times in both health service projects, issues arose that were not accounted for in the implementation project plans. The evidence is that these issues were resolved using human creativity. That this happened in a local context is a departure from a general Department of Health policy aim of standardisation of healthcare

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[43] The decision to use known markers of the creative solving process was made in the absence of any other literature guiding how creativity and creative behaviours may be accounted for in the implementation phase of the service innovation process. There was no intention to reduce workforce creativity to a list of such markers of creativity.

services, and training guidance that focuses on ideation in the early stages of the design of a service innovation, rather than during its implementation.

It was also noted that the nature of creativity in the implementation of service innovation was different than that which might occur during the earlier ideation stage. Instead of problems being defined and ideas emerging through organised workshops involving people drawn from different organisations which may be involved in the service innovation, and from different disciplines, there was much more attention to human reflexivity. Whilst this creative behaviour is not accounted for in other creativity or innovation literature, and indeed is not expressed in terms in common use by creativity and innovation researchers, it is consistent with the management ethos of the NHS CCG senior managers and senior clinicians. This observation raises two issues: firstly, what is the nature of creativity and creative behaviour in the implementation of service innovations and secondly, what is the prevalence of a discourse for creativity, or not, in NHS organisations. Both are discussed further in the next section.

7.4 Thesis summary

In examining inconsistencies between theory and practice in relation to creativity and service innovation, this thesis makes four key contributions to creativity theory and work practices. It is noted that these contributions are intended to inform creativity theory and, in particular, service innovation theory, rather than more general innovation theory. This thesis makes no

claims to processes associated with manufacturing or technological innovation. Additionally, the research was conducted in a UK public sector service organisation. The thesis makes no direct claim to a generalisation of findings across service innovation in a business context, though it is later speculated that comparative research conducted in public sector and business service organisations may prove fruitful.

7.4.1 The development of contextual novelty as representative of creative practices

This issue relates directly to RQ1, set out in Table 3.5 and repeated in section 7.1. In short, the empirical evidence presents a case for creative practices in a workforce when an organisation implements a programme of service improvement through replicating a service innovation from elsewhere. Though the replication of the Virtual Ward adopted by the NHS CCG was not a novel idea, in order to successfully implement it, at various times the project team was called upon to solve an ill-defined problem, using techniques of problem identification, information gathering, idea generation and idea evaluation. The extant literature suggests that these activities are illustrative of creativity (Mumford and Gustafson, 1988; Mumford et al, 2012a). However, the produced service (the Virtual Ward) is not sufficiently original for it to be considered novel. There is no suggestion that it is novel, as the original concept for a system of integrated care (the Virtual Ward) was developed elsewhere. This means that, using the standard definition of

creativity (Stein, 1953; Runco and Jaeger, 2012), the replicated Virtual Ward cannot be considered a creative output.

In order to account for creativity associated with the translation of the replicated service and service activities, it is argued that it is the novelty within the new context that is driving the creative behaviour of the workforce. So, 'contextual novelty' may indeed produce a system of 'creative replication'. However, the extant understanding of creativity, rooted in judgements of creativity by knowledgeable observers (Amabile, 1982, 1983, 1996) or by a peer group (Csikszentmihalyi, 1988, 1999), is unable to account for the type of contextual novelty described. Indeed, the empirical evidence suggests that workplace creative practices were taking place, but were unrecognised as such. Therefore, an understanding of creativity outside of the positivist philosophy must be considered.

7.4.2 The necessity of human creativity during the implementation of successful service innovation

This issue relates directly to RQ2, set out in Table 3.5 and section 7.1. One of the service innovations, the introduction of a system of integrated care (the Virtual Ward) across the NHS CCG area relied on the replication of best practice; the other innovation, the diagnosis of dementia in primary care, was designed locally, and understood by those involved to be the first of its type in England. Now, it has already been demonstrated that the extant creativity literature struggles to account for the creative behaviours

associated with the replication of practice. In writing about service innovation and the organisational and strategic system that produces innovations in services, Sundbo (2010) identifies the practise of creativity involved in the later stages of the innovation development. He terms this "*creativity-in-the-process*" (p.286), which is used to address the "*many unknown problems and issues*" (p.287) that emerge. Sundbo (*ibid*) also describes that this type of creativity is more likely to be 'bottom-up' rather than 'top-down'. However, Sundbo (*ibid*) offer no further insight into the nature of such creativity, nor how it might be championed or incorporated into the literature relating to the service innovation process. The creativity literature is similarly quiet in relation to the nature and necessity of creativity in the implementation of service innovations, with West (2002a) acknowledging its contribution to the implementation stage, but without any further detailed clarification or explanation, and Rickards (1996) describing an innovation process which has creativity running through it.

However, the empirical evidence suggests that an assessment of the creativity of the dementia diagnosis service, for example, by an appropriate group of knowledgeable observers (Amabile, 1982, 1983, 1996) or peers (Csikszentmihalyi, 1988, 1999) would, most likely, determine that dementia diagnosis service innovation is indeed a creative outcome, as it is original[44].

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[44] The general practitioner who developed and led the dementia diagnosis project has subsequently published a guide for other GPs and practice nurses to assist them with assessing and treating dementia. The publication is supported by the NHS England, the Department of Health and the Royal College of General Practitioners.

Each of the service innovations faced unforeseen problems during the implementation stage. Both involved the introduction of new ways of working involving collaboration across organisational boundaries, professions and disciplines. The empirical evidence illustrates that barriers to implementation were overcome through using creative problem solving techniques of problem definition, information gathering, idea gathering and idea evaluation (Mumford et al, 1991; Mumford et al, 2012a; Sawyer, 2012). However, the extant creativity literature fails to adequately explain the necessity of creativity in this later stage of the innovation process.

7.4.3 Redefining the current understanding of creativity

Martin and Wilson's (2014a) critical realist account of creativity as 'discovery' offers promise in reconceptualising creativity. A critical realist account of creativity affords the possibility of the existence of unrecognised creativity. It is understood that any variation of Martin and Wilson's (*ibid*) definition of creativity needs to seen as a placeholder in advance of further explanatory research. However, the notion of creativity as discovery fits well with the consideration of creativity in a place or context, given that creativity may exist unrecognised.

Thus, it is suggested that Martin and Wilson's (*ibid*) definition of creativity be modified to account for both instances of creativity in the service innovation process described in 7.4.1 and 7.4.2 above:

"Human creativity, **in any place or context**, may (or may not) gain individual, group, organizational, community or global recognition and this process of recognition can be influenced by many factors including psychological, economic, political and power processes."

The addition of "*in any place or context*" is intended to locate the site of human creativity, and provide for an understanding of creativity to extend to the context in which is situated, whether or not there is a creative product or outcome. The revised definition avoids the aforesaid problems associated with recognition and judgement.

Additionally, the reconceptualising of creativity as a process of discovery has the necessary effect of removing the artificial 'separation' between the creativity and innovation implementation stages in the organisational innovation process, at least for service innovation. Calling for a recognition that creativity has a transformative role at the back end of service innovations, as well as the front-end, will also help to propagate a discourse of creativity through the English NHS, and positively impact upon productivity.

7.4.4 Developing a discourse for creativity and service innovation in the English NHS

The empirical evidence reveals that the published guidance on the practise of creativity as part of the innovation process in the English NHS (Maher et al, 2010; Maher et al, 2012) is currently insufficient.

Though the NHS is a major employer, its workforce is spread across many smaller, discrete organisations, each with a distinct focus. In the case of the NHS CCG, it is responsible for the planning and commissioning of healthcare services in its local area (NHS, 2015). The local leadership recognise that in doing so, such healthcare services need to be implemented to suit the local context.

In implementing service innovations, members of the NHS CCG workforce are being creative, but are not associating their working practices with creativity. The evidence indicates that there is a lack of a discourse for creativity in the implementation stages of a service innovation. Individually, members of the workforce believe creativity to be about the generation of ideas, and doing things that are new. However, in their normal course of work, when they are faced with a need to draw on creative problem solving techniques to overcome issues which arise when implementing service innovations, they do not see their response as creative, but rather just routine work.

The principal attention in current guidance is to the call for creativity in the early stages of the service innovation process. Interviews with NHS staff involved in service design confirmed the staging of large multi-organisation, multi-profession, multi-discipline workshops at the start of an innovation process to help identify problems, and to source information to help with idea generation. However, there is little attention in guidance to a structured creative problem solving process that the evidence indicates is necessary during the implementation stage. The focus of NHS guidance on the importance and value of innovation to support service improvement, including the use of the replication of best practice, is welcome, but references to creativity are underplayed (Department of Health, 2011).

As mentioned in section 7.4.2, the academic literature, in both fields of creativity and innovation research, also underplays the role of creativity in the implementation of service innovations. Such an under-reporting of creativity in late-stage innovation may also impact upon the practical training measures deployed by the NHS.

Yet the empirical data reveals that creative practices are present throughout the service innovation process, even though there is a distinct lack of a language for describing it on a day-to-day, work basis. Future training and guidance to NHS managers should address these issues, and also recognise that the nature of the creative problem solving process during later implementation stages of the service innovation process may be different.

7.5 Limitations and suggestions for future research

The research study has sought to find human evidence of creativity in the implementation of service innovations. It hasn't attempted to provide an explanation for the creativity or the creative practices found in the workplace. However, it is early research related to the reframing of creativity away from judgements of novelty, utility and value, and towards an understanding of creativity as a social process involving discovery.

