

Entrepreneurial social capital research: resolving the structure and agency dualism

Purpose – While there is a large volume of entrepreneurial social capital research, the philosophical assumptions have received limited attention. We therefore review and classify entrepreneurial social capital studies according to the following approaches – objectivist (positivist-realist, structuralist) and subjectivist (social constructionist). There is a neglect of structure and agency, and we encourage a critical realist approach that permits an understanding of observable network structure, constraint-order and human agency as a dynamic system.

Design/Methodology/Approach – The ontological and epistemological assumptions, and associated strengths and weaknesses of objectivist (positivist-realist, structuralist) and subjectivist (social constructionist) entrepreneurial social capital studies are discussed. The case for a more progressive critical realist approach is developed.

Findings – We demonstrate that objectivist (positivist-realist, structuralist) research with findings bereft of situated meaning and agency dominates. The emergence of subjectivist research – narratively examining different network situations from the perspective of those embedded in networks – is an emerging and competing approach. This dualism is unlikely to comprehensively understand the complex system level properties of social capital. Future research should adopt critical realism and fuse: objective data to demonstrate the material aspects of network structures and what structural social capital exists in particular settings; and subjective data that enhances an understanding of situated meaning, agency and intention in a network.

Originality – This paper contributes a review of entrepreneurial social capital research and philosophical foundations. The development of a critical realist approach to understanding social capital gestation permits a system level analysis of network structure influencing conduct, and agency.

Keywords – Entrepreneurialism, social capital, ontology, epistemology, critical realism

Introduction

Since the pioneering work of Jacobs (1965) in urban studies there has been wide recognition of the importance of social capital in creating dynamic communities. Coleman (1988) confirmed that social capital contributed to the development of relationships that encompassed shared values *via* processes of co-operation that helped create 'civic trust'. While Putnam (2000) claimed that the lack of social capital had contributed to the decline of community spirit in the United States. His work was so influential that he was invited to act as an advisor to US President Bill Clinton. With regards to entrepreneurship, social capital is based on the way in which those starting or managing small businesses must develop and maintain relationships with a wide range of social actors. Reciprocal relationships based on mutual trust, obligations and expectations are central to the creation of social capital.

Nahapiet and Ghoshal (1998) made a significant advance in understanding the nature of social capital by suggesting that there are three underlying dimensions: structural, relational and cognitive. Structural social capital refers to the nature of the entrepreneur's social network based on size, density and diversity. Those entrepreneurs with small, closed homogeneous social networks in which all actors are well-known to each other benefit from sharing knowledge and information. Norms associated with trust, reciprocity, mutual obligations and future expectations are more likely to be created within closed networks. However, there are substantial disadvantages in terms of providing access to social capital because closed networks have finite resources. Entrepreneurs who have larger, more diverse and heterogeneous social networks will be able to access to a much wider array of social capital resources. The disadvantage in this case is that it may be more difficult to access those resources because actors do not have the same level of obligations nor can individuals be sure about the future expectations of others in their network.

The second dimension, relational social capital, focuses attention on the norms of

trust, reciprocity, mutual obligations and expectations that influence the behaviours of those belonging to a particular social network. Social capital is an intangible asset, which relies on goodwill between members of a network to ensure that there are effective flows of knowledge including suggestions about new ideas or new market opportunities. Lack of trust between network actors means that there will not be a basis for sharing valuable information about, for example, new business opportunities or improving internal efficiency by making better use of social media.

Cognitive social capital, the third dimension identified by Nahapiet and Ghoshal (1998), has received less attention than structural or relational social capital (see Lee and Jones, 2008). Cognitive social capital draws on the idea that actors build relationships by communicating *via* stories and narratives. Effective communication means that actors must have a ‘shared language’ based on understanding the codes which govern conversations. Clearly becoming an entrepreneur means acquiring the appropriate language in which to converse with other entrepreneurs and resource providers. At a basic level, that might mean that the entrepreneur develops an understanding of the differences between debt and equity funding. Enhancing cognitive social capital skills means that entrepreneurs learn to communicate with other entrepreneurs as well as a wide-range of stakeholders including customers, competitors, suppliers and resource-providers (De Carolis and Saporito 2006).

In his book *‘Bowling Alone’*, Putnam (2000:26) challenges social capital researchers to adopt progressive research approaches and methods: ‘if we are to explain how our society is like or unlike our parents, we must make imperfect inferences from all the evidence we can find’. Whittaker and Banwell (2002:253) urge sociologists studying social capital to refer to their philosophical assumptions and: ‘epistemological basis...we suggest they display a blurring between structure and agency’. The need for ecological-systems level research, ethno methodologies and mixed-methods that permits an understanding of social structure

and agency in networks has been reinforced in sociology, political science, health and community studies (Archer, 1995; Bourdieu, 1990; Emirbayer and Goodwin, 1994; Kawachi et al, 2008; Onyx and Bullen, 2000; Patulny and Svendsen, 2007; Portes and Landolt, 2000; Putnam, 2000; Putnam et al, 2003). In contrast, social capital theorists in economics, geography, business and management tend to: ‘campaign for scientific respectability...an analytical concern...might be seen as interfering with the goal of finding statistically significant effects’ (Staber, 2007:518). There is also a need to examine how network structural mechanisms ‘facilitate and constrain’ action, and ‘how individuals make choices’ and act as change agents in networks (Kilduff and Brass, 2010:336). There is a sustained debate regarding the most appropriate and valid ways to collect and analyse data in the general entrepreneurship literature (Alvarez and Barney, 2010; Grant and Perren, 2002; Jennings et al, 2005; Lindgren and Packendorff, 2009; Mole and Mole, 2010; Molina-Azorin et al, 2012; Pittaway, 2005; Smith et al, 2013; Watson, 2013). However, studies addressing the philosophical assumptions of entrepreneurial social capital and network research, and the blurring between structure and agency are limited (Jack, 2010).

