THE ROLE OF CREATIVITY IN ENTREPRENEURSHIP

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Abstract:
This paper evaluates the contribution of creativity to entrepreneurship theory and practice in terms of building an holistic and transdisciplinary understanding of its impact. Acknowledgement is made of the subjectivist theory of entrepreneurship which embraces randomness, uncertainty and ambiguity but these factors should then be embedded in wider business and social contexts. The analysis is synthesised into a number of themes, from consideration of its definition, its link with personality and cognitive style, creativity as a process and the use of biography in uncovering data on creative entrepreneurial behaviour. Other relevant areas of discussion include creativity's link with motivation, actualisation and innovation, as well as the interrogation of entrepreneurial artists as owner/managers. These factors are embedded in a critical evaluation of how creativity contributes to successful entrepreneurship practice. Modelling, measuring and testing entrepreneurial creativity are also considered and the paper includes detailed consideration of several models of creativity in entrepreneurship. Recommendations for future theory and practice are also made.

Introduction:

A change in the economy has been identified recently, moving from knowledge based activities to creativity, innovation, entrepreneurship and imagination (van den Broeck et al. 2008; Oke et al. 2009). Increasing globalisation and technology effects have resulted in more business opportunities but the marketplace has also become more crowded and competition has increased (McMullan and Shepherd 2006). Creativity enables the entrepreneur to act on these opportunities in ways which can result in competitive advantage for the organisation. It can provide the basis for innovation and business growth, as well as impacting positively on society generally (Bilton 2007). Entrepreneurship occurs in all types and sizes of organisations, from the domestic microenterprise to the global corporation. Entrepreneurship can be defined as the process of creating value for business and social communities by bringing together unique combinations of public and private resources to exploit economic, social or

cultural opportunities in an environment of change. Creativity has been viewed as the construction of ideas or products which are new and potentially useful (Amabile 1988), although in an entrepreneurial sense there should also be a subsequent link to innovation and profitability in monetary and social terms. These ideas can be internally or externally located, although the entrepreneur will tend to search and identify potential solutions shaped in part by internal competencies. Creativity allows the organisation to take advantage of opportunities which develop as the result of changing environmental conditions (Shalley et al. 2004).

Entrepreneurship has three central underlying dimensions: innovation, risk-taking and proactiveness. Innovation is the manner in which the entrepreneur searches for new opportunities, or the way in which ideas are brought to a profitable conclusion. The test of innovation lies in its success in the marketplace of ideas, rather than in its novelty alone. Risk-taking refers to the manner in which innovation is embedded in the organisation, society or community. It also relates to the willingness of people to commit significant resources to opportunities that are calculated to succeed. Pro-activeness is concerned with making things happen by perseverance, adaptability and by breaking with the established ways of doing things. Creativity involves a perceptual response to the environment which may induce a high or low frequency of creative endeavour. The term ‘creative intensity’ is used by Morris et al. (2003) to illustrate the combined effects of the degree and frequency of creative behaviour at the individual, organisational or societal levels. Individual creativity within an organisation contributes to overall competitive advantage and organisational innovation, while teams or groups of creative individuals increase this advantage

further (Hirst et al. 2009). The contribution of creativity to today's changing economies makes it central to business, scientific and social endeavour.

Blackburn and Kovalainen (2009) call for more critical perspectives in researching small firms and entrepreneurship and this paper adopts such an approach when considering how creativity impacts on entrepreneurship. They remark that research should be embedded in core disciplines such as economics, psychology and sociology and this paper will show that creativity research in entrepreneurship needs to be influenced by these and other diverse disciplines. Blackburn and Kovalainen identify a number of mature, enduring and novel research topics in entrepreneurship but there is no specific mention of creativity or innovation. This suggests that, although creativity does impact across a number of areas of entrepreneurship, there is still much more potential to fulfil. There is no universally accepted definition of creativity, although there are a number of overlaps in its interpretation. A preliminary analysis identifies creativity as showing imagination and originality of thought in moving beyond everyday thinking. It can be characterised by stretching or even breaking the rules of convention, with even the smallest departure from the norm being deemed creative. Young (1985) defines creativity as the actualising of our potential, involving the integration of our logical side with our intuitive side. It can involve an advance in thought but may also retain links with the past. Ford and Harris (1992) believe it to be a modifiable and deliberate process which exists to some degree in everybody. Fillis and Rentschler (2006) view creativity as being able to do imaginative and non-routine things while also building on tradition to achieve profitable outcomes. Hunter et al (2007) view creativity as emerging from an interaction between the individual and the situation, facilitated by an appropriate environment or climate.

Creativity has a diverse research base which can be highly complex (Mumford and Gustafson 1988). Creativity research has implications for teaching and learning, and has been informed by disciplines such as psychometrics, cognitive psychology, historiometrics, biology and contextual studies (Petrowski 2000). So important is the impact of creativity on our lives, that a call has been made for the establishment of a Creativity University, focusing on the teaching and nurturing of the art and skills of creativity (Duderstadt 2000). However, despite its perceived importance to society, a number of factors have contributed to the neglect of creativity as a research topic including the notion that it is a mystical phenomenon involving a spiritual process which does not sit comfortably with academic scrutiny. The early twentieth century schools of psychology such as structuralism, functionalism and behaviourism chose to ignore creativity (Blumenthal 1980), while popularist creativity 'experts' promoted creative thinking without substantiation through testing the validity of their thoughts. However, there are now publications devoted to creativity research such as the Journal of Creative Behavior and the Creativity Research Journal which have helped to introduce an air of respectability to its study.

Increasing importance is now placed on creativity by governments and their advisors (Robinson 2001). One way of understanding creativity is to think of its particular attributes within a process, product, place or person (Rhodes 1961), as a form of expertise (Rich and Weisberg 2004) or as an ability (Vincent et al. 2002). Evidence of creativity spans many centuries, if not millennia, and so it is important to also identify any longitudinal historical factors which have shaped it. Creativity has been linked to genius and in science, business and art, a number of individuals have

attained heroic status through their creative philosophies, discoveries, practices and products (Puccio 1991; Eysenck 2008). In addition to being a personality characteristic, creativity has been grounded sociologically, thereby acknowledging its human rather than scientific input. A number of attempts have been made at modelling, measuring and testing creativity, although it is recognised that no single interpretation has been able to capture its essence. Creativity is also viewed as a central element in problem solving and there are a number of ways in which creative thinking can facilitate decision making. In an investigation of artist versus market orientation, it has also been shown that creativity for creativity's own sake can result in profitable outcomes (Fillis 2006).