The study has opened up avenues for further research, with examples of empirical and theoretical future studies set out below. It is not suggested that qualitative methods are the only way to yield useful empirical evidence. Research methods should be chosen on the basis of the nature of the research question (Sayer, 1992; Punch, 2014), and so any future study could adopt a quantitative, qualitative or a mixed methods approach.

It is suggested that further research be commissioned to explore a number of the issues arising from this study:

> 1. A more nuanced study of the concept of contextual novelty should be carried out, examining boundary conditions, and exploring what makes the replication of a system of services and service activities new. It is suggested that Wilson's (2010) notion of social creativity, which views creativity as a process which crosses boundaries, including organisations, disciplines and professions, is used to

theoretically underpin such research. This approach is also consistent with Sundbo's (2010) acknowledgement that the innovation process is a social one, in which many employees, managers and other actors participate.

2. The model for creativity in service innovation needs further unpacking. The study found evidence that many of the actors involved in the implementation of service innovations are front-line, operational staff. Though their creative input is required to overcome unforeseen practical issues which arise during the implementation of service innovations, it is, largely, unrecognised. Some of these operational staff would not have been involved in the detailed innovation design, yet their contribution is vital.

3. Further studies of innovation management should be undertaken with the aim of producing a taxonomy of the nature and scale of creativity in service innovation, exploring similarities and differences between different types of interventions, for example a comparison between new service innovation against replicated service innovation, or between a service innovation in a commercial environment and in a public sector environment, or between radical and incremental service innovation. It is suggested that the whole process of service innovation should be examined, rather than a concentration on the 'front-end'.

4. The nature of the creative problem solving in the workplace observed during the implementation of service innovations appears different from that which is used at the start of the innovation process. Instead of a large group of professionals coming together in a workshop, representing a range of organisations and disciplines, creative problem solving during the implementation phase appears to involve fewer people, drawing on their human reflexivity to deal with issues as they arise. Further, it may be the time constraints, pressures and deadlines, which are a fundamental part of any service innovation implementation plan, drive the need for greater human reflexivity in the later stages of the service innovation process. This research should embrace both creativity and service innovation literatures. Through conducting a critical realist study, there exists the opportunity to identify the causal mechanisms informing practices.

5. Extant creativity and service innovation theory and practice may need further adjustment to account for the empirical findings arising from the research activity suggested in points 1, 2, 3 and 4 above.

The thesis has illustrated the importance of pursuing new research areas, and a commitment to developing and sharing knowledge. Whilst care needs to be taken in generalising any research findings uncovered here in a public sector service workplace across a wider patch into commercial service organisations, it is recognised that the English NHS is a place where

evidence-based practice and a tendency towards standardisation is the norm. Yet, in relation to health care service innovations, the study has revealed that human creativity is at the core of the implementation of successful service innovations, though is largely unrecognised, given the lack of a general discourse of creativity in the English NHS.

The thesis has identified key contributions to creativity and service innovation theory and practice, and speculated on areas for future research. During one of the interviews, it was refreshing to hear the words, repeated below, which present a challenge to the Taylorism that might otherwise limit human knowledge and creative practice:

> *"Creativity is basically generating the ideas...clinicians on the ground, operationally, always come up with ideas about how things should work, what things are working well and what things are not working well and how we would fix them."* **GP #36, NHS CCG**

APPENDIX 1

Interview topic[45]	Type of interviewee contribution	Creativity/ innovation
Role and responsibilities	Contextual information	
Experience of change in the NHS	Locates previous work experience and provides early opportunity to describe involvement in previous innovative work, e.g. seniority, when and where, links to Department of Health guidance	Creativity – problem finding / problem identification / problem solving / idea generation / idea selection Innovation – creativity / innovation implementation stages / radical /incremental / product / service Mundane service improvement – not creative / not innovative
How are new services introduced?	As above. Probing questions tease out involvement with replication of working practice as a service improvement tool, standardisation / local adaptation.	Describes the process by which health services are improved / seeks to unpack what happens when services are replicated

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[45] An example interview sheet including questions is reproduced in Appendix 5.

What do you understand by the term 'innovation'?[46]	Identifies knowledge. Probing questions require the interviewee to identify a person(s) who is (are) innovative, and reflective on innovative projects they have been involved with.	Focus on innovation – link between day to day service improvement, and incremental / radical innovation continuum / service innovation / link with creativity
What do you understand by the term 'creativity'?	Identifies knowledge. Probing questions require the interviewee to identify a person(s) who is (are) creative, and reflective on projects they have been involved with requiring creativity.	Focus on creativity – novelty, usefulness, problem definition, idea generation, idea selection. Outside work, and inside work.
Link between creativity and innovation and their role in the NHS CCG / GP practice / other collaborating organisation	How are practices of creativity and innovation are used in the development of health services?	Unpack operational context.
Innovative projects / activities	Cross referencing with earlier responses / prompt may yield other examples and more contextual information, and link to researcher observations	Unpack operational context of innovation. Identify creative behaviours / novelty / usefulness.

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[46] The question relating to knowledge of innovation was asked in advance of the question relating to knowledge of creativity, as the term 'innovation' is in more common use in Department of Health literature and work practice.

Creative projects / activities[47]	Cross referencing with earlier responses / prompt may yield other examples and more contextual information, and link to researcher observations	Unpack operational context of creativity. Identify creative behaviours / novelty / usefulness.
How does creativity arise?	Further cross-referencing.	Further unpacking.

[47] The questions are prompts for the research. For example, this question may have been answered in the the response ot the previous question, as for some the concepts of 'creativity' and 'innovation' may be harmonised.

APPENDIX 2

NATURAL WORLD VS. SOCIAL WORLD - DESCRIPTIONS OF LEVELS OF THE REAL, ACTUAL AND EMPIRICAL		
Domain	**Natural world**	**Social world (in a chemicals factory)**
Empirical	Witness an apple falling	The domain of experience, and is contingent (neither necessary nor impossible) whether we know the real or the actual. Observe a team of operatives following test schedules and standard operating procedures detailed within a Code of Practice. Observe that they do this independently of supervision, repeated hundreds of times and never having an 'unsatisfactory' test result*.
Actual	Examining other apples or additional objects might indicate that objects actually tend to fall.	The domain of the actual is what happens if and when powers are activated, what they do and what eventuates when they do. Here the causes of the empirical regularity may be accessed beyond the observed regularity. For example, intra-team relationships may be an important determinant of the behaviour observed, as might the activities of those people constructing the Code of Conduct, requirements for pre-entry professional training, random surveillance from supervisors, etc.

Real	An imaginary real mechanism that explains these occurrences – in this case, gravity.	The realm of objects, their structures and powers. Imaginary real mechanisms that explain these occurrences. Other influences, such as research and development procedures, national training systems and the routines of supervisors of which participants may be unaware, are important precursors of observed behaviour. Critical realist researchers see reality as multiply determined, with no single mechanism determining the whole result.

Adapted from: Sayer (2000, p.12) and O'Mahoney and Vincent (2014, pp.9-10).

- - For Elder-Vass (2010), this is a "*level-abstracted view of it - a view that considers the effect of the whole entity [the team] in isolation*" (p.49).

Appendix 3: NHS CCG meetings attended, February 2012-April 2013		
Description of meeting	**Frequency**	**Approximate duration (total)**
Board meeting (Agenda was mainly strategic issues)	7 events	14 hours
Commissioning Delivery Group meeting (Agenda was mainly operational issues)	6 events	6 hours
Senior Management Team meeting	11 events	21 hours
Project meeting – Self –care / Diabetes*	18 events	57 hours
Project meeting – Integrated Care	11 events	21 hours
Project meeting – Diagnosis of Dementia in Primary Care	5 events	11 hours
Project meeting - Telehealth	3 events	3 hours
Professional training for NHS CCG staff – various meetings and workshops**	6 events	21 hours

Notes:

* Included 2x2-day workshops.

** One of the training events related directly to the Integrated Care project.

Appendix 4: Interviewees and duration of interview		
Generic job title	**Type of organisation**	**Interview duration**
Volunteer – #5	Volunteer organisation	73 mins
GP – #14	General Practice	42 mins and 46 mins
Senior manager – #15	General Practice	71 mins
Administrative / technical officer – #16	NHS CCG	46 mins
Senior Manager – #18	NHS CCG	64 mins
GP – #21	General Practice	85 mins
Senior Manager – #23	NHS CCG	85 mins
Senior Manager – #26	NHS CCG	78 mins
Senior Manager - #35	NHS CCG	109 mins
GP – #36	NHS CCG / General Practice	48 mins
Senior Manager – #37	General Practice	64 mins
GP – #39	General Practice	97 mins
Senior Nurse – #43	General Practice	60 mins
Senior Nurse – #45	Mental Health Trust	70 mins
Senior Manager – #53	NHS CCG	63 mins
Administrative / technical officer – #54	General practice	72 mins
Senior Manager – #56	Local authority adult social services	59 mins
Senior Manager – #57	NHS CCG	74 mins
Senior Nurse – #58	General Practice	46 mins
Senior Nurse – #62	General Practice	30 mins

Administrative / technical officer – #67	NHS CCG	54 mins
Senior Manager – #68	External Consultancy	77 mins
Senior Nurse – #70	General Practice	51 mins
Senior Manager – #71	Local authority adult social services	75 mins
Administrative / technical officer –#72	General Practice	41 mins
Senior Manager – #73	External consultancy	45 mins
Administrative / technical officer – #74	NHS CCG	84 mins
Senior Manager – #75	NHS CCG	108 mins
Senior Manager - #76	General Practice	51 mins
Senior Manager - #77	Mental Health Trust	54 mins
Senior Nurse – #78	Community Health Trust	53 mins

APPENDIX 5 – SAMPLE INTERVIEW QUESTIONS

<u>#INSERT IDENTIFICATION CODE – INSERT JOB TITLE</u> Date:

Tell me about your role at the CCG.