The purpose of this paper is twofold. First, we review and classify exemplar entrepreneurial social capital studies according to the following approaches – objectivist (positivist-realist, structuralist) and subjectivist (social constructionist). In a recent study of entrepreneurship and network topology, Jack (2010) reviews 58 articles and shows that: 40(68.9%) were quantitative; 15(25.8%) were qualitative; and only 3(5.1%) were mixed methods. We intend to demonstrate that objectivist approaches (positivist-realist, structuralist), which are bereft of situational meaning and agency, dominate studies of entrepreneurial social capital. We also intend to demonstrate the emergence of subjectivist (social constructionist) studies as an alternative to the dominant objectivist research approaches. A second purpose is to develop a critical realist approach to bridge this divide

(Sayer, 2000). We therefore ‘embark on a new voyage’ of discovery and exemplify the need to situate an entrepreneurs meaning in the context of observable network structures (Kilduff et al, 2006:1044). Situated meaning and subjective data permits an understanding of network structural constraint-order, and human agency. Mole and Mole (2010:236) recently stress: ‘entrepreneurship is the study of the interplay between the structures of a society and the agents within it’. Furthermore, Jack (2010:121-122) points out that there is a need for: ‘multi-method studies providing richer insights and better understanding about the role of networks in entrepreneurship’.

We begin with a background review of dualisms, philosophical approaches and paradigms in entrepreneurship research. Then we proceed to review and classify exemplar entrepreneurial social capital studies according to the following approaches – objectivist (positivist-realist, structuralist) and subjectivist (social constructionist). A discussion then follows, in which we offer a more progressive critical realist approach. Finally, our concluding thoughts are offered on the future of social capital research.

Dualisms in Entrepreneurship Research

Similar to other disciplines within the broad field of management and organizational studies (MOS) the study of entrepreneurship is plagued by dualisms. Perhaps the most obvious and longstanding is the distinction between entrepreneurs and non-entrepreneurs (Ramoglou, 2013). Attempts to identify the distinguishing features have sustained an extensive research tradition in entrepreneurship. Examples range from McClelland’s (1961) ideas about psychological attributes such as the need for achievement to more recent work engaged in the (fruitless) search for an entrepreneurial gene (Nicolaou et al, 2008; Shane, 2003; Shane et al, 2010). Other recent dualisms include the differences between commercial (for profit) entrepreneurs and social entrepreneurs (Doherty et al, 2014). Of particular

concern to policy-makers and politicians interested in stimulating economic growth are differences between necessity-based and opportunity-based entrepreneurship (Block and Sandner, 2009); or subsistence and transformative entrepreneurship (He and Chi, 2013). The former group are generally associated with less developed economies while the latter group are more usually based in developed economies such as the US (Valliere and Peterson, 2009). A related concept is the difference between entrepreneurs operating in the formal and informal sectors (Williams and Nadin, 2011, 2013). Similarly, the search for higher levels of economic performance has prompted considerable interest in the distinction between growth-oriented businesses, known as ‘gazelles’ (Stangler, 2010), and the majority of entrepreneurs who do not intend to grow their businesses to any significant scale (Jennings and Beaver, 1997; Mason, 2010; Mason et al, 2011). Much of this interest was originally stimulated by Birch (1979, 1987) who suggested that 3% of small firms were responsible for creating 70% of net new jobs in the US.

Another topic which has received a considerable amount of attention over the last 15 years has been the distinction between male and female entrepreneurs. Research in this tradition has focused on the difficulty female entrepreneurs have in accessing capital (Carter et al, 2003) or the fact that males and females tend to have very different social networks (Jones and Jayawarna, 2010). In the latter case, female networks are typically dominated by strong ties (family and friends) with limited links to more professional networks which provide access to a wider range of resources (Jayawarna et al., 2012). From a more theoretical perspective, there is a clear difference between those who subscribe to the idea that ‘alert’ entrepreneurs are able to identify new opportunities which have an objective reality (Shane, 2003; Shane and Venkataraman, 2000) and the opposing view that opportunities are created (Sarasvathy, 2001) rather than discovered. This is summarized in distinctions between the ‘causal’ school (Shane, 2000) and those who subscribe to the