The year 1950 has been viewed as a landmark in creativity research, when J.P. Guilford first presented his Creativity address to the American Psychological Association. Until then, very few articles on creativity had been published, but after the address output grew considerably. Since the 1960s research has focused on areas such as creativity as an intellectual ability, the training of creativity thinking; the creative individual, the relationship with intelligence, creative people as divergent problem solvers and scientific understanding of creativity (Roweton 1989). Creativity is influenced by thinking styles, motivation and culture (Sternberg and O'Hara 1999). Each individual is born with domain specific abilities; for example, some people are more talented in art or music than others. Some commentators believe that creativity can be taught, while others feel that it can only be facilitated. In some Masters programmes, students are exposed to relevant creativity theory but they are then allowed to experiment in order to derive their own creative solutions to a particular problem. Creativity is best achieved when flexible, exploratory, non-predetermined paths of discovery are possible (Amabile 1983). Fillis and Rentschler (2006) show

that creative solutions need not be complex, especially in the business field where relatively basic responses are capable of resulting in success for the organisation.

The Connection between Creativity and Entrepreneurship:

Links have been made between creativity and entrepreneurship for some time (Whiting 1988; Lee et al. 2004). Stein (1974) claimed that creative ability and entrepreneurial ability are separate constructs but this is now disputed (Gilad 1984). Early creativity research concentrated on scientific interpretations, the impact of technology and artistic creation and any connection with entrepreneurship was confined to the application of the end product of a creative act. Whiting identified independence, the drive to achieve, curiosity, self-confidence and deep immersion in a task as the five main characteristics of the relatively more creative individual while self-confidence, perseverance, high energy levels, calculated risk taking and the need to achieve are seen as the top five characteristics of the relatively more entrepreneurial individual. Other relevant factors include using one's initiative and being flexible. So, although there may be differences between the meanings of being creative and being entrepreneurial, there are certainly a number of overlaps. These characteristics also compare favourably with those identified by Fillis (2007a) discussed later in the paper as he notes a stability in creative entrepreneurial factors over time. Entrepreneurship is viewed as a major contributor to economic growth and employment creation while understanding how creativity impacts on the process is also crucial (Baumol 2002).

Much entrepreneurship research concentrates on new venture creation (McMullan and Long 1990) but has tended to ignore the impact of the social environment. This

imbalance can be addressed by examining the contribution of creativity on entrepreneurial growth, while also examining creativity throughout the lifetime of the business. Lee et al. (2004) note that entrepreneurial activity not only requires both a supportive and productive business climate but that it also needs an environment where creativity and innovation can flourish. Having a strong and diverse knowledge base, well developed business and social networks and an ability to identify opportunities also contribute to successful entrepreneurial behaviour (Harryson 2008; Ko and Butler 2007; Kijkuit and van den Ende 2007; Rosa et al. 2008); for example, intermittent interactions within a social network involving individuals seeking information outside a close social circle can result in new idea generation (Perry-Smith 2006). A successful integration of creativity and technology can then lead to commercialisation of the idea, product or service. The knowledge base can also be utilised in contributing to useful juxtapositionings or bisociations between previously unrelated ideas or domains (Sternberg 2004; Ko and Butler 2006).

Entrepreneurial creativity has been defined as the generation and implementation of novel, appropriate ideas to establish a new venture (Amabile 1997). This definition sits alongside much entrepreneurship literature on new venture formation (Hisrich 1992; Woo and Daellenbach 1994), but fails to follow the growth of the business over time. Entrepreneurial creativity, however, exists before, during and after the lifetime of a particular business since it is shaped in part by the social world and by the individual decision maker (Fillis and Rentschler 2006). There are also a number of other contributing internal and external impacting factors:

> entrepreneurial creativity requires a combination of intrinsic motivation and certain kinds of extrinsic motivation – a motivational synergy that results when strong levels of personal interest and involvement are combined with the

> promise of rewards that confirm competence, support skill development, and enable future achievement (Amabile 1997:18)

One inconsistency with this stance is the belief that the successful implementation of creative ideas requires the input of a range of individuals working in teams. However, other research identifies how the entrepreneurial microenterprise, consisting of ten or less people, with often only one main decision maker, can also utilise creativity in order to create competitive advantage in the marketplace (Cook 1998; Fillis 2002). Those organisations which are prepared to recognise creative achievement are subsequently likely to exhibit further creative behaviour.

An entrepreneur often has to make decisions which are influenced by the organisation's resources, but decisions are also often made irrespective of the resources available via the process of intuition. The entrepreneur must demonstrate strong leadership by shaping business strategy and motivating employees via creative thinking (Darling et al. 2007; de Jong and Den Hartog 2007). A leadership style modelled on democracy and participation facilitates creativity (Nystrom 1979) and a leader's vision is an important factor in managing creative individuals (Locke and Kirkpatrick 1995; Frisch 1998; Becherer et al. 2008). This vision must be communicated through appropriate informal and formal channels and across all levels of management. An organisational culture which facilitates risk taking is also capable of enhancing creative achievement (Amabile 1988). By owning a problem through self initiated activity, creativity can lead to enhancing intrinsic motivation (Robinson and Stern 1997). Encouraging an element of entrepreneurial thinking in business contributes to the enhancement of motivation. Continual faithfulness towards a single favoured approach to problem solving should be discouraged and instead:

> An organisational culture, which supports creativity, should nourish innovative ways of representing problems and finding solutions and regard creativity as both desirable and normal and consider innovators as role models to be identified with (Locke and Kirkpatrick 1995).

Creativity, problem solving and intuition interact in order to produce an appropriate strategic vision for the entrepreneurially led organisation (Markley 1988). Intuition can be viewed as a core business competency which is influenced by the ability to be creative. Creative organisations have been visualised as consisting of idea-rich people with innovative leadership and open communication (Roweton 1989).