> Probe: And your responsibilities?

Tell me about the your experiences of attempts of change in the NHS? Examples?

> Probe: Problem solving. Problem identification? Idea generation? Idea selection? Examples?

> Probe: Space / time / environment (In the CCG and in GP Practice)

> Probe: How might the CCG respond to the DH challenge to improve quality and reduce cost?

How are new services are introduced into GP Practice? Examples?

And how can the CCG help this to happen?

How did that influence your approach on how to lead and support the improvement of health care services? Examples?

> Probes: Can you think of any examples where you have done that?
> And how did you do that?
> And here in this area?

> Probe: Pros / cons / pitfalls / value / what worked / what could have been better / risk? Examples?

> Probe: Replicating best practice, that is finding out what works in terms of healthcare in one area, perhaps one part of the country, and taking that into a new setting.
> Examples?

> Probe: What happens in practice? Standardisation or local fit?
> Examples?

> Probe: If it is about developing local approaches, who is involved and what roles do these people involved in the various stage of design, commissioning and provision of healthcare services?
> Examples – look for involvement of manager, senior clinicians, front-line staff, partners.

What do you understand by the term 'innovation'?
Probe: Can you think of anyone who is innovative? Can you explain that? (SG note: West: Problem identification / Innovation initiation / Implementation / Adaptation / Stabilisation)
Probe: Can you think of any times you've been innovative outside of work? And in work?
And, what do you understand by the term 'creativity'?
Probe: Can you think of anyone who is creative? Can you explain that?
Probe: Can you think of any times you've been creative outside of work? What did you do / why – look for novelty, usefulness, problem definition, idea generation, idea selection. And in work?
How did this fit with your roles in the CCG and in GP practice? Examples?
Can you think of any recent projects or activities that were innovative?
Probe: Do any of these projects require creativity – novel approach, applying something that is done elsewhere but shaping it for here / contextual. If so, at what stage, or stages? Beginning, as the project moves along, any time before implementation, after implementation? (West: Problem identification / Innovation initiation / Implementation / Adaptation / Stabilisation)   Probe: Integrated Care / Dementia / Diabetes / Incentive Scheme / Organisational activity, such as bringing Practices on board
Probe: How do you try to help the spread of good clinical practice across the CCG area – say from one Practice in your area to your Practice, or vice-versa? Standardisation or local fit? Look for problem definition / idea generation / idea selection
Probe: SG to define creative as novelty, which may be contextual, and valuable (evidence based). Can you think of any projects where creativity has been necessary to get innovative projects to succeed?   Probe: Differentiate between creativity leading to the innovation and creativity being necessary for it.   Examples?
Can you think of any recent projects or activities that involve creativity?
Probe: Do any of these projects require creativity – novel approach, applying something that is done elsewhere but shaping it for here. If so, at what stage, or stages? Beginning, as the project moves along, any time

before implementation, after implementation? (e.g. West, 1990: Problem identification / Innovation initiation / Implementation / Adaptation / Stabilisation)
Probe: Integrated Care / Dementia / Diabetes / Incentive Scheme / Organisational activity, such as bringing Practices on board

Probe: Differentiate between creativity leading to the innovation and creativity being necessary for it.
Examples?

How does creativity arise?

(Note: reflect back on earlier understanding of creativity outside of work if necessary)

Probe: Probe: Individuals? Organisational context? Work teams? Constrained – does NHS limit or support change? And what about the CCG? – examples
Probe: How do you know? How do you go about selecting individuals to work on new projects? Examples
Probes: openness to experience / questioning of what has been done before / motivation / number of ideas (divergent thinking) / choosing an idea (convergent thinking) – seek examples – particularly of problem identification / solving. Examples?
Probe: Where in GP Practices and / or the CCG, or other healthcare organisations working with the Practice or CCG, might creativity be found? Examples? Explain the terms.
Probe: Can you think of examples here in this area, or elsewhere, of how individuals working in teams foster, or hinder creativity? In meetings, at the desk, out in the community? Diversity of teams? Attention to others? Incubation? Task structure?
Probe: Is leadership a factor? If so, what are the qualities of a leader that might support creativity? Attitude to risk? Empowerment? Motivation? Engagement?
Probe: The organisational environment? For example, working relationships in the CCG, and associated networks, how difficult task are, flexibility, risk-taking, space to try something?

APPENDIX 6 – PARTICIPANT PATIENT INFORMATION SHEET

Participant Information Sheet
Xxxx Clinical Commissioning Group

Title of Study: Creativity in the English National Health Service

Name of Researcher(s):   Shaun Gordon, Professor Ruth McDonald, Dr Lee Martin

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear.

What is the purpose of the study?

The Health and Social Care Bill sets out a role for GPs and other healthcare professionals to be directly involved in the commissioning of health services, through clinical commissioning groups. Coming into operation in April 2013, the new commissioning system is intended to improve health outcomes for NHS patients. Those involved in clinical commissioning groups will be active leaders of change, focusing on quality and productivity, which will require new ways of working, giving patients greater choice and control. This means that clinical commissioning groups may look to innovate in order to do things differently, with better outcomes in mind.

This research, which will take place during 2012 and into early 2013, will help us to learn how creative behaviours in clinical commissioning groups may support better health services commissioning. Our findings will be fed back to you with the aim of promoting better organisational arrangements within your clinical commissioning group and better health outcomes for patients.

This research will help us to learn from what works well and may suggest some areas where practice and policy effects are not in line with those intended by practitioners or policy makers in terms of creative behaviours. We will feed these findings into practitioners and policy makers with the aim of promoting the commissioning of high quality healthcare for NHS patients.
We would like to invite you to help us assess what happens in terms of creative behaviours in the clinical commissioning process as part of our study.

Why have I been invited?

You are being invited to take part because you are involved with the Xxxx Clinical Commissioning Group (CCG). We are inviting participants in activity associated with commissioning discussions and decisions to take part. We will observe these activities, formal and informal, such as meetings and conversations, and make notes of our observations. The number of participants in commissioning activities, and the number of activities too, will depend on Xxxx CCG's commissioning programme. We will also interview, separately, up to 20 people involved in the Xxxx CCG.

We are also carrying out similar research in another clinical commissioning group elsewhere.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form so that we can observe activities in which you are involved. In some instances, in order to ensure that the activity is free-flowing, verbal consent will be obtained from those people who have not signed a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This would not affect your legal rights.

What will happen to me if I take part?

The research will last for a period of up to 18 months. This means that we will be liaising with the Xxxx CCG throughout that period of time, and attending and observing activities related to the commissioning of health services. You may be at some or all of these activities, but may not be required, through our research at least, to attend all such Xxxx CCG commissioning activities. Indeed, it will not be possible for us to be present at all such activities, and we will discuss our attendance at activities in advance with Xxxx, the Xxxx CCG Chief Operating Officer.

When we observe activities we may make notes during the activity, or immediately afterwards, of issues we feel are important to our study. Our notes may include your name and role within the CCG, and we may make note of comments you may make. This will help us to better understand and interpret creative behaviours within these activities. Such comments or quotations will be anonymised in any subsequent publications. Personal information relating to identifiable individual's medical histories will not be collected.

When we interview Xxxx CCG participants, we will liaise with Xxxx, the Chief Operating Officer, to ensure that the interview is held in a room that ensures privacy from third party intrusion. Interviews will be held at the convenience of those being interviewed, in terms of timing and location. We will ask if we can record the meeting using a digital audio recording device

to assist with the accuracy of questions and responses. The interview transcripts will be anonymised. Interviews may last for a period of up to 90 minutes, though many will be conducted within 60 minutes. We will share the key questions with you in advance of the interview, so that you may prepare if you wish to. During the interview we may ask some more detailed questions, following up on issues that you may mention. We will not collect or record any information relating to personal medical histories. We may ask that we interview participants on a second occasion, towards the end of our research phase. During this second interview we will ask participants further questions about the CCG commissioning process, and their involvement in it.

Expenses and payments

Participants will not be paid to participate in the study. However, travel expenses will be offered for any visits incurred as a result of participation.

What are the possible disadvantages and risks of taking part?

While studies involving observations and interviews rarely involve damaging consequences, there are sometimes consequences for participants and others. Being part of research study may sometimes create anxiety or worsen it, particularly if the participant believes their work is being evaluated.

Our research is not seeking to evaluate the performance of individuals or your organisation, nor will we report an individual's comments or behaviours to anyone in Xxxx CCG or NHS Xxxx, or any other organisation. All comments and quotations will be anonymised to minimise disadvantages and risks.

What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from this study may help to explain the value of creative behaviours of people involved in health services commissioning, and inform policy making and practice in his area in the future.

What happens when the research study stops?