effectual school of entrepreneurship (Read and Sarasvathy, 2005; Sarasvathy, 2001; 2004). To some extent these differences are summarised by one of the most long-standing dualisms in social science: agency and structure (Bourdieu, 1977; Giddens, 1984). A number of studies have attempted to reconcile the agency-structure dichotomy in studies of entrepreneurship and the management of small firms (Ekinsmyth, 2013; Gorton, 2000; Jones, 2003; Karatas-Ozkan, 2011). Venkataraman and Sarasvathy (2005) draw on Wiener's (1993) Shakespearean metaphor of Romeo and Juliet to illustrate the interlinking of agency (Romeo) and structure/institutions (the balcony). The authors suggest that strategic management research is 'all balcony and no Romeo' while entrepreneurship research is 'all Romeo and no balcony' (Venkataraman and Sarasvathy, 2005: 652). In other words, researchers have paid too much attention to the entrepreneur at the expense of the institutional context. Venkataraman and Sarasvathy (2005) suggest that an effectuation approach helps to reconcile the agency-structure dualism by stressing the interaction of the entrepreneur and their institutional environment. According to Ramoglou (2013) Gartner's (1989) critique of the trait-based approach led to much greater focus on the situational (institutional) conditions that encourage entrepreneurs and entrepreneurship. However, Ramoglou (2013) goes on to argue that there has been a resurgence of interest in the nature of the entrepreneur as a result of Shane and Venkataraman's (2000) focus on the individual-opportunity nexus (see, for example, Nicolaou et al, 2008; Shane, 2003; Shane et al, 2010). The balcony has been rejected in favour of renewed interest in Romeo's activities.

From a research perspective the most obvious dualism is based on the distinction between qualitative and quantitative approaches to data collection. This is also linked to another well-known dualism – the apparently different research traditions associated with Europe and the US (Down, 2013). Davidsson (2013) suggests that, in fact, both research traditions are far more heterogeneous than the simple dichotomy that sees US

entrepreneurship dominated by quantitative approaches and European approaches being largely qualitative. Burrell and Morgan (1979) drew on Kuhn's (1962) highly-influential work to argue that all management research could be divided into four paradigms based on two dimensions. The horizontal axis is based on assumptions about the nature of science (epistemology and ontology) which is labelled the subjective-objective dimension. The vertical axis is grounded on assumptions about the nature of society in terms of a regulation-radical change dimension. Drawing on these two dimensions, Burrell and Morgan (1979) identified four distinct 'sociological' paradigms: functionalist, interpretive, radical humanist and radical structuralist (see Hassard and Cox, 2013; Shepherd and Challenger, 2013). Rousseau et al (2008) point out that alternative views of science are based on variations in ontology and epistemology. Ontological concerns are related to ideas about the extent to which the world has an objective reality beyond an individual's subjective perceptions. Epistemology concerns are related to assumptions about the nature of knowledge; in particular, the extent to which it is possible to obtain objective data by which to 'measure' or quantify social phenomena. Therefore, it is possible to summarise these deep-seated philosophical differences as variations between constructionism and positivism with a mid-point occupied by critical realism (Al-Amoudi and Willmott, 2011).

Positivist oriented researchers accept that the collection of empirical evidence leads to the verification of observable laws. To simplify, positivists apply the principles of natural science to the study of social phenomena. As pointed out by Smith *et al* (2013:366), entrepreneurship is largely dominated by quantitative approaches to data collection based on large-scale mail surveys. In contrast, those who adopt a constructionist perspective reject the idea of a universal reality which is separate from an individual's perceptions. Whereas a positivist science is based on quantitative techniques, constructionists generally adopt qualitative approaches to research adopt approaches including interviews, observation and

ethnography (Cope, 2011). Rather than establishing the ‘truth’ through the collection of objective data, constructionists are much more concerned with improving the understanding of human experiences. Based on their literature review, Blackburn and Kovalainen (2009) suggest that entrepreneurship researchers are beginning to produce high-quality qualitative analyses. Jones and Macpherson (2014) also note that qualitative studies of entrepreneurship have been published in leading mainstream business and management journals (see Clarke, 2011; Zott and Huy, 2007). However, Smith *et al* (2013) argue that while qualitative research in entrepreneurship is based on a ‘contextualist, phenomenological approach’ – ‘these philosophical underpinnings are left inchoate, implicit and tacit’. Increasingly, critical realist approaches have been developed in an attempt to span the ‘irreconcilable’ gap between positivism and social construction (Lee and Jones, 2008; Menzies, 2012). Critical realism is based on the view that there is an objective reality – but it is mediated by individual perceptions and cognitions (Fleetwood and Ackroyd, 2004). Research approaches in the critical realist tradition generally adopt mixed research methods which attempt to combine qualitative and quantitative evidence.

In this paper we examine a particular dualism that has become increasingly apparent in recent years. As indicated above, much research has concentrated on identifying distinctive entrepreneurial attributes such as their traits (McClelland, 1961) or genetic make-up (Nicolaou et al, 2008; Shane, 2003; Shane et al, 2010). According to Conway and Jones (2012) this focus on the entrepreneur as a ‘heroic’ individual has been increasingly challenged by those who stress the importance of entrepreneurial networks (Birley, 1985). Social networks are regarded as essential in providing access to a wide range of resources that are crucial for establishing new businesses (Aldrich et al, 1987; Cope et al, 2007). This entrepreneur-social network dichotomy has resulted in a considerable amount of research since Birley’s (1985) seminal paper. The field of entrepreneurial network research is

criticised for demonstrating an overreliance on objectivist quantitative methods (Coviello, 2005; Hoang and Antoncic, 2003; Jack, 2010; O'Donnell and Cummins, 1999). The concept of social capital is strongly related to the social network perspective and this will be the focus of the remainder of this paper.