Kao (1989) sees creativity as a competitive strength while Carson et al. (1995) view it as a key competency in small and medium sized enterprises and Bridge et al. (2003) view it as an entrepreneurial attribute. Entrepreneurial management can influence creativity by providing a work environment in which creative individuals and groups function. Taggar (2002) includes the componential theory of individual creativity (Amabile 1983; 1996) as a contributing component of his multilevel model of team performance in utilising creativity. The dimensions of agreeableness, extraversion, conscientiousness, general cognitive ability and openness to experience impact on individual behaviours which then influence individual and group level creativity:

P1: It can be proposed that an entrepreneurial environment has a positive impact on both individual and group creativity.

People in an organisation are believed to exhibit either an adaptive or innovative style of creativity (Kirton 1976; Stacey 1996). With the former, the individual is content to

operate within an existing system or paradigm in order to improve upon it while, with the latter, existing thinking is challenged in order to change the situation:

P2: It is proposed that in an entrepreneurial firm environment, higher levels of challenging existing thinking will occur and that any boundaries will be stretched or even broken.

Filipczak (1997) promotes the need to have both adaptive and innovative creative individuals. Creative adaptation concerns the reworking of existing ideas and concepts, while innovative creativity relates to the invention of new and different ideas. Entrepreneurial characteristics such as flexibility, visualisation and imagination all play a part in an individual's ability to see new ways of applying past experiences and constructing alternative strategic directions. The working conditions within the enterprise need to be flexible enough to allow for individual and group creativity. Creativity may be easier to achieve within the smaller firm environment where flexibility is a key factor in being able to address business opportunities (Poon and Jevins 1997). The entrepreneur is more prepared to challenge existing practices and implement changes when needed, rather than maintain the status quo.

Researching Entrepreneurial Creativity:

Creativity can be used to deal with the ambiguity and uncertainty in decision making by matching the nonlinear responses of the entrepreneur to that of the business world. Uncertainty has not tended to be modelled in investigations of creativity and social networks, although it is very much part of an entrepreneur's environment (Perry-Smith and Shalley 2003). However, within new product development processes, it

does receive attention in terms of moves to reduce it in order to secure the desired commercial effects. Creativity can also contribute to dealing with ambiguity. While uncertainty refers to a lack of information, ambiguity refers to the existence of multiple and conflicting interpretations regarding an organisational situation (Kijkuit and van den Ende 2007):

P3: It can be proposed that the entrepreneurial manager and entrepreneurial organisation is much better placed to deal with these circumstances than their conservative counterparts.

A variety of quantitative and qualitative methods have been adopted in order to research creativity; for example, there are merits in the construction of multivariate models of creativity in attempting to explain its impact but its often intuitive and intangible nature also lends itself to qualitative enquiry. Much creativity research focus on specific aspects such as the qualities of the creative person, the creative product, the creative process and the creative environment, rather than investigating creativity from an holistic perspective. There are, however, also particular methodological benefits of this wider viewpoint in terms of identifying patterns of similarity between creative people working in particular fields (Mace 1997). The creative activities of visual artists have been investigated using a qualitative approach in order to reach an understanding of the interactive and mutually dependent nature of the influencing factors of creativity:

> It was thought that a qualitative examination of the process of art making through the verbal reports of creatively active people might yield new and valuable information regarding creativity. [The benefits of adopting a qualitative approach include the ability to] capture the nature and meaning of creative experience from the perspective of the research participants themselves, rather than a measurement of frequency of responses or events….such an

> approach would provide theory that was driven by the research participants themselves, thus providing additional, and possibly insightful, material about the construct creativity (Mace 1997:266).

Evaluating the creativity of entrepreneurial artists can uncover data which is also of use to entrepreneurship researchers in general. Visual artists, for example, tend to spend long periods of time engaged in creative problem-solving strategies. Ecker (1963) viewed the process of making art as a problem solution problem continuum and Fillis and Rentschler (2006) have shown how this notion can be applied to the field of entrepreneurial marketing through their biographical analysis of the entrepreneurial artists Salvador Dali, Vincent Van Gogh, Pablo Picasso and Andy Warhol. A work of art serves as a biography of an artist's life, providing the viewer with insight into their creative personality. In the same fashion that products are given meaning by the way in which they are positioned in the marketplace, the artist gives meaning to the artwork. In both cases, there are also social and economic forces which impact. The main thrust of this examination is that the creative philosophy of the artist can be compared similarly to that of the entrepreneur (Fillis 2004; Fillis and Rentschler 2005). Even though the creative process is complex, decision making is common to all types of creative performance (Cawelti et al. 1992):

P4: It is proposed that investigation of the artistic decision making process can provide insight into creative decision making generally

Taking a psychological perspective, creativity can be examined from cognitive, social and personality points of view (Woodman and Schoenfeldt 1990), thereby gaining insight into entrepreneurial thought processes. Other important factors include motivational, attitudinal, social and environmental aspects (Runco 1993). Magyari-

Beck (1990) believes that the 4Ps interpretation of creativity is limited since it focuses on creativity solely from a psychological perspective. The link with innovation, and hence entrepreneurship, must also be considered, alongside personal, historical, cultural, organisation and group influences (Boden 1992; Nayak 2008):

P5: It is proposed that instead of focusing solely on the creative individual, it is better to adopt an holistic approach to understanding creative entrepreneurship.

Nayak talks about the use of an operating logic or 'feel for the game' when searching for creative solutions. This matches the intuitive abilities of the entrepreneur as part of his or her wider competency spectrum. Nayak believes that the literature on creativity can be divided into the levels of the individual and the organisation but this perspective omits the wider environmental and social factors which also influence creativity. He also dismisses the value in researching poets, artists and scientists in informing understanding of managerial creativity but such an approach has been found to be of value to entrepreneurship research; for example, Fillis (2007a) has carried out a biographical approach to understanding creativity in entrepreneurship which uncovers valuable data on the individual but also grounds the findings longitudinally in the social world.