We will let you know when we have stopped collecting information. At this stage will complete the data analysis and start to write up our findings.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions the researchers contact details are given at the end of this information sheet. If

you remain unhappy and wish to complain formally, you can do this by contacting NHS Complaints. Details can be obtained from your GP practice.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence. We will not disclose which clinical commissioning groups we are working with, or CCG participant's names.

If you join the study, some parts of the data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected University database to which only the research team have access. Any information about you will have your name removed (anonymised) and a unique code will be used so that you cannot be recognised from it. This anonymised information will also be kept on a secure University computer drive or in a locked cabinet to which only the research team have access.

All processing of personal data will comply with the terms of the Data Protection Act 1998. Your personal data (email address and telephone number) will be kept for up to eighteen months after the end of the study so that we are able to contact you about the findings of the study. All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Any quotations used in any publications will also be anonymised.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis.

What will happen to the results of the research study

The information gathered as part of our research study will feed into Shaun Gordon's Doctor of Philosophy (PhD) thesis for Nottingham University Business School. The PhD thesis is scheduled for completion at the end of

2013. We will also expect to produce interim reports as part of the research, analysis and writing process.

We will also produce a management report for the CCG (in a format to be agreed with Xxxx, the CCG Chief Operating Officer) after our research study has been completed.

We also intend to publish articles and papers relating to the research study.

All information in the interim reports, PhD thesis, management reports, or similar and articles and papers will be anonymised.

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is being funded through a bursary provided by Nottingham University Business School / the Collaboration for Leadership in Applied Health Research and Care – Nottinghamshire, Derbyshire and Lincolnshire (CLAHRC-NDL). The CLAHRC-NDL is a collaboration between the University of Nottingham and the NHS National Institute for Health Research.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Nottingham University Business School Research Ethics Committee.

Further information and contact details

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Telephone: 07858 629971 (from 9am to 5pm Monday to Friday. If you leave a message outside these hours I will return you call as soon as possible.)
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APPENDIX 7 – INFORMED CONSENT FORM – OBSERVATIONS

CONSENT FORM (OBSERVATIONS)

Title of Study: **Creativity in the English National Health Service**

REC ref: Nottingham University Business School

Name of Researcher:　　　Shaun Gordon

Name of Participant:　　　　　　　　　　　　　**Please initial box**

1.　　I confirm that I have read and understand the information sheet version number 1.1 dated 1 November 2011 for the above study and have had the opportunity to ask questions.

2.　　I understand that my participation is voluntary and that I am free to withdraw consent at any time, without giving any reason, and without my legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis. If I withdraw consent during an activity, the researcher will leave the activity at that point.

3.　　I understand that data collected in the study may be looked at by authorised individuals from the University of Nottingham and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.

4.　　I understand that activities will be observed and notes made. Anonymous direct quotes may be used in the study reports.

5.　　I agree to take part in the above study.

_____　_____　　　_____

Name of Participant　　　　　　　**Date**　　　　　　　**Signature**

_____　_____

　Name of Person taking consent　　　Date　　　　　　Signature

2 copies: 1 for participant, 1 for the project notes

APPENDIX 8 – INFORMED CONSENT FORM (INTERVIEWS)

CONSENT FORM (INTERVIEW)

Title of Study: **Creativity in the English National Health Service**

REC ref: NOTTINGHAM UNIVERSITY BUSINESS SCHOOL

Name of Researcher: Shaun Gordon

Name of Participant: **Please initial box**

1.   I confirm that I have read and understand the information sheet version number 1.1 dated 1 November 2011 for the above study and have had the opportunity to ask questions.

2.   I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis.

3.   I understand that data collected in the study may be looked at by authorised individuals from the University of Nottingham and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.

4.   I understand that the interview will be recorded and that anonymous direct quotes from the interview may be used in the study reports.

5.   I understand that I may be contacted again and asked to give permission for a second interview. (I also understand that the second interview is optional and I can decline to participate).

6.   I agree to take part in the above study.

_____ _____   _____

Name of Participant   **Date**   **Signature**

_____   _____
 Name of Person taking consent   Date   Signature

2 copies: 1 for participant, 1 for the project notes

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APPENDIX 9 – NHS CCG 'INNOVATION CELL'

Photographs – researcher's own

Problem definition exercise

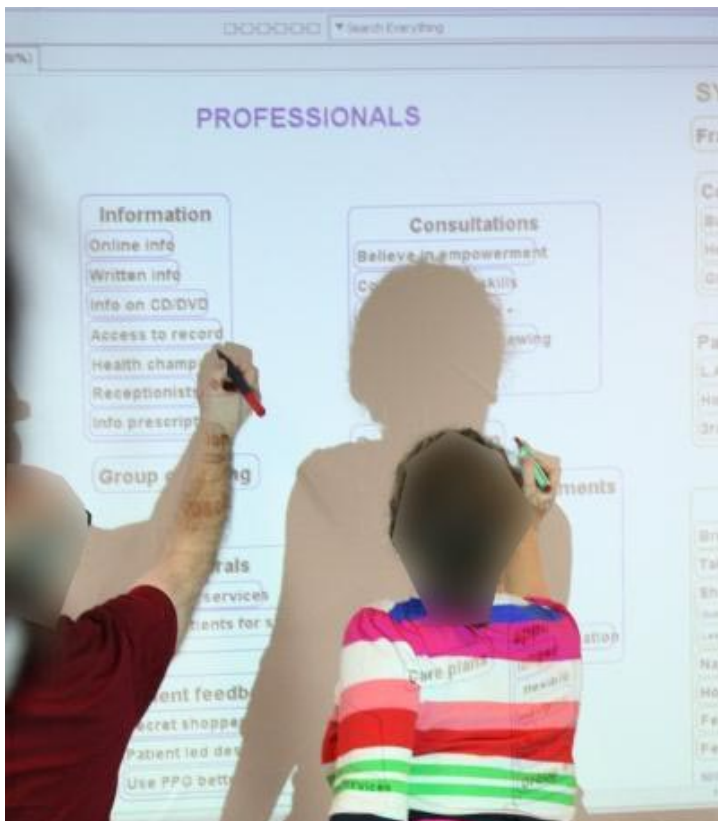

Information gathering exercise

Idea generation exercise

Idea evaluation exercise

References

Abernathy, W.J. and Utterback, J.M. (1978) Patterns of Industrial Innovation **Technology Review** June/July: pp.40-47.

Abernathy, W.J. and Clark, K.B. (1985) Mapping the Winds of Creative Destruction **Research Policy** 14: pp.3-22.

Ackroyd, S. and Karlsson, J.C. (2014) Critical Realism, Research Techniques, and Research Designs. In: Edwards, P.K., O'Mahoney, J. and Vincent, S. (Eds.) **Studying Organizations Using Critical Realism.** Oxford: Oxford University Press, pp.21-45.

Agars, M.D., Kaufman, J.C., Deane, A. and Smith, B. (2012) Fostering Individual Creativity Through Organizational Context: A Review of Recent Research and Recommendations for Organizational Leaders. In: Mumford, M.D. (Ed.) **Handbook of Organizational Creativity.** London: Academic Press, pp.271-291.

Albury, D. (2005) Fostering Innovation in Public Services. **Public Money and Management** 25(1): pp.51-56.

Amabile, T.M. (1982) Social Psychology of Creativity: A Consensual Assessment Technique. **Journal of Personality and Social Psychology** 43(5): pp.997-1013.

Amabile, T.M. (1983) **The Social Psychology of Creativity.** New York. Springer-Verlag.

Amabile, T.M. (1988) A model of creativity and innovation in organizations. In: B.M. Staw and L.L. Cummings (Eds.) **Research in behaviour.** Greenwich: JAI, pp.123-167.

Amabile, T.M. (1996) **Creativity in Context.** Boulder: Westview Press.

Amabile, T.M., Conti, R., Coon, H., Lazenby, J. and Herron, M. (1996) Assessing the Work Environment for Creativity. **Academy of Management Journal** 39(5): pp.1154-1184.

Anderson, N., De Dreu, C.K.W. and Nijstad, B.A. (2004) The Routinization of Innovation Research: A Constructively Critical Review of the State-of-the-Science. **Journal of Organizational Behavior** 25: pp.147-173.

Anderson, N., Potočnik, K., and Zhou, J. (2014) Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework. **Journal of Management** 40(5): pp. 1297-1333.

Andriopoulos, C. and Dawson, P. (2009) **Managing Change, Creativity and Innovation.** London: SAGE.

Archer, M.S. (2007) **Making Our Way Through The World: Human Reflexivity and Social Mobility.** Cambridge: Cambridge University Press.

Archer, M.S. (2012) **The Reflexive Imperative in Late Modernity.** Cambridge: Cambridge University Press.

Archer, M.S., Bhaskar, R., Collier, A., Lawson, T., and Norrie, A. (1998) **Critical Realism: Essential Readings.** London: Routledge.

Barron, F. (1955) The Disposition Toward Originality. **Journal of Abnormal and Social Psychology** 51: pp.478-485.

Basadur, M. (2004) Leading others to think innovatively together: Creative leadership. **The Leadership Quarterly** 15(1): pp.103-121.

Bhaskar, R. (1975/2008) **A Realist Theory of Science.** Verso Edition. London: Verso.

Bhaskar, R. (1998) **The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences.** 3rd Ed. Abingdon: Routledge.

Bhaskar, R. (2008) **Dialectic: The Pulse of Freedom.** London: Routledge.