Entrepreneurial Social Capital and the Dualist Divide

Above, we noted that Burrell and Morgan (1979) map four paradigms in organisation studies according to two overarching approaches: objectivist (functionalist, structuralist paradigms); and subjectivist (interpretivist, radical humanist paradigms). Similarly, McKelvey (1997:354) suggests that there are 'just two' competing sides and associated paradigms: objectivists adopting positivist and scientific realist testability criterion; and subjectivists adopting interpretation, narrative description and social construction (also see Morgan and Smircich, 1980). We proceed to review the ontology, epistemology, strengths and weaknesses of objectivist (positivist-realist, structuralist) and subjectivist (social constructionist) entrepreneurial social capital research.

Positivist-realist. The ontological position of positivist social research refers to reality as observable patterns of immutable regularity (Gill and Johnson, 2002). Positivist researchers argue that social phenomena can be captured by accurate observation and exhibit law-like properties (Burrell and Morgan, 1979). As such, positivists are concerned with making claims about the generalisability of results in a population (Benton and Craib, 2001; Halfpenny, 1982; Sayer, 2000). Furthermore, McKelvey (1997:356) suggests that scientific realism is more appropriate in organisation science as: 'there is no single universal truth – only the possibility for corroboration in a complex world with many different entities'. Popper (1979) argued that human and social behaviour can only be imperfectly observed and corroborated. Many social capital theorists represent findings as a 'broad umbrella

concept...plausible predications' and 'universalistic' (Staber, 2007:517-518).

The epistemological position of positivist-realist social research refers to knowledge derived from large-scale surveys, measurement items and constructs (Burrell and Morgan, 1979; McKelvey, 1997). In addition, hypotheses and the statistical testing of relationships between variables provide objectively derived and value-free results (Gill and Johnson, 2002; Blaikie, 1993). Application of the scientific method and outputs in the form of correlations, probability distributions and regression models facilitates generalisable results (McKelvey, 1997). The confirmation or rejection of hypotheses represents a valid body of knowledge and enables researchers to corroborate their results.

Theorists and public policy-makers have an interest in the role and measurement of social capital (OECD, 2001; Staber, 2007). The UK Office for National Statistics ONS 'Social Capital Question Bank' is an exemplar of systematic observation. A strength of large randomised data sets is that they facilitate findings based on many observations, and reduce bias and anecdotal evidence (Gill and Johnson, 2002). Many entrepreneurial researchers develop robust large-scale surveys and view social capital as a process that can be measured (Dakhli and DeClercq, 2004; DeCarolis et al, 2009; Manolova et al, 2007; Molina-Morales and Martinez-Fernandez, 2006, 2010; Maula et al, 2003; Ozgen and Baron, 2007; Steinfield et al, 2010; Wu et al, 2008). In their seminal large-scale survey, Davidsson and Honig (2003) demonstrate the positive influence of business networks, start-up teams, family and friends on screening opportunities. Carter et al (2003) also demonstrate the positive influence of network diversity and size on women entrepreneurs' bootstrapping.

Recent studies also recode and reanalyse secondary data from the Panel Survey of Entrepreneurial Dynamics PSED, Global Entrepreneurship Monitor GEM and World Values Surveys WVS, and demonstrate the importance of social capital for nascent entrepreneurs (Kwon and Arenius, 2010; Liao and Welsch, 2005; Patel and Fiet, 2009). Another strength of

conventional large-scale surveys is that standardised statistical procedures and regression models restrict researcher bias (McKelvey, 1997). Thus, Landry et al (2002) demonstrate a significant and positive relationship between entrepreneurs participating in business meetings, associations and networks and their likelihood to innovate. Structural equation modelling also reliably predicts the direct and indirect effects of social capital variables (Fang et al, 2010; Parra-Requena et al, 2010).

Positivist-realist research has limitations and specifically ignores situated meaning in favour of reporting reductionist results¹. This restricts the relevance of findings for entrepreneurs, theory development and limits findings to ‘low level abstraction...tractable issues’ (Staber, 2007:518). For example, Liao and Welsch (2005) demonstrate through structural equation modelling that a shared vision for getting admiration and being well-respected (cognitive), is positively and directly related to local governments, banks and investors providing support (relational). Subjective insights are needed to understand how shared language enables such relational norms and governance. Parra-Requena et al (2010) also demonstrate that shared goals (ambitions, skills) and shared culture (practices, operations) are directly related to knowledge acquisition. However, subjective data may be able to advance an understanding of specific micro-practices, routines, communication attitudes, operations and ambitions that relate to knowledge. Regression coefficients also vary in terms of the direction of their statistical significance. As such, Carter et al (2003) demonstrate through regression models that contact with foundational advisors and professional advisors is significantly and negatively related to women entrepreneurs raising personal sources of business investment. While Pirolo and Presutti (2010), in their novel longitudinal study, demonstrate the significant and negative impact of strong social capital on

¹ We also identify the problem of multiple and competing measurement items which makes it difficult to select the most feasible and appropriate to test the effects of social capital. We consider this specific limitation problematic for face validity and reliability. While this limitation may lead to a fragmented body of knowledge, it is not largely related to the competing assumptions of data representations.

innovation performance. These significant and negative associations are important, and imply a complex process that requires subjective insights and thick description (Staber, 2007).