There is also a growing body of work within management studies which analyses the manager from an artist perspective which is relevant to entrepreneurship (Degot 1987; Brownlie 1998; Monthoux 2004). Rather than reducing management activities down to economic aspects alone with managers and their actions displaced to the background, the manager can be visualised as the creator of acts of management. Both

management practice and research can be thought of in terms of styles or schools where different, and even opposing forms are evident, from the autocratic to an entrepreneurial approach. Instead of thinking outside of the box, Kupp and Anderson (2009) advocate thinking outside of the canvas as they examine the artistic managerial qualities of the artist Joseph Beuys. He identified three levels of creativity: the active form of thinking, or personal creativity; the sculptural theory or process creativity; and social sculpture or collective creativity. Kupp and Anderson note that when routine solutions are not suitable for addressing strategic, leadership and other organisational issues with no precedents, there should be a quest for non routine creative solutions. Grounded in the Austrian economics school and the uncertainty involved in economic decisions, together with the subjective perception of opportunity (Kirzner 1973), Mahoney and Michael (2005) develop a subjectivist theory of entrepreneurship where individual creativity, discovery, surprise and learning are central components. Kor et al. (2007) further embrace individual creativity as they seek to construct a subjectivist theory of entrepreneurship grounded in the resources, skills and knowledge of the individual as he or she seeks to discover and create. This subjectivist stance promotes a stochastic perspective of entrepreneurship which centres on random events, uncertainty and ambiguity, rather than planned, objective interpretations (Boettke 2002). Such an approach seeks to reflect the reality of entrepreneurship in practice where the future is unknown.

The paper now develops a detailed analysis of additional themes within creativity research which are relevant for entrepreneurship theory and practice, including its impact on personality and cognitive style and the subsequent implications for decision making, the process of creativity, creativity and biography, the motivation to be

creative and the impact of creativity in business generally. The paper also assesses how we might best model, measure and test for entrepreneurial creativity.

Creativity, Personality and Cognitive Style as Factors in Entrepreneurial Decision Making:

Examining creativity from a psychological perspective signals its scientific connection, while also providing a link to entrepreneurship where exploration of constructs such as personality, cognitive style and trait theory help to uncover how creativity contributes to entrepreneurial decision making. Ward (2004) investigates the relationship between cognition, creativity and entrepreneurship, remarking that successful ideas occur as the result of a balance between the new and the familiar in order to ensure that radical ideas are not rejected. However, creativity is concerned with both incremental steps and paradigm shifts, so radical ideas should not be dismissed. Ideas, however, cannot be created at will and often emanate from the fringe of consciousness, rather than as the result of linear rational thinking (Dasgupta 1994). Utilising a network perspective, useful ideas tend to be the result of having non-redundant and heterogeneous contacts which permit idea generation through the combination of diverse information (Burt 2004). Non-redundant refers to contacts which are only related to the individual in question but not to each other, while heterogeneous contacts represent different functional backgrounds. Ward's perspective goes some way to explain why most new products are really only line extensions, rather than totally new entities (Kuczmarski 1996). Some of the techniques advocated include analogy, or the application of structured knowledge from a familiar domain to a new or less known domain (Gentner et al. 2001), as well as conceptual combination:

> …when two previously separate concepts or images are merged into a single unit, novel properties can emerge that were not obviously present in either of the separate components, and that the effect is particularly strong for dissimilar or divergent concepts. Such novelty can be exploited to develop new product ideas or market niches. by Ward (2004:174)

This closely relates to the notion of transmutation of thought (Warhol 1975) and bisociation, while analogy has connections with the use of metaphor in rationalising uncertainty (Cornelissen 2006; Fillis and Rentschler 2008). As with metaphorical construction, analogy works best when there is a deeper level connection between the domains, rather than merely at the surface level. These techniques work because in reality individuals do not make linear rational decisions when problem solving.

Study of the relationship between creativity and personality tends to take one of three routes: explaining creativity by utilising personality theories; examining the personality and biographical characteristics of well known creative individuals and their activities in different fields; and focusing on a small number of particular personality dimensions (Woodman and Schoenfeldt 1990). Personality theory is used since it would be expected that any such theory should account for creative behaviour, as well as other behaviour types. Psychoanalytical theorists view creativity as emerging from the unconscious or preconscious while humanistic theorists relate creativity to self-actualisation. By examining biographical information and identifying details of any personality characteristics contained within it, future creative behaviour can be understood and even predicted. Barron and Harrington (1981:453), for example, identified the following creative characteristics following a fifteen year long research programme:

> …a fairly stable set of core characteristics (e.g. high valuation of aesthetic qualities in experience, broad interests, attraction to complexity, high energy, independence of judgement, autonomy, intuition, self-confidence, ability to resolve or accommodate apparently opposite or conflicting traits in one's self

concept, and finally, a firm sense of self as 'creative') continued to emerge as correlates of creative achievement and activity in many domains.

Many of these factors are also firmly rooted in the entrepreneurship literature where decision maker personality impacts on the future direction of the organisation (Lau and Schaffer 1999; Williams 2004; Fillis and Rentschler 2006)**.** Fillis (2007a) identifies a set of creative entrepreneurial competencies and philosophies which appear stable over time and which should be incorporated into subsequent modelling of the entrepreneurial decision making process. These factors include self-belief and ambition, utilisation of creative business networks, high motivational levels, intuition, strong communication skills, ability to visualisation problems, flexibility and the ability to break down physical and perceptual barriers. Other contributing factors include the adoption of a variety of problem solving styles and divergent thinking.

The ability to make associations between previously unconnected domains also draws on cognitive ability, or the capacity to perceive, reason or use intuition, something which the creative entrepreneur is particularly good at doing. Creativity can also be judged in terms of the amount of imagination utilised in solving problems (Piaget 1962; McFadzean 1998). Imagination integrates with intelligence as an individual develops from child to adult. Throughout the developmental process, imagination increases, with creativity and intelligence combining to encourage the generation of more productive activity:

P6: It can therefore be proposed that the entrepreneur exhibits more imagination than his or her conservative counterpart.