Bhaskar, R. (2011) **Reclaiming Reality: A Critical Introduction to Contemporary Philosophy.** Abingdon: Routledge.

Boden, M. (2004) **The Creative Mind: Myths and Mechanisms.** 2nd Ed. Abingdon: Routledge.

Boyatzis, R.E. (1998) **Transforming Qualitative Information: Thematic Analysis and Code Development.** Thousand Oaks: SAGE.

Braun, V. and Clarke, V. (2013) **Successful Qualitative Research: A Practical Guide for Beginners.** London: SAGE.

Bryson, J.R. and Daniels, P.W. (1998) Introduction: Understanding the Rise and Role of Service Activities and Employment in the Global Economy: An Introduction to the Academic Literature. In: Bryson, J.R. and Daniels, P.W. (Eds.) **Service Industries in the Global Economy. Volume 1.** Cheltenham: Edward Elgar, pp.xiii-xxxv.

Caroff, X. and Lubart, T. (2012) Multidimensional Approach to Detecting Creative Potential in Managers. **Creativity Research Journal** 24(1): pp.13-20.

Casebourne, J. (2014) **Why Motivation Matters in Public Sector Innovation.** London: NESTA.

Clayton, T. (2003) Service innovation – aiming to win. In: Tidd, J. and Hull, F. M. (Eds.) **Service Innovation: Organizational Responses to Technological Opportunities and Market Imperatives.** London: Imperial College Press, pp.113-133.

Collier, A. (1994) **Critical Realism: An Introduction to Roy Bhaskar's Philosophy.** London: Verso.

Council on Competitiveness (2005) **Innovate America: National Innovation Initiative Summit and Report.** Washington, D.C.: Council on Competitiveness.

Crevani, L., Palm, K. and Schilling, A. (2011) Innovation Management in Service Firms: A Research Agenda. **Service Business** 5: pp.177-193.

Csikszentmihalyi, M. (1988) Society, culture, person: A systems view of creativity. In: Sternberg, R.J. (Ed.) **The Nature of Creativity.** Cambridge: Cambridge University Press, pp.325-339.

Csikszentmihalyi, M. (1996) **Creativity: Flow and the Psychology of Discovery and Invention.** New York: Harper Collins.

Csikszentmihalyi, M. (1999) Implications of a systems perspective for the study of creativity. In: Sternberg, R.J. (Ed.) **Handbook of Creativity.** Cambridge: Cambridge University Press, pp.313-335.

Cummings, L.L. and O'Connell, M.J. (1978) Organizational Innovation: A Model and Need for Research. **Journal of Business Research** 6: pp.33-50.

Damanpour, F. (2014) Footnotes to Research on Management Innovation **Organization Studies** 35(9): pp.1265-1285.

Department for Business, Innovation and Skills (2014) **Innovation Report 2014: Innovation, Research and Growth.** London: Department of Business, Innovation and Skills.

Department for Innovation, Universities and Skills (2008) **Innovation Nation.** Cmnd 7345. London: The Stationery Office.

Department of Health (2000a) **The NHS Plan: A plan for investment. A plan for reform.** Cmnd 4818-I. London: The Stationery Office.

Department of Health (2000b) **NHS Learning Network: NHS Beacon Programme for 2000/2001.** London: HMSO.

Department of Health (2001) **The NHS Plan – an action guide for nurses, midwives and health visitors.** London: Department of Health publications.

Department of Health (2005) **Research Governance Framework for Health and Social Care.** Second Edition. London: Department of Health.

Department of Health (2008) **High Quality Care For All. NHS Next Stage Review Final Report.** Cmnd 7432. London: The Stationery Office.

Department of Health (2009a) **The NHS Constitution: The NHS belongs to us all. For England.** London: Department of Health.

Department of Health (2009b) **The NHS Constitution: All you need to know about how the NHS Constitution affects you as a provider or commissioner of NHS care.** London: Department of Health.

Department of Health (2009c) **NHS 2010-2015: from good to great. Preventative, people-centred, productive.** Cmnd 7775. London: Department of Health.

Department of Health (2010) **Equity and excellence: Liberating the NHS.** Cmnd 7881. London: The Stationery Office.

Department of Health (2011) **Innovation, Health and Wealth: Accelerating Adoption and Diffusion in the NHS.** Leeds: Department of Health, Improvement and Efficiency Directorate.

Department of Health (2012a) **The Functions of Clinical Commissioning Groups.** London: Department of Health, Commissioning Development Team.

Department of Health (2012b) **Creating Change: IHW One Year on.** London: Department of Health.

Dewar, R.D. and Dutton, J.E. (1986) The Adoption of Radical and Incremental Innovations: An Empirical Analysis. **Management Science** 32(11): pp.1422-1433.

Djellal, F., Gallouj, F. and Miles, I. (2013) Two decades of research on innovation in services: Which place for public services? **Structural Change and Economic Dynamics** 27: pp.98-117.

Drejer, I. (2004) Identifying innovation in surveys of services: a Schumpeterian perspective. **Research Policy** 33: pp.551-562.

Easterby-Smith, M., Thorpe, R. and Jackson, P. (2012) **Management Research. 4th Edition.** London: SAGE.

Elder-Vass, D. (2010) **The Causal Power of Social Structures: Emergence, Structure and Agency.** Cambridge: Cambridge University Press.

Emerson, R.M, Fretz, R.I. and Shaw, L.L. (1995) **Writing Ethnographic Fieldnotes.** Chicago: University of Chicago Press.

Ettlie, J.E., Bridges, W.P. and O'Keefe, R.D. (1984) Organization Strategy and Structural Differences for Radical Versus Incremental Innovation **Management Science** 30(6): pp.682-695.

Fagerberg, J. (2005) Innovation: A Guide to the Literature. In: Fagerberg, J., Mowery, D.C. and Nelson, R.R. (Eds.) **The Oxford Handbook of Innovation.** Oxford: Oxford University Press, pp.1-26.

Fetterman, D.M. (2010) **Ethnography: Step-by-Step.** 4th Edition. Thousand Oaks, Ca.: SAGE.

Fleetwood, S. (2004) An ontology for organisation and management studies. In: Ackroyd, S. and Fleetwood, S. (Eds.) **Critical Realist Applications in Organisation and Management Studies.** London: Routledge, pp.27-53.

Florida, R. (2002) **The Rise of the Creative Class and How It's Transforming Work Life, Community and Everyday Life.** New York: Basic Books.

Florida, R. (2004) America's Looming Creativity Crisis. **Harvard Business Review** 10: pp.122-136.

Florida, R. (2012) **The Rise of the Creative Class, Revisited.** Revised Ed. New York: Basic Books.

Gallouj, F. (2002) **Innovation in the Service Economy.** Cheltenham: Edward Elgar.

Gallouj, F. and Djellal, F. (2010a) Introduction: filling the innovation gap in the service economy – a multidisciplinary perspective. In: Gallouj, F. and Djellel, F. (Eds.) **The Handbook of Innovation and Services: A Multi-disciplinary Perspective.** Cheltenham: Edward Elgar, pp.1-23.

Gallouj, F. and Djellal, F. (2010b) **The Handbook of Innovation and Services: A Multi-disciplinary Perspective.** Cheltenham: Edward Elgar.

Gallouj, F. and Weinstein, O. (1997) Innovation in services. **Research Policy** 26: pp.537-556.

George, J.M. (2007) Chapter 9: Creativity in Organisations. **The Academy of Management Annals** 1(1): pp.439-477.

Ghiselin, B. (1963) Ultimate Criteria for Two Levels of Creativity. In: Taylor, C.W. and Barron, F. (Eds.) **Scientific Creativity: Its Recognition and Development.** New York: John Wiley and Sons, pp.30-43.

Giannopoulou, E., Gryszkiewicz, L, and Barlatier, P-J. (2014) Creativity for Service Innovation: A Practice-Based Perspective. **Managing Service Quality** 24(1): pp.23-44.

Gilson, L.L. and Madjar, N. (2011) Radical and Incremental Creativity: Antecedents and Process. **Psychology of Aesthetics, Creativity and the Arts** 5(1): pp.21-28.

Gopalakrishnan, S. and Damanpour, F. (1997) Economics, Sociology and Technology Management. **Omega, International Journal of Management Science** 25(1): pp.15-28.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. and Kyriakidou, O. (2004) Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. **The Milbank Quarterly** 82(4): pp.581-629.

Gummesson, E. (2000) **Qualitative Methods in Management Research.** 2nd Edition. Thousand Oaks: SAGE.

Hage, J. (1980) **Theories of Organizations: Form, Process, and Transformations.** New York: John Wiley and Sons.

Hamel, G. and Getz, G. (2004) Funding growth in an age of austerity. **Harvard Business Review** (July /August): pp.76-84.

Hargadon, A.B. and Bechky, B.A. (2006) When collections of creative become creative collectives: A field study of problem solving at work. **Organization Science** 17(4), pp.484-500.

Harré, R. and Madden, E.H. (1975) **Causal Powers: Theory of Natural Necessity.** Oxford: Blackwell.

Harris, M. and Albury, D. (2009) **The Innovation Imperative: Why Radical Innovation is Needed to Reinvent Public Services for the Recession and Beyond.** London: NESTA.

Hartley, J. (2004) Case Study Research. In: Cassell, C. and Symon, G. (Eds.) **Essential Guide to Qualitative Methods in Organizational Research.** London: SAGE, pp.323-333.