When variables are not significantly associated, this suggests that there are unobserved-underlying conditions, actions and agency that need further explanation (Ackroyd and Fleetwood, 2000; Easton, 2000; Sayer, 2000). Therefore, subjective insights can help understand the different meanings agents assign to actions or variables that are not statistically significant. For example, Landry et al (2002) demonstrate that trusting relations are not related to innovation and this contrasts the assertions of Adler (2001) and Adler and Kwon (2002). This suggests that industry, culture or agency may encourage actors to assign different meanings to trust. While Molina-Morales and Martinez-Fernandez (2006) demonstrate that: trust was positively and significantly related to small firm innovation in the textiles, ceramics and leather industries; trust was not significantly related to small firm innovation in the furniture and food industry. In addition, they demonstrate that the statistical sign was negative in the furniture and food industry. This non-significant finding is interesting, complex and only likely to be understood through situated meaning in the context of industry dynamics.

A summary of positivist-realist entrepreneurial social capital research and ontology, epistemology, strengths and weaknesses is provided in Table 1.

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Structuralist. The structuralist paradigm in social capital research examines the ‘configuration of ties in the network’ and ‘is a structural, topological approach’ (Borgatti and Foster, 2003:1002). A structuralist ontology suggests networks induce rules that are fixed and universal – irrespective of the personalities of individuals taking up each position (Schroeder, 2005). Network ties are viewed as ‘prisms’ or ‘girders’ and assumed to induce certain types of rational behaviour so actors can maximise certain types of resources (Borgatti and Foster,

2003; Kilduff and Brass, 2010). The primary assumption is that: ‘beneath the complexity of social networks, there are enduring patterns of clustering, connectivity and centralisation’ (Kilduff and Brass, 2010:319). Network structures provide boundary conditions for universal, routines and rule driven actions (Emirbayer and Goodwin, 1994; Wellman and Berkowitz, 1988). Thus, distinct network structures influence behaviour. For example, cohesive and dense networks uphold communitarian values, and sparse open networks and structural holes enable calculative self-pursuit (Ahuja, 2000; Burt, 1992; Coleman, 1988; Gargiulo and Benassi, 2000; Rodan, 2010). As Burt (1992:5) states, actors are ‘structurally induced’.

The epistemological position of structuralist research represents human actors as ‘nodes’ in a network structure (Scott, 2000). These data representations have been criticised for being deterministic and ‘atomistic’ as human beings are very different to atoms and interchangeable particles in the atmosphere (Jack, 2010:121). Social network data are typically derived from questionnaires, and sometimes observations through ethnomethodology and documentary research (Wasserman and Faust, 1994). Free recall or fixed choice name generation questionnaires are used to elicit an individual’s (ego’s) connections to different people (alters) (Adams et al, 2006; McEvily and Zaheer, 1999). Roster questionnaires are also used and request that an actor indicates the extent of interaction with other actors on a list (Stam and Elfring, 2008). Position generators are another technique to aid analysis of network heterogeneity and different occupations (Batjargal, 2003). Social network methodologists use the power of mathematical formula and graph theory to understand the structures inherent within network data (Wasserman and Faust, 1994). Many structuralist researchers calculate network properties (density, centrality) through software packages (UCINET, Pajek) and recode for regression analyses.

The structuralist approach is popular in entrepreneurial social capital research and has developed many theoretical insights (Barbieri, 2003; Batjargal, 2003, 2007; McEvily and

Zaheer, 1999; Runyan et al, 2006²; Schutjens and Volker, 2010; Stam and Elfring, 2008; Stam, 2010; Walker et al, 1997). The strengths of this approach are robust results based on large primary datasets of whole network populations (Borgatti and Foster, 2003; Kilduff and Tsai, 2003; Wasserman and Faust, 1994). For example, Stam (2010) shows from a roster questionnaire and secondary dataset of industry event participation, that Dutch knowledge-driven entrepreneurs ‘event heterogeneity’ and ‘event bridging’ is significantly and positively related to brokerage opportunities. Stam and Elfring (2008) show from a roster questionnaire that centrality is a poor predictor of entrepreneurial orientation and performance, and that bridging is more useful. There are also robust results derived from very large secondary datasets alone (Ahuja, 2000; Ferriani et al, 2009). In a recent study, Feldman and Zoller (2012) demonstrate from secondary data that high density and cohesion – in Silicon Valley, Boston, San Diego and Seattle – encourages collaboration opportunities. They argue that low density and cohesion leads to reduced collaboration. In the absence of whole network data, egocentric name generation enables theorists to examine the benefits of: ‘an ego-network with a certain structure’ (Borgatti and Foster, 2003:1004). McEvily and Zaheer (1999) asked executives in micro and small US Midwestern manufacturing firms to list 5 important alters (actors) and indicate whether they knew each other. Non-redundancy was positively and significantly related to pollution prevention and competitive scanning capabilities.