The personality of an individual consists of a unique pattern of traits which ensures that each individual differs from another. Behaviour traits consist of aptitudes, interests, attitudes, and temperamental qualities. Creative personality is determined by the trait patterns which shape the characteristics of creative persons (Guilford 1950). Creativity as a trait focuses on issues such as locus of control, or the impact of internal and external influences on the outcomes of actions, self esteem, dogmatism and narcissism. Examining creativity from a trait perspective alone can have limited impact, given that the social environment has also been shown to impact upon creative behaviour (Amabile 1998). A psychometric approach to understanding creativity assumes that it is a measurable mental trait, in the same manner as intelligence and the focus tends to be on measuring divergent thinking (Petrowski 2000). Positive personality traits of creative individuals include high levels of energy, attraction towards complex and novel phenomena, openness to ambiguity, willingness to be open-minded and being persistent in adverse conditions (Mintzberg et al. 1976; Feist 1999). These factors are also located within the entrepreneurial personality.

Insight into the creative personality of the entrepreneur can be achieved through the adoption of biographical research which is capable of uncovering data which would not necessarily be identified using the survey or interview method alone. Approaches used include the analysis of the allotted space in biographical dictionaries for each individual and the construction of a longitudinal approach to understanding creativity through biographical analysis of the individual, from their birth, socialisation, through to establishment and growth of the business and beyond into later life. Recent work relevant to entrepreneurship has focused on examining data in the form of the biography, or ‘story’, of the organisation and its managers where both historical and

current data can be compared and contrasted (Carson and Carson 1998; Gabriel 2000). The adoption of a longitudinal research approach is one way of securing an in-depth appreciation of the creative entrepreneur and the world in which he/she is located. The merits of this technique include the ability to triangulate data on personality as well as around social, economic and historical dimensions. Biography itself is a creative medium, in terms of the way in which the story of the individual, organisation or other entity is told. This and other narrative techniques can be used to rethink entrepreneurship through their juxtapositioning with the arts and humanities; for example, researchers have interrogated literature and other narrative forms as entrepreneurial data sources. Biography or life history can strengthen our entrepreneurial knowledge through its ability to explore the sociological imagination (Downing 2005).

The Process of Creative Entrepreneurship:

Entrepreneurial creativity can be viewed as a process occurring in an individual who has been shaped, in part, by a range of social factors (Amabile 1996; Perry-Smith and Shalley 2003). A distinction can be made between conscious and unconscious processes of creativity (Rothenberg 1979; Eysenck 1996). Attempting to measure its conscious elements is challenging but assessing its unconscious contributors is particularly intricate, given the many intangible dimensions involved. The creative process has been visualised as involving a number of stages:

> The first stage is problem identification, during which the problem solvers recognise, define, and attempt to understand the problem or the opportunity facing them. The second is preparation, during which the problem-solvers gather information and other resources necessary to tackle the problem or pursue the opportunity. The third stage is response generation, during which various ideas for solving the problem or pursuing the opportunity are designed. The fourth stage, validation and communication, involves the consideration of

> the ideas generated, selection among them, and formalisation or communication of the selected approach (Amabile 1997:23).

The creative act can be viewed as an extended, variable process rather than something occurring at one particular point in time (Motamedi 1982; Sapp 1992). Csikszentmihalyi (1999) interprets creativity as a systemic process consisting of individuals originating the idea, the gatekeepers who represent the field or society, and the culture or domain within which creativity occurs. These factors then interact in order to interrogate and validate the new ideas. Viewing creativity as a process is valuable but it also suggests that a certain sequence of events is inevitable. In reality progression may not be linear and some stages may be leapfrogged or omitted altogether. Alternative suggestions based on holistic and network approaches now appear viable as alternatives to understanding creativity in entrepreneurship; for example, improved understanding can be reached by focusing on a more multi-layered, holistic conceptualisation where environmental, cognitive, competency and motivational inputs shape creative practice.

Creativity, Motivation and Actualisation of the Entrepreneur:

Creativity may be part of an individual's innate makeup but only a small proportion of the population fully actualise their creative potential since not everyone is motivated to be creative (Maslow 1968; Amabile 1983):

P7: It can be proposed that entrepreneurs are more likely to actualise their creative potential than their conservative counterparts because of their predisposition to seek out new opportunities.

There are also crucial differences between intrinsic and extrinsic creative motivation which explain behaviour determined by internal and external drivers:

> People will be most creative when they are primarily intrinsically motivated, by the interest, enjoyment, satisfaction, and challenge of the work itself; this intrinsic motivation can be undermined by extrinsic motivators that lead people to feel externally controlled in their work (Amabile 1998:1157).

When interviewing entrepreneurs about their motivations concerning business development it is clear that, although increasing their profit levels is a factor, being able to shape and grow the business and its workforce are also key motivating factors. Intrinsic motivation is essential in channelling the passion and interest of creative personnel in an organisation who carry out a task because they feel they enjoy the challenge of it. Individuals are extrinsically motivated when an additional goal is reached which is separate from the act of doing the work, or when a constraint imposed by an extrinsic source is overcome.

Those individuals who are more inclined to be intrinsically motivated exhibit behaviour which is heavily involved in the activity at hand since they are free from extraneous concerns about goals extrinsic to the activity itself. It would be expected that this is the case for the entrepreneur. They exhibit playfulness with their ideas because of their freedom to take risks and ability to explore new cognitive pathways. Mainemelis and Ronson (2006) consider how ideas are generated through the interaction of play and creativity within organisations. Play helps to stimulate the cognitive, affective and motivational aspects of the creative process and there is even a case for considering the merits of play as part of creativity for its own sake. Here, unbounded searching for solutions to emerging problems can contribute to idea generation and even contribute to new strategy formulation instead of adherence to

the usual linear, rational path. Individuals may even experience positive affect while carrying out their work. Those who are mainly extrinsically motivated tend to be concerned with the extrinsic goal to be attained and will not be as deeply involved in the activity. They feel less able to take risks and will rely more on well-worn cognitive pathways and experience less positive affect while working (Amabile et al. 1990). In new venture start-ups, extrinsic motivation issues might focus on heightened external visibility while intrinsic motivation could concern the wishes to develop a business based on certain lifestyle factors (Fillis 2007a).