Hartley, J. (2005) Innovation in Governance and Public Service: Past and Present. **Public Money and Management** 25(1): pp.27-34.

Hartley, J. (2006) **Innovation and its Contribution to Improvement: A Review for Policy-makers, Policy Advisers, Managers and Researchers.** London: Department for Communities and Local Government.

Hartley, J. (2010) Innovation in Governance and Public Services: Past and Present. **Public Money and Management** 25(1): pp.27-34.

Health and Social Care Act 2012 (c.7). Great Britain. London: HMSO.

Health and Social Care Information Centre (2015a) **General and Personal Medical Services: England 2004-2014.** [online]. Accessed at: http://www.hscic.gov.uk/catalogue/PUB16934/nhs-staf-2004-2014-gene-prac-rep.pdf [Accessed 15 November 2015].

Health and Social Care Information Centre (2015b) **Number of Patients Registered at a GP Practice: CCG.** [online]. Accessed at: http://www.hscic.gov.uk/searchcatalogue?productid=19077&topics=1%2fPrimary+care+services%2fGeneral+practice&sort=Most+recent&size=10&page=1#top [Accessed 15 November 2015].

Health Education England (2014) **Developing a flexible workforce that embraces research and innovation: Research and Innovation Strategy.** [online]. Available at: http://hee.nhs.uk/wp-content/blogs.dir/321/files/2014/05/RI-Strategy-Web.pdf [Accessed 2 February 2015].

Hill, T.P. (1977) On Goods and Services. **Review of Income and Wealth** 23(4): pp.315-338.

Hill, S. and Wilkinson, A. (1995) In search of TQM. **Employee Relations** 17(3): pp.8-25.

Hollander, S. (1965) **The Sources of Increased Efficiency: A Study of Du Pont Rayon Plants.** The MIT Press: Cambridge, Massachusetts.

Horbar, J.D., Rogowski, J., Plsek, P.E., Delmore, P., Edwards, W.H., Hocker, J., Kantak, A.D., Lewallen, P., Lewis, W., Lewit, E., McCarroll, C.J., Mujsce, D., Payne, N.R., Shiono, P., Soll, R.F., Leahy, K., Carpenter, J.H. (2001) Collaborative Quality Improvement for Neonatal Intensive Care. **Pediatrics** 107(1): pp.14-22.

Hunter, S.T., Bedell, K.E. and Mumford, M.D. (2007) Climate for creativity: A quantitative review. **Creativity Research Journal** 19(1): pp.69-90.

Illeris, S. (1989) **Services and Regions in Europe: A Report from the FAST programme of the Commission of the European Communities.** Aldershot: Avebury.

Jones, J. (2013) **UK Service Industries: definition, classification and evolution.** [online]. Available at: http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCIQFjAA&url=http%3A%2F%2Fwww.ons.gov.uk%2Fons%2Frel%2Fnaa1-rd%2Fnational-accounts-articles%2Fuk-service-industries--definition--classification-and-evolution%2Fuk-service-industries-pdf.pdf&ei=2nv0VKi0A-O17gbOj4Eg&usg=AFQjCNF31jBPNPWjYGGALrXsQBAsVP9NtQ&sig2=oZLEYxWwZAis9knhKZu56w&bvm=bv.87269000,d.ZGU [Accessed 25 February 2015].

Jones, L. and Exworthy, M. (2015) Framing in Policy Processes: A Case Study from Hospital Planning in the National Health Service in England. **Social Science and Medicine** 124: pp.196-204.

Kaluzny, A.D., Veney, J.E. and Gentry, J.T. (1974) Innovation of Health Services. A comparative study of hospitals and health departments. **Milbank Memorial Fund Quarterly – Health and Society** Winter 52(1): pp.51-82.

Kanter, R.M. (1983) **The Change Masters: Innovation and Entrepreneurship in the American Corporation.** Touchstone Edition. New York: Simon and Schuster.

Kaufman, J.C. and Beghetto, R.A. (2009) Beyond Big and Little: The Four C Model of Creativity. **Review of General Psychology** 13(1): pp.1-12.

Kaufman, J.C. and Sternberg, R.J. (2010) Preface. In: Kaufman, J.C. and Sternberg, R.J. (Eds.) **The Cambridge Handbook of Creativity.** Cambridge: Cambridge University Press, pp.xiii-xv.

King, N. (1990) Innovation at Work: The Research Literature. In: West, M.A. and Farr, J.L. (Eds.) **Innovation and Creativity at Work: Psychological and Organizational Strategies.** Chichester: John Wiley and Sons, pp.15-58.

King, N. (1992) Modelling the Innovation Process: An Empirical Comparison of Approaches. **Journal of Occupational and Organizational Psychology** 65: pp.89-100.

King, N. and Horrocks, C. (2010) **Interviews in Qualitative Research.** London: SAGE.

Knight, K. (1967) A Descriptive Model of the Innovation Process **The Journal of Business** 40(4): pp.478-496.

Kozbelt, A., Beghetto, R.A. and Runco, M.A. (2010) Theories of Creativity. In: Kaufman, J.C. and Sternberg, R.J. (Eds.) **The Cambridge Handbook of Creativity.** Cambridge: Cambridge University Press, pp.20-47.

Litchfield, R.C. (2008) Brainstorming Reconsidered: A Goal-Based View. **Academy of Management Review** 33(3): pp.649-668.

Long, H. (2014) An Empirical Review of Research Methodologies and Methods in Creativity Studies (2003-2012). **Creativity Research Journal** 26(4): pp.427-438.

Lubart, T.I. (2000-2001). Models of the creative process: past, present and future. **Creativity Research Journal** 13(3&4): pp.295-308.

Maher, L. (2006) Innovation and Improvement. **Nursing Management** 13(8): pp.16-17.

Maher, L., Plsek, P., Garrett, S. and Bevan, H. (2012) **Thinking Differently.** Coventry: NHS Institute for Innovation and Improvement.

Maher, L., Plsek, P., Price, J. and Mugglestone, M. (2010) **Creating the Culture for Innovation: A Practical Guide for Leaders.** Coventry: NHS Institute for Innovation and Improvement.

Martin, L.D. (2009) Critical realism and creativity: A challenge to the hegemony of psychological conceptions. **Journal of Critical Realism** 8(3): pp.294-315.

Martin, L.D. and Wilson, N. (2014a) Re-discovering creativity: Why theory-practice consistency matters. **International Journal for Talent Development and Creativity** 2(1): pp.31-42.

Martin, L. and Wilson, N. (2014b) Opportunity, Discovery and Creativity: A Critical Realist Perspective. **International Small Business Journal** pp.1-15.

Miles, I. (1993) Services in the New Industrial Economy. **Futures** 25: pp.653-672.

Miles, I. (2000) Services innovation: coming of age in the knowledge-based economy. **International Journal of Innovation Management** 4(4): pp.371-390.

Miles, I. (2010) **Innovation and the Service Economy.** [online]. Available at:
https://www.bbvaopenmind.com/wpcontent/uploads/static/pdf/21_MILES_ING.pdf [Accessed 3 September 2015].

Moore, M.H., Sparrow, M. and Spelman, W. (1997) Innovation in Policing: From production line to job shops. In: Altshuler, A.A. and Behn, R.D. (Eds.) **Innovation in American Government: Challenges, Opportunities and Dilemmas.** Washington D.C.: The Brookings Institution, pp.274-298.

Mugglestone, M. Maher, L., Manson, N. and Baxter, H. (2008) Accelerating the Improvement Process. **Clinical Governance: An International Journal** 13(1): pp.19-25.

Mulgan, G. (2007) **Ready or Not? Taking Innovation in the Public Sector Seriously.** London: NESTA.

Mulgan, G. (2014) **Innovation in the Public Sector: How Can Public Sector Organisations Better Create, Improve and Adapt?** Version 1. London: NESTA.

Mulgan, G. and Albury, D. (2003) **Innovation in the Public Sector** [online]. Available at:
http://www.sba.oakland.edu/faculty/mathieson/mis524/resources/readings/innovation/innovation_in_the_public_sector.pdf
[Accessed 29 September 2013]

Mumford, M.D. (Ed.) (2012) **Handbook of Organizational Creativity.** London: Elsevier.

Mumford, M.D. and Gustafson, S.B. (1988) Creativity syndrome: Integration, application and innovation. **Psychological Bulletin** 103(1): pp.27-43.

Mumford, M.D. and Gustafson, S.B. (2012) Creative Thought: Cognition and Problem Solving in Dynamic Systems. In: Runco, M.A. (Ed.) **The Creativity Research Handbook: Volume 2.** New York: Hampton Press.

Mumford, M.D. and Licuanan, B. (2004) Leading for Innovation: Conclusions, Issues and Directions. **The Leadership Quarterly** 15(1): pp.163-171.

Mumford, M.D., Hester, K.S. and Robledo, I.C. (2012a) Methods in Creativity Research: Multiple Approaches, Multiple Levels. In: Mumford, M.D. (Ed.) **Handbook of Organizational Creativity.** Amsterdam: Elsevier, pp.39-65.

Mumford, M.D., Hester, K.S. and Robledo, I.C. (2012b) Creativity in Organizations: Importance and Approaches. In: Mumford, M.D. (Ed.) **Handbook of Organizational Creativity.** Amsterdam: Elsevier, pp.3-16.