Although structuralist studies are common, we note issues related to a lack of explanation for agency, culture and unobserved effects (Emirbayer and Goodwin, 1994). Structuralists are criticised for pursuing explanations that are deterministic and reduce individuals to statistically significant properties of network configuration (Kilduff et al, 2006; Kilduff and Brass, 2010). Thus, structuralist researchers: ‘do not describe surface expressions...they seek something more systematic and ambitious; a clarification of the rules

² Runyan et al’s (2006) study has similarities to positivist-realist research as there is some effort to measure relational reciprocity and shared vision. However, a major contribution of their study is to examine network density and homophily.

that constitute the systems of meaning and beyond this; the rules that make all systems of that type' (Schroeder, 2005:244-245). The effects of structural holes differ across contexts, and such differences are poorly understood (Kilduff and Brass, 2010). For example, Kirkels and Duysters (2010) collect name generator data from specialist design entrepreneurs in the Netherlands and demonstrate that: ties with non-profit consultants are related to brokerage; ties with consultants, suppliers, knowledge suppliers and distributors are not related to brokerage. These findings are insightful but lack of data on relationships implies the presence of an unobserved effect such as agency, emotions or culture (Kilduff and Tsai, 2003; Kilduff and Brass, 2010; Kilduff et al, 2010). The effects of cohesion and density also differ across contexts. Ferriani et al (2009) demonstrate that structural holes do not enhance box office returns for producers in the Hollywood film industry, and that centrality is more likely to increase returns. In contrast, Stam and Elfring (2008) argue that centrality was significantly and negatively related to knowledge-driven entrepreneurs' performance. These different effects are insightful, and are only likely to be fully explained through situated meaning in the context of occupational classification and industry context.

Structuralists seek to clarify the underlying structures that induce conventions and dedicate limited attention to meaning, action and behaviour in networks (Schroeder, 2005). This structural determinism implies a 'transmission process' and rational action (Borgatti and Foster, 2003:1004). As Kilduff et al (2006:1035) further suggest: 'actors tend to be represented as pawns subject to system forces'. More recently, Kilduff and Brass (2010:332) argue that structuralist social capital research: 'has tended to pursue a Durkheimian agenda...individual actors, to the extent that they are discussed at all, have tended to be treated as residues of social structure...for example, people who are constrained within relatively closed networks develop different personalities from those who experience relatively open networks'. The benefits of open networks and structural holes are highly

researched – how actors are constrained and develop cognition in open networks is understudied (Afuah, 2013; Kilduff et al, 2006). As Batjargal (2007) demonstrates, Chinese internet entrepreneurs with Western experience were able to exploit structural holes and enhance firm survival. This important and novel finding lacks situated meaning or an explanation of how cognition is influenced in Western settings.

A summary of structuralist entrepreneurial social capital research and ontology, epistemology, strengths and weaknesses is provided in Table 2.

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Social Constructionist. The social constructionist paradigm is associated with the belief that human behaviour has an ‘internal logic’ and this necessitates a need for understanding the subjective meaning individuals attach to their behaviour and surroundings (Gill and Johnson, 2002; Guba, 1990). It is directly opposed to positivist-realist and structuralist research. In this sense, social constructionist research rejects the view that a concrete and external reality exists independent of human consciousness and experience (Gergen, 1999; Gustavsson, 2001). Researchers are interested in the internal logic of individuals and to: ‘understand (verstehen) how people make sense of their world, with human action being conceived as purposeful and meaningful’ (Gill and Johnson, 2002: 168). As such, and unlike ‘animals’ and natural ‘physical objects’, humans attach meaning to the objects surrounding them and events (Gill and Johnson, 2002). As Rocco et al (2003:21) point out, another: ‘purist perspective is associated with the constructionists or interpretivists. They believe reality to be socially constructed and only knowable from multiple and subjective points of view. The knower and known are seen as inseparable’. Thus, individuals are considered agentic and can imagine new possibilities (Chia, 2000; Weick, 1989).

The epistemological bases of social constructionism are narrative and descriptive accounts (Guba, 1990). Data and knowledge representations are based on detailed accounts of

written-spoken word and ideographic symbolic action (Gergen, 1999; Gill and Johnson, 2002; Shotter, 1993). As Cunliffe (2001) suggests, managers' everyday talk is an entry point into their multiple realities and social constructions in an everyday setting. There is a focus on: 'detailed, rich, and thick (emphatic) description written directly and somewhat informally' (Johnson and Onwuegbuzie, 2004:14). This thick descriptive approach to analyses contrasts the formal and passive reporting of positivist-realist and structuralist research. It is clear that social constructionists have very few concerns about objective or value-free 'testability', and instead, prefer to immerse themselves in the rich data (McKelvey, 1997).

Thick description is an important strength of social constructionism and encourages researchers to situate the meaning of entrepreneurs in their everyday social interactions (Gill and Johnson, 2002; Johnson and Onwuegbuzie, 2004). Detailed and thick description facilitates an understanding of specific contextual, spatial and cultural factors that relate to entrepreneurial social capital 'instead of glossing over' them, as much positivist-realist and structuralist research does (McKelvey, 1997:354). Subjective research demonstrates the unwillingness or inability of migrant entrepreneurs to develop bridging networks (Ram et al, 2008; Ryan et al, 2008), and the resource-poor bonding networks of business founders with lower socio-economic backgrounds (Anderson and Miller, 2003). In addition, subjective research demonstrates the parochial preferences and kinship values that moderate the small networks of African-Tanzanian micro-traders (Jenssen and Kristiansen, 2004; Oyhus, 2003). There are even recent efforts to provide substantive insights based on anthropological design (Foley and O'Connor, 2013; Light and Dana, 2013).