Innovation, Creativity and the Entrepreneurial Leader:

Today, creativity appears more important than ever before, with it being seen as a critical success factor for organisations (Basadur and Hausdorf 1996). The understanding of attitudes towards creativity and the promotion of creative thinking within the organisation are pre-requisites to facilitating creativity in all employees. Although effectiveness and efficiency have long been viewed as central organisational requirements, creativity is now also deemed a core success factor, with organisational creativity resulting in higher levels of quality and customer satisfaction. The nature of the business environment is changing, with more and more turbulent conditions being experienced (Agor 1991; Mason 2007). Creative leadership is often deemed more appropriate than conventional managerial methods in the quest to deal with these non-linear and often unpredictable environmental conditions. In addition, managerial judgement is now viewed as just as relevant a decision making competency as the deployment of more conventional business skills centring on planning and strategy (Brownlie and Spender 1995; Brownlie 1998). Intuitive decision making is deemed an appropriate alternative response to changes in the contemporary business

environment, where the generation of a range of alternative directions can be constructed through appropriate visionary leadership and creative entrepreneurial behaviour.

Although creativity has yet to be fully embraced in the business world due to varying attitudes towards risk and change, organisations of all sizes are now realising the benefits of developing a creative orientation within a culture of globalisation as a factor in the longer term wellbeing of the organisation. This orientation should then lead to openness to innovation and acceptance of new ideas which can benefit the company (Salford 1995; Berthon et al. 1999). The majority of firms are small, and the majority of these are microenterprises employing ten people or less where business growth and behaviour is often influenced by a single owner/manager who may not necessarily be disposed towards encouraging creative thinking and practice (Storey 1994; Bridge et al. 2003). However, individuals in all sizes of organisation who exhibit entrepreneurial tendencies are much more likely to embrace creativity than those who do not demonstrate entrepreneurial ability (Bennett 2006; Day et al. 2006). Creativity has been identified as a core organisational competency (Palus and Horth 2002) and the creativity of key decision makers is of vital importance in shaping future business success. Organisational, customer and technological competencies have all been found to contribute to heightened innovative performance through their ability to extend existing strengths while also shaping new skills (Teece et al. 1997; Lokshin et al. 2009).

There are also connections between creativity, innovation and entrepreneurship in the development of a product. The product is shaped by the tangible outcomes of

creativity but it is also influenced by the creative process and creative ability of those involved in its production (Magyari-Beck 1990). In order to know what is creative also requires the ability to know what is not creative. In line with what has been found in the new product development literature where the vast majority of 'new' products are really only existing product extensions (Casto 1994; Coats et al. 1997), Magyari-Beck (1990) found no example of creation which was not an application of an existing model. At first glance the product does appear new but over time it is viewed as a routine response due to the application of an existing paradigm. However, paradigm shifts do occur occasionally and creativity can sometimes result in the establishment of an entity with little or no prior connections with other spheres; for example, via the use of new technologies with no market precedents. Innovation, as the commercial tangibilisation of creativity, is often the driving force behind successful business performance and it should be viewed as an investment rather than an unwanted cost (Kuczmarski 1996). Amabile et al. (1996) distinguish between creativity and innovation in that creativity is seen as the production of novel and useful ideas within any field. Innovation is viewed as the successful implementation of creative ideas within an organisation.

The creativity in individuals and teams is often the origin for innovation. Akehurst et al. (2009) believe that, instead of focusing on individual talent, the heads of organisations should be more concerned with creating and sustaining an internal environment which is supportive of collective support for creativity and innovation. There is still a focus on the single heroic entrepreneurial figure and this must now be set against the merits of internal cooperation and teamwork. Collective entrepreneurial endeavour within an organisation has been termed internal

entrepreneurship (Casson and Wadeson 2007) and is closely related to the notion of entrepreneurial teams of employees (Stewart 1989). Entrepreneurship from the bottom up, where creative thinking and innovative behaviours originate from employees rather than the entrepreneur has been referred to as intrapreneurship (Huse et al. 2005). However, Fillis (2007a) has shown that focusing on a single entrepreneurial decision maker is still relevant, as long as his or her role is defined within wider social and business environments.

The link between creativity, innovation and environmental variables has been examined from collaboration and leadership perspectives (Bullinger et al. 2004; Howell and Boies 2004). Collaborations can sometimes result in the development and integration of complementary competencies which impact on creativity. The climate, or people's perceptions of their work environment in terms of factors such as support and autonomy, has also been found to impact on creativity (Anderson et al. 1998; West 2002):

P8: It can therefore be proposed than an entrepreneurial culture can have a positive effect on the creative climate.

Both Mumford et el. (2002) and Amabile et al. (2004) also found that leader support was positively related to the level of employee creativity;

P9: It can therefore be further proposed that an entrepreneurial culture has a higher probability of resulting in support for the leader as an entrepreneur than other forms of leadership due to the empowering of employees to make decisions.

This also has an impact on the level of innovation in the organisation. An entrepreneurially led organisation should have effective lines of communication and should also be prepared to act on opportunities identified during employee/manager/customer interactions.

Modelling, Measuring and Testing Entrepreneurial Creativity:

A number of creativity models have been constructed but, to date, very few have been able to account for the subjective nature of creative activity. The componential model of creativity (Amabile 1988) utilises the dimension of organisational motivation to innovate as a supportive structure for creativity and innovation throughout the enterprise. Other relevant factors include the resources available to assist creative work such as sufficient time and appropriate training, management practices and the allowance of freedom or autonomy in carrying out challenging work through the construction of work teams with contrasting skills. Woodman and Schoenfeldt (1990) develop an interactionist model of creative behaviour which integrates personality, cognitive and social psychology perspectives. Antecedent conditions such as early socialisation experiences, learning, family socio-economic status and gender are viewed as precursors to the current attitudes and behaviour of the individual towards creativity. Their model promotes the belief that creativity is fundamentally process led but there is now ample evidence as shown in this paper to show that this is not the best way to view entrepreneurial creativity**.** West (2002) develops an integrative model of innovation and creativity implementation among groups at work, noting that the environment can hinder creativity but that any uncertainty can serve to drive innovation. Lubart (2001) evaluates a number of process-led creativity models, noting that the basic four stage model may need to be superceded, as also noted earlier

in this paper. Figure 1 illustrates the impact and benefits of creativity in entrepreneurship by viewing it as a response to the dynamic nature of the environment, conflicting with previous linear, process-led modelling of business behaviour. Additional important factors include the influence of the social world, the effect of cognitive skills and both creative and entrepreneurial competencies such as vision, judgement, curiosity and opportunity recognition. These factors in combination are capable of enabling the organisation to achieve competitive advantage.