Mumford, M.D., Mobley, M.I., Uhlman, C.E., Reiter-Palmon, R. and Doares, L.M. (1991) Process Analytic Models of Creative Capacities. **Creativity Research Journal** 4: pp.91-122.

Munson, F.C. and Pelz, D.C. (1981) **Innovating in Organizations: A Conceptual Framework.** 3rd Version. Ann Arbor: The University of Michigan.

Myers, S. and Marquis, D.G. (1969) **Successful Industrial Innovations.** Washington D.C: National Science Foundation, pp.69-17

National Audit Office (2011) **Department of Health: Delivering efficiency savings in the NHS. Briefing for the House of Commons Health Committee.** London: National Audit Office.

National Institute for Health and Clinical Excellence. (2009) **How to use NICE guidance to commission high-quality services.** London: Crown Publications.

NHS (2015) **The NHS in England: The NHS** [online]. Available at: http://www.nhs.uk/NHSEngland/thenhs/about/Pages/overview.aspx [Accessed 2 February 2015].

NHS Beacon Services (2000) **NHS Beacon Learning Handbook: Spreading good practice across the NHS.** Leeds: National Health Service.

NHS Commissioning Board (2012) **Clinical Commissioning Group Authorisation: Guide for applicants.** London: NHS Commissioning Board.

NHS Improving Quality (2013) **An Introduction to the NHS Change Model.** [online]. Available at: http://www.nhsiq.nhs.uk/resource-search/publications/change-model-intro.aspx [Accessed 5 February 2015].

NHS Institute for Innovation and Improvement (2005). **Improvement Leaders' Guide" Working with Groups, General Improvement Skills.** Coventry: NHS Institute for Innovation and Improvement.

NHS Institute for Innovation and Improvement (2007). **It's How We Do Things Around Here: An Introduction to the NHS Institute's Work Process.** Coventry: NHS Institute for Innovation and Improvement.

NHS Institute for Innovation and Improvement (2008). **Using an Innovation Process in the NHS.** Coventry: NHS Institute for Innovation and Improvement.

NHS Institute for Innovation and Improvement (2010) **The Handbook of Quality and Service Improvement Tools.** Coventry: NHS Institute for Innovation and Improvement.

NHS National Institute for Health Research (2010a) **Research in the NHS - HR Good Practice Resource Pack: HR Good Practice: Information for researchers, R&D and HR staff in Higher Education Institutions and the NHS.** Version 2. London: NHS National Institute for Health Research.

NHS National Institute for Health Research (2010b) **Research in the NHS - HR Good Practice Resource Pack: Guide to Completing the Research Passport Form.** Version 1. London: NHS National Institute for Health Research.

NHS National Institute for Health Research (2011a) **Introduction to Good Clinical Practice (GCP): A Practical Guide to Ethical and Scientific Quality Standards in Clinical research.** Leeds: NHS National Institute for Health Research.

NHS National Institute for Health Research (2011b) **Gaining NHS Permission for Clinical Research: A Guide for Researchers.** London: NHS National Institute for Health Research.

NHS National Patient Safety Agency (2007) **Defining Research: NRES Guidance to Help You Decide if Your Project Requires Review by a Research Ethics Committee.** London: NHS National Patient Safety Agency.

Newman, J., Raine, J. and Skelcher, C. (2000) **Innovation and Best Practice in Local Government: A Research Report.** London: Department of the Environment, Transport and the Regions.

Nightingale, D.J. and Cromby, J. (1999) **Social Constructionist Psychology: A Critical Analysis of Theory and Practice.** Buckingham: Open University Press.

Nord, W.R. and Tucker, S. (1987) **Implementing Routine and Radical Innovations.** Lexington: Lexington Books.

Normann, R. (1971) Organizational Innovativeness: Product variation and Reorientation. **Administrative Science Quarterly** 16: pp.203-215.

O'Mahoney, J. and Vincent, S. (2014) Critical Realism as an Empirical Project: A Beginner's Guide. In: Edwards, P.K., O'Mahoney, J. and Vincent, S. (Eds.) **Studying Organizations Using Critical Realism.** Oxford: Oxford University Press, pp.1-20.

Oldham, G.R. and Cummings, A. (1996) Employee Creativity: Personal and Contextual Factors at Work. **Academy of Management Journal** 39(3): pp.607-634.

Osborne, S.P. and Brown, L. (2011) Innovation, Public Policy and Public Services Delivery in the UK: The word that would be king? **Public Administration** 89(4): pp.1335-1350.

Osborne, S.P. and Brown, L. (2013a) **Handbook of Innovation in Public Services**. Cheltenham: Edward Elgar.

Osborne, S.P. and Brown, L. (2013b) Introduction. In: Osborne, S.P. and Brown, L. (Eds.) **Handbook of Innovation in Public Services**. Cheltenham: Edward Elgar, pp.1-11.

Paulus, P.B. (2000) Groups, Teams and Creativity: The Creative Potential of Idea-Generating Groups. **Applied Psychology: An International Review** 49(2): pp.237-262.

Paulus, P. B. (2002) Different Ponds for Different Fish: A Contrasting Perspective on Team Innovation. **Applied Psychology: An International Review** 51(3): pp.394-399

Paulus, P. B. (2008) Fostering Creativity in Groups and Teams. In: Zhou, J. and Shalley, C.E. (Eds.) (2008) **Handbook of Organizational Creativity.** New York: Lawrence Erlbaum and Associates, pp.165-188.

Pierce, J.L. and Delbecq, A.L. (1977) Organization Structure, Individual Attitudes and Innovation. **Academy of Management Review** 2: pp.27-37.

Plucker, J.A. and Makel, M.C. (2010) Assessment of Creativity. In: Kaufman, J.C. and Sternberg, R.J. (Eds.) **The Cambridge Handbook of Creativity.** Cambridge: Cambridge University Press, pp.48-73.

Public Health England (2015) **Welcome to Health Profiles** [online]. Available at: http://www.apho.org.uk/default.aspx?RID=49802 [Accessed 30 May 2016].

Puccio, G.J and Cabra, J.F. (2012) Idea Generation and Idea Evaluation: Cognitive Skills and Deliberate Practices. In: Mumford, M.D. (Ed.) **Handbook of Organizational Creativity.** London: Academic Press, pp.189-215.

Punch, K. (2014) **Introduction to Social Research: Quantitative and Qualitative Approaches.** 3rd Edition. London: SAGE.

Rashman, L. and Hartley, J. (2002) Leading and Learning? Knowledge transfer in the Beacon Council Scheme. **Public Administration** 80(3): pp.523-542.

Reiter-Palmon, R. and Illies, J.J. (2004) Leadership and creativity: Understanding leadership from a creative problem-solving perspective. **The Leadership Quarterly** 15: pp.55-77.

Rhodes, M. (1961) An Analysis of Creativity. **Phi Delta Kappan** 42(7): pp.305-310.

Rickards, T. (1996) The Management of Innovation: Recasting the Role of Creativity. **European Journal of Work and Organizational Psychology** 5(1): pp.13-27.

Richards, R. (2007) Introduction. In: Richards, R. (Ed.) **Everyday Creativity and New Views of Human Nature: Psychological, Social, and Spiritual Perspectives.** Washington, DC: American Psychological Association, pp.1-22.

Rogers, E.M. (1983) **Diffusion of Innovations.** 3rd Edition. New York: Free Press.

Rosenbloom, R.S. and Abernathy, W.J. (1982) The Climate for Innovation in Industry: The role of management attitudes and practices in consumer electronics. **Research Policy** 11: pp.209-225.

Runco, M.A. (2003a) Education for Creative Potential. **Scandinavian Journal of Educational Research** 47(3): pp.317-324.

Runco, M.A. (2003b) Commentary on Personal and Potentially Ambiguous Creativity: You Can't Understand the Butterfly Unless You (Also) Watch the Caterpillar. **Creativity Research Journal** 15(2&3): pp.137-141.

Runco, M.A. and Albert, R.S. (2010) Creativity Research: A Historical View. In: Kaufman, J.C. and Sternberg, R.J. (Eds.) **The Cambridge Handbook of Creativity.** Cambridge: Cambridge University Press, pp.3-19.

Runco, M. and Jaeger, G.J. (2012) The Standard Definition of Creativity. **Creativity Research Journal.** 24(1): pp.92-96.

Sawyer, R. K. (2012) **Explaining Creativity: The Science of Human Innovation.** 2nd Edition. New York: Oxford University Press.

Sayer, A. (1992) **Method in Social Science.** 2nd Edition. London: Routledge.

Sayer, A. (2000) **Realism and Social Science.** London: SAGE.

Sayer, A. (2004) Foreword: Why Critical Realism? In: Ackroyd, S. and Fleetwood, S. (Eds.) **Critical Realist Applications in Organisation and Management Studies.** London: Routledge, pp.6-20.

Schroeder, R.G., Van de Ven, A.H., Scudder, G.D. and Polley, D. (1986) Managing Innovation and Change Processes: Findings from the Minnesota Innovation Research Program. **Agribusiness** 2(4): pp.501-523.

Schroeder, R.G., Van de Ven, A.H., Scudder, G.D. and Polley, D. (1989/2000) The Development of Innovation Ideas. In: Van de Ven, A.H., Angle, H.L. and Poole, M.S. (Eds.) **Research on the Management of Innovation: The Minnesota Studies.** Oxford University Press edition. Oxford: Oxford University Press, pp.107-134.