Another strength of social constructionist research is a focus on 'how and why' entrepreneurs socially interact, relational norms and structures of communication in everyday settings (Lindgren and Packendorff, 2009; Reimer et al, 2008). As Gill and Johnson

(2002:171) suggest, situated meaning demonstrates a commitment to understanding: ‘micro-analyses of individual or group action’. Emerging entrepreneurial research demonstrates the influence of cognitive social capital and everyday use of technical language competencies, straight talk and open communication (Anderson et al, 2007; Bowey and Easton, 2007; Westerlund and Svahn, 2008). Relational social capital research draws attention to diverse norms such as trust, reciprocity, favours, expectations and security (Anderson and Jack, 2002; Butler and Purchase, 2008; Jonsson and Lindbergh, 2011; Ramstrom, 2008). Recent studies show the complex evolution of relationships, sequences of tie decay and growth stages (Partanen et al, 2008; Prashantham and Dhanaraj, 2010).

The social constructionist paradigm also has limitations. According to Gill and Johnson (2002:181), discursive and narrative inquiry represents: ‘a move towards idealism’. That is, ‘strong’ social constructionist studies reporting findings bereft of quotations or in-situ field notes lack evidence and are difficult to penetrate (Sayer, 2000). And Sayer (2000:176) suggests, entirely narrative studies with no data: ‘licenses dogmatism’. For example, Reimer et al’s (2008) ethnographic case analysis of a Japanese community of small herb cultivators is rich, insightful and demonstrates the role of norms in communitarian and market-bureaucratic social relations. Oyhus (2003) examines cohesion and kinship influencing the behaviour of three Tanzanian entrepreneurs and three Indonesian entrepreneurs. However, these two studies do not integrate significant quotes or in-situ field notes, and therefore, the findings are extra-discursive (Sayer, 2000:92-97). Furthermore, Jenssen and Kristiansen (2004) compare and contrast two African entrepreneurs’ networks and resources. They describe how ‘Ally’ developed low cohesion and density, and ‘Akberali’ developed high cohesion and density. There are a very small number of insightful quotes included and more examples would have enhanced the validity of their findings.

The significance of network structural mechanisms that constrain entrepreneurs

embedded actions are often obscured in narrative data. As Sayer (2000) notes, social forces and structures have real power, influence processes and determine action. Narrative and descriptive accounts, even with numerous quotations, can sometimes neglect the salient effects of structure over action and it is easy to overlook: ‘the background law forest because of the idiosyncratic trees...interpretivists place the body so high that only the details are thought to be of interest’ (McKelvey, 1997:364). For example, Salvato and Melin (2008) tabulate findings and integrate quotations related to bonding cohesiveness and family controlled Italian wineries – Borsci, Frescobaldi, Matasci and Tamborini. The data demonstrate that high family cohesion leads to high trust, and low family cohesion leads to low trust and reduced motivation. The integration of graphical maps or descriptive density statistics would make it easier to compare the network cohesion and density across the four cases and links to norms. Furthermore, Butler and Purchase (2008), in their novel study of eight Russian entrepreneurs, demonstrate through tabulated quotations that closeness centrality relates to trust, favours and common ground. They suggest that social capital dimensions are interrelated. However, it might be beneficial to comprehensively observe the composition of ‘close and central’ actors, depicting the network boundary, and then explore the evolving relational and cognitive themes substantively in this boundary.

A summary of social constructionist entrepreneurial social capital research and ontology, epistemology, strengths and weaknesses is provided in Table 3.

-----Insert Table 3 here-----

Discussion

As McKelvey (1997:352) points out: ‘even a hermit in bleakest Antarctica must be aware of the organization science paradigm war by now’. Despite the burgeoning

entrepreneurial social capital literature (Stam et al, 2013), the philosophical and methodological foundations have not been examined in detail. We demonstrate that positivist-realist and structuralist entrepreneurial social capital research is predominant based on: 'rational choice models of individual behaviour' (Kilduff and Brass, 2010:336). There are predictable, measurable and fixed laws influencing the actions and, hence, what network actors can achieve (McKelvey, 1997). Positivist-realist and structuralist studies are able to generalize tractable relationships 'but they are unable to tap the specifics of structural context', and varied everyday order and conduct (Berry et al, 2004:548). The emerging and competing social constructionist approach (Gergen, 1999; Guba, 1990) reflects findings based on the discursive reporting of entrepreneurs network experiences, it suggests that knowledge and network practices are socially constructed. There are even 'strong' social constructionist (Sayer, 2000) entrepreneurial social capital studies that are extra-discursive and based entirely on narrative storytelling with no quotations or field notes (Oyhus, 2003; Reimer et al, 2008). This leaves little room for measuring and observing in precise ways the boundaries of network structures and resource flows. Social constructionist and humanistic studies: 'often mine these contextual complexities, but they are less able to substantiate the extended effects of structural relations among multiple actors' (Berry et al, 2004:548).