Take in Figure 1

Eysenck (1996) uncovers several dimensions of creativity which help in attempting to measure it. These include viewing it as involving the production of new and original content, as a creative product which can involve more than just creative characteristics, as individual creativity and as a creative solution to problem solving. Creativity has also been measured using tests of divergent thinking, attitude and interest inventories, personality inventories, biographical inventories, ratings by teachers, peers and supervisors, the tangibilising of creativity through the creation of products, the study of eminent people and self-reported creative activities and achievements (Hovecar and Bachelor 1989; Creigh-Tyte 2005). Cropley (2000) believes that creativity tests are actually only measures of creative potential due to their inability to account for factors such as technical skills and opportunity.

Unsworth (2001) develops a typology of creative states or orientations which helps in understanding how creative individuals behave in different ways, rather than being seen as a homogeneous group. Responsive creativity is externally shaped where the

individual reacts to the problem being posed. Expected creativity occurs when there is a need for a creative solution to a particular problem driven by external motivation. Contributory creativity occurs when an individual decides to engage in a creative task even though he or she has no direct initial involvement. Proactive creativity is driven by an internal motivation to seek out problems to solve. This last category appears to have the best fit with entrepreneurial creativity where the owner/manager actively seeks out business opportunities. This orientation also matches the notion of the proactive personality (Bateman and Crant 1993) and the concept of personal initiative (Frese et al. 1996). These different orientations can be compared with the four creative states found by Fillis (20007b) in a study of creativity in craft firm internationalisation. Differing forms of creativity are located in the four craft firm types depending on the owner/manager's attitude towards creativity. Some choose to work in the craft industry because of the type of lifestyle involved and are unwilling to sacrifice this in order to expand the business. These creative types are called lifestylers. Another type is the business-oriented entrepreneur who is willing to take risks with both the business and the product, while recognising the importance of developing a customer base. The third type can be described as an artist/designer or idealist who is unwilling to view the craft as a product but as a creative object. They take risks as far as the craft itself is concerned in order to break new ground and they can be innovative and certainly creative with the craft product. The fourth creative type, the late developer, enters the industry much later than the others, having gained previous work experience in unrelated areas before making a career change.

Researchers of entrepreneurship should be interested in the concept of creativity since it is often associated with unusual solutions to solving problems. Creativity, and the

resultant innovation, often develops through juxtapositions of previously unconnected fields through the freedom to think in a non-linear, unblinkered fashion. Although logical thinking does have its purposes, continual adoption of this often sequential approach serves to omit many potentially useful associations which might otherwise be formed by following flexible, exploratory, non-predetermined paths. If we choose to adopt the social psychological perspective of Amabile and others in terms of how we view creativity, this then provides a useful connection across domains, from the sciences to the social sciences and entrepreneurship. Many measures of creativity and other associated dimensions such as entrepreneurial orientation have been constructed and operationalised but these tend to be quantitative, tangible attempts at capturing seemingly measurable dimensions. The reality, however, is that much of our behaviour is shaped by intangible, implicit dimensions based on mood and feeling, sensory experience and elements of the unconscious (Davis 2009):

P10: It is proposed that an entrepreneurial environment is more likely to result in impacting on mood in a positive sense, and therefore creativity, than a conservative environment.

Also, we cannot reasonably hope to measure intuition, for example, as a dimension of creativity solely through the application of Likert-type attitudinal scales (Likert 1932; Braunsberger and Gates 2009).

Conclusions and Areas for Future Research:

The holistic conceptualisation of creativity in entrepreneurship as shown in Figure 2 acknowledges the impact of imaginative thinking which embrace intangible

dimensions and move beyond the often rigid frameworks of testing variable relationships. Creative entrepreneurship is influenced by the external effects of globalisation and technology which impact on the enterprise and its members in terms of instilling an innovative culture. This impacts on a number of different levels, from the individual, team, organisation through to the particular industry and beyond. In order to realise the full creative potential of the enterprise, in-depth understanding of problem solving and decision making activities which embrace factors such as ambiguity and uncertainty should also be achieved. A research agenda needs to be developed which accounts for both scientific and artistic ways of knowing which are influenced by cross disciplinary and diverse domains. This paper has suggested a number of potential avenues outside the conventional boundaries of entrepreneurship research which can help inform future research activities and it is hoped that other researchers will continue to interrogate other fields with creative potential.

Take in Figure 2

Increasing globalisation effects drive the need for greater creativity within a marketplace with increased levels of opportunity but also with heightened levels of competition. A creative entrepreneurial response represents the best chance of capitalising on these opportunities. This paper has shown that there is a clear link between creativity, entrepreneurship and related areas such as innovation in terms of establishing competitive advantage for the organisation. It should also be noted that profitability should be measured not just in monetary terms, but also in relation to dimensions such as social wealth or capital. An entrepreneurial contribution to creativity can assist in breaking the rules of convention, or at the very least, stretching

their boundaries in order to achieve both incremental and ground breaking success. Entrepreneurial creativity can be informed by a wide variety of disciplines, rather than just within the business world; for example, this paper has shown how interrogation of domains such as the art world, biography and psychology can inform understanding. So it is important to adopt a more holistic perspective when attempting to grasp the essence of entrepreneurial creativity, rather than attempt to view it solely as a process led phenomenon.