Schumpeter, J.A. (1934) **The Theory of Economic Development.** Cambridge, Mass.: Harvard University Press.

Schumpeter, J.A. (1939) **Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process. Volume I.** New York: McGraw-Hill.

Schumpeter, J.A. (1942) **Capitalism, Socialism and Democracy.** New York: Harper and Brothers.

Shalley, C.E. (1991) Effects of productivity goals, creativity goals, and personal discretion on individual creativity. **Journal of Applied Psychology** 76: pp.179-185.

Shalley, C.E. (2002) How Valid and Useful is the Integrative Model for Understanding Work Groups' Creativity and Innovation? **Applied Psychology: An International Review** 51(3): pp.406-410.

Shalley, C.E. (2008) Creating Roles. What Managers Can Do to Establish Expectations for Creative Performance. In: Zhou, J. and Shalley, C.E. (Eds.) (2008) **Handbook of Organizational Creativity.** New York: Lawrence Erlbaum and Associates, pp.147-164.

Shalley, C.E. and Gilson, L.L. (2004) What Leaders Need to Know: A Review of Social and Contextual Factors That Can Foster Or Hinder Creativity. **The Leadership Quarterly** 15: pp.33-53.

Shalley, C.E. and Zhou, J. (2008) Organizational Creativity Research. In: Zhou, J. and Shalley, C.E. (Eds.) (2008) **Handbook of Organizational Creativity.** New York: Lawrence Erlbaum and Associates, pp.3-31.

Shalley, C.E., Gilson, L.L. and Blum, T.C. (2000) Matching creative requirements and the work environment: Effects of satisfaction and intentions to leave. **Academy of Management Journal** 43: pp.215-223.

Shalley, C.E., Zhou, J. and Oldham, G.R. (2004) Effects of personal and contextual characteristics on creativity: Where should we go from here? **Journal of Management** 30(6): pp.933-958.

Simonton, D.K. (1990) History, chemistry, psychology, and genius: An intellectual autobiography of historiometry. In: Runco, M.A. and Albert, R.S. (Eds.) **Theories of Creativity**. Newbury Park: SAGE, pp.92-115.

Smith, C. and Elger, T. (2014) **Critical Realism and Interviewing Subjects.** In: Edwards, P.K., O'Mahoney, J. and Vincent, S. (Eds.) **Studying Organizations Using Critical Realism.** Oxford: Oxford University Press, pp.109-131.

Stein, M.I. (1953) Creativity and culture. **Journal of Psychology** 36: pp. 31-32.

Stein, M.I. (1974) **Stimulating Creativity: Volume 1 Individual Procedures.** New York: Academic Press.

Steiner, G.A. (1965) **The Creative Organization.** Chicago: University of Chicago Press.

Sternberg, R.J. (1999) A Propulsion Model of Creative Contributions. **Review of General Psychology** 3(2): pp.83-100.

Sternberg, R.J. (2006) The Nature of Creativity. **Creativity Research Journal** 18(1): pp.87-98.

Sternberg, R.J. and Lubart, T.I. (1999) The Concept of Creativity: Prospects and Paradigms. In: R.J. Sternberg (Ed.) **Handbook of Creativity.** Cambridge: Cambridge University Press, pp.3-15.

Sternberg, R. J., Kaufman, James C. and Pretz, J.E. (2002) **The Creativity Conundrum: A Propulsion Model of Kinds of Creative Contributions.** New York: Psychology Press.

Sundbo, J. (1997) Management of Innovation in Services. **The Service Industries Journal** 17(3): pp.432-455.

Sundbo, J. (2010) The toilsome path of service innovation. In: Gallouj, F. and Djellel, F. (Eds.) **The Handbook of Innovation and Services: A Multi-disciplinary Perspective.** Cheltenham: Edward Elgar, pp.279-300.

Sundbo, J. and Gallouj, F. (2000) Innovation as a Loosely Coupled System ion Services. In: Metcalfe, S. and Miles, I. (Eds.) **Innovation Systems in the Service Economy: Measurement and Case Study Analysis.** Dortrecht: Kluwer Academics Publishers, pp.43-68.

Symon, G. and Cassell, C. (2004) Promoting New Research practices in Organizational Research. In: Cassell, C. and Symon, G. (Eds.) **Essential Guide to Qualitative Methods in Organizational Research.** London: SAGE, pp.1-10.

Thompson, V. (1965) Bureaucracy and Innovation. **Administrative Science Quarterly** 10: pp.1-20.

Tidd, J., Bessant, J. and Pavitt, K. (2005) **Managing Innovation: Integrating Technological, Market and Organizational Change.** 3rd Edition. Chichester: John Wiley and Sons Ltd.

Tierney, P. (2008) Leadership and Employee Creativity. In: Zhou, J. and Shalley, C.E. (Eds.) **Handbook of Organizational Creativity.** New York: Lawrence Erlbaum and Associates, pp.95-123.

Toivonen, M. and Tuominen, T. (2009) Emergence of Innovations in Services. **The Service Industries Journal** 29(7): pp.887-902.

Townsend, W. (2013) Innovation and the Perception of Risk in the Public Sector. **International Journal of Organizational Innovation** 5(3): pp.21-34.

University of Nottingham (2010) **Code of Research Conduct and Research Ethics.** Version 3.0. Nottingham: The University of Nottingham Research Committee.

Urquhart, M. (1984) The employment shift to services: where did it come from? [online]. Available at: http://www.bls.gov/opub/mlr/1984/04/art2full.pdf [Accessed 25 February 2015].

Utterback, J.M. (1974) Innovation in Industry and the Diffusion of Technology. **Science** 183: pp.620-626.

Van de Ven, A. (1986) Central Problems in the Management of Innovation. **Management Science** 32(5): pp.590-607.

Van de Ven, A.H. and Poole, M.S. (1995) Explaining Development and Change in Organizations. **Academy of Management Review** 20(3): pp.510-540.

Voss, C.A. (1992) Measurement of Innovation and Design Performance in Services. **Design Management Journal** 3(1): pp.40-46.

Wallas, G. (1926) **The Art of Thought.** London: Cape.
Watson, T.J. (2011) Ethnography, Reality, and Truth: The Vital Need for Studies of 'How Things Work' in Organizations and Management. **Journal of Management Studies** 48(1): pp.202-217.

West, M.A. (1990) The Social Psychology of Innovation in Groups. In: West, M.A. and Farr, J.L. (Eds.) **Innovation and Creativity at Work: Psychological and Organizational Strategies.** Chichester: John Wiley and Sons, pp.309-333.

West, M. A. (2002a) Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. **Applied Psychology: An International Review** 51(3): pp.355-387.

West, M.A. (2002b) Ideas are Ten a Penny: It's Team Implementation not Idea Generation that Counts. **Applied Psychology: An International Review** 51(3): pp.411-424.

West, M.A. and Farr, J.L. (1990) Innovation at Work. In: West, M.A. and Farr, J.L. (Eds.) **Innovation and Creativity at Work: Psychological and Organizational Strategies.** Chichester: John Wiley and Sons, pp.3-13.

West, M.A. and Sacramento, C.A. (2012) Creativity and Innovation: The Role of Team and Organizational Climate. In: Mumford, M.D. (Ed.) (2012) **Handbook of Organizational Creativity.** London: Elsevier, pp.359-385.

Willig, C. (2008) **Introducing Qualitative Research in Psychology: Adventures in Theory and Method.** Maidenhead: Open University Press.

Wilson, N. (2010) Social Creativity: Re-qualifying the Creative Economy. **International Journal of Cultural Policy** 16(3): pp.367-381.

Windrum, P. and Garciá-Goñi, M. (2008) A neo-Schumpeterian model of health services innovation **Research Policy** 37: pp.649-672.

Windrum, P. and Koch, P. (2008) **Innovation in Public Services: Entrepreneurship, Creativity, and Management.** Cheltenham: Edward Elgar.

Woodman, R.W., Sawyer, J.E. and Griffin, R.W. (1993) Toward a theory of organizational creativity. **Academy of Management Review** 18(2): pp.293-321.

Wright, C., Sturdy, A. and Wylie, N. (2012) Management Innovation Through Standardization: Consultants As Standardizers of Organizational Practice. **Research Policy** 41: pp.652-662.

Yin, R.K. (2009) **Case Study Research: Design and Methods.** 4th Edition. Thousand Oaks, Ca.: SAGE.

Zairi, M. and Ahmed, P. (1999) Benchmarking Maturity As We Approach The Millennium. **Total Quality Management** 10(4-5): pp.810-816.

Zairi, M. and Whymark, J. (2000a) The transfer of best practices: how to build a culture of benchmarking and continuous learning – part 1. **Benchmarking: An International Journal** 7(1): pp.62-79.

Zairi, M. and Whymark, J. (2000b) The transfer of best practices: how to build a culture of benchmarking and continuous learning – part 2. **Benchmarking: An International Journal** 7(2): pp.146-167.

Zaltman, G., Duncan, R. and Holbek, J. (1973) **Innovations and Organizations.** New York: John Wiley and Sons.

Zeng, L., Proctor, L.W. and Salvendy, G. (2009) Fostering Creativity in Service Development: Facilitating Service Innovation by the Creative Cognition Approach. **Service Science** 1(3): pp.142-153.

Zhou, J. and Shalley, C.E. (2008) **Handbook of Organizational Creativity.** New York: Lawrence Erlbaum and Associates.