Entrepreneurship matches the flexible, exploratory paths of creative discovery where solutions do not necessarily need to be complex. Entrepreneurial factors overlap with many creative characteristics such as curiosity, self confidence, high energy levels, risk taking and vision. Entrepreneurial creativity impacts throughout the lifetime of the entrepreneur, and not just during the span of the business. Success is stimulated through the use of juxtapositioning and bisociations of ideas from diverse and often unrelated domains which then impact on decision making. Although there are undoubtedly a number of extrinsic motivational factors which affect attitudes towards creativity, entrepreneurial creativity is largely driven by intrinsic dimensions concerning the tasks being performed in the enterprise. Entrepreneurial creativity should be concerned with the continual creation of alternative solutions to problem solving and identification of new opportunities. It should also be seen as a competitive strength and portfolio of competencies. Adopting an entrepreneurial approach to creativity also helps to deal with uncertainty and ambiguity in decision making and within the external environment. Rather than ignoring these dimensions, it acts to embrace this unsureness as part of the everyday entrepreneurial climate.

In terms of future research, if we are to improve our understanding of creativity from an entrepreneurship perspective, we need to consider the adoption of alternative methodologies which are capable of uncovering previously undiscovered data. Blackburn and Kovalainen (2009) note the reservations by many researchers to adopt approaches which depart from both functionalist paradigms and quantitative approaches and yet by researching creativity in entrepreneurship, this should serve to stimulate interest in other methodological avenues. The continued utilisation of common techniques such as the survey and in-depth interviews have their uses but researching creativity must involve much more than just asking set questions or exploring a range of themes. Creativity data collected using a biographical approach, for example, can be triangulated with the more usual approaches in order to check for stability in the constructs being analysed and in terms of generating more holistic and insightful understandings (Young 1988; Roberts 2002; Fillis 2007a). Biographical insight can be used to construct the longitudinal story of the entrepreneur and the organisation while also identifying the impact of social and historical factors on shaping creativity.

Creativity is potentially most useful within the smaller enterprise as a way of overcoming barriers to acquiring resources and in terms of deriving alternative and lower cost solutions to solving problems. Many of these organisations have specialist skills relating to their core products and services but do not have the expertise or the time to develop formal ways of generating future strategies as occurs in the larger organisation. This being the case, understanding creativity as leverage to lower cost but no less useful solutions is crucial to future economic success. Future research should embrace more innovative approaches to its understanding which sometimes

conflict with more mainstream methodological approaches. It is this conflict and the creation of juxtapositions between previously unrelated fields which can result in new insight and more valuable directions of enquiry.

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Figure 1: Creativity in Entrepreneurship

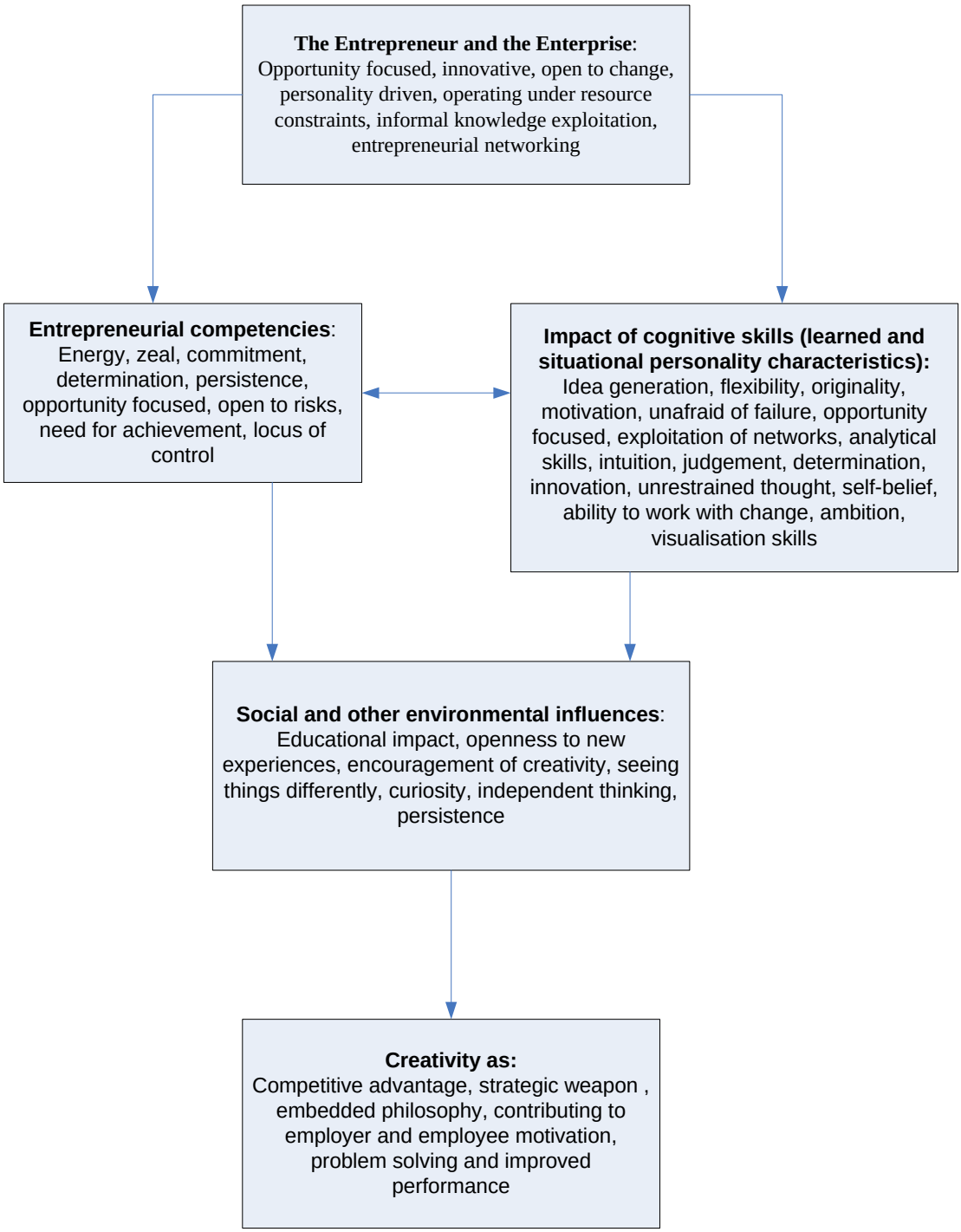

Figure 2: Conceptualisation of Future Research Agenda in Creative Entrepreneurship