This dualist divide problem, incommensurability and rigid assumptions about data hinders the understanding of entrepreneurial social capital as a complex system of structure and agency. Ibarra et al (2005:366) argue that research must examine the links: 'between network structure, perceptions, and action in a dynamic field of interaction'. More recently, Afuah (2013:58) suggests that management science has not examined: 'these components of structure and conduct'. As Kilduff et al (2006:1044) demand, we must 'embark on a voyage of discovery into those undiscovered territories' and focus on progressive theory and methods to understand how networked interaction is a complex entity. We now articulate an

alternative critical realist philosophical and methodological approach, based largely on Sayer (2000), to study entrepreneurial social capital as a dynamic system of structure influencing conduct, and the role of human agency and intentions (Ibarra et al, 2005; Kilduff et al, 2006; Kilduff and Brass, 2010). Reed (1997:38) points out, a fuller understanding of structure and agency demands that we are not: ‘welded to social ontologies and theoretical approaches’. Thinking beneath the correlation coefficients is important (Jones, 1995).

According to Sayer (2000), critical realism acknowledges the real effects of social structures such as class, institutions, rules, bureaucracies and network relations. These social structures, unlike natural and physical objects or physiological structures, are mental interpretations and carried out by imperfect humans (Archer, 1995; Mearns, 2011; Mingers, 2000; Mir and Watson, 2001; Morton, 2006; Sayer, 2000). As Sayer (2000:11) writes: ‘the real is whatever exists, be it natural or social, regardless of whether it is an empirical object for us...the real is the realm of objects, their structures and powers. Whether they be physical, like minerals, or social, like bureaucracies, they have certain structures and causal powers, that is, capacities to behave in particular ways’. The ontological position of critical realism suggests that there is a ‘structural integrity that limits’ what social agents can do and this ‘structural integrity’ is causal and ‘externally related to our own existence’ (Sayer, 2000:13). For both Archer (1995) and Sayer (2000), critical realism acknowledges that many social practices and conventions have a ‘material’ basis (e.g. resources, capital, physical environment and body) and are rationally induced. Easton (2002, 2010) argues that the material basis of valuable objects, such as physical and natural resources, equipment, materials and finance, have the power to generate regular observable conventions and can influence the way we think and act in exchange relationships. Recently, Christ (2013) and DeForge and Shaw (2012) point out the similar ‘worldview’ of critical realism and

pragmatism³ when focusing on causality, both expressing social reality as external to individuals perceptions. However, pragmatism rejects the possibility to identify stable underlying structures, whereas critical realism displays a greater ‘a priori’ commitment to identifying stable and even durable structures that constrain actual lived events, and agency (Johnson and Onwuegbuzie, 2004; Modell, 2009). The social world is ‘contingent’ and critical realism also acknowledges that individuals make alternative decisions (Archer, 1995; DeForge and Shaw, 2012; Easton, 2002, 2010; Ryan et al, 2012; Sayer, 2000). Giddens (2005:52) argues that: ‘the orderliness of day-to-day life is a miraculous occurrence...yet the slightest glance of one person towards another, inflexion of the voice...may threaten it’. There is always the possibility for agentic desires, flexible opportunism, diverse decision-making and multiple meanings in fleeting and transient exchange relations (Emirbayer and Goodwin, 1994; Gulati and Srivastava, 2014; Sydow and Windelar, 1998; Wittel, 2001). This mutuality between the material aspects of social structures influencing conduct-order, and agency is a basic critical realist tenet:

‘When we read a final demand for payment of our electricity bill and the accompanying threat of disconnection, we could play endless parlour games running through diverse construction of what this text says, showing off our ability to construe it in imaginative ways. Nevertheless, which of the many possible meanings is supposed to apply, is usually pretty clear, if it isn’t, it might register when the lights go out’ (Sayer, 2000:40).

The critical realist philosophical position, and likewise pragmatism, insists on a pluralistic epistemology and advocates mixing quantitative and qualitative approaches to specify how social life produces regular conventions, and is influenced by agency (Christ,

³ The classical pragmatist ontology (e.g. Charles Sanders Pierce 1839-1914, William James 1842-1910 and John Dewey 1859-1952) views social reality as external to an individual’s perceptions but as a provisional reality, and is interested in identifying both empirical and practical consequences (Johnson and Onwuegbuzie, 2004; Stanford Encyclopaedia of Philosophy, 2013). According to Rorty (1979:377), neo-pragmatism suggests that all research is pragmatic and not ‘determinate’, implies that the practical consequences are more important than the empirical, and the ‘edifying’ philosopher should ‘keep the conversation going rather than to find objective truth’. The neo-pragmatist perspective also emphasises that all research is influenced by the researchers fallible practical judgements and is a personal construction system (DeForge and Shaw, 2012; Johnson and Onwuegbuzie, 2004; Pansiri, 2005).

2013; Easton, 2000, 2010; Johnson and Onwuegbuzie, 2004; Modell, 2009; Mole and Mole, 2010). This pluralistic epistemology promotes the mixing of quantitative and qualitative data as a: ‘movement toward a more total understanding’ (Deforge and Shaw, 2012:86). Easton (2000:217) supports the fusion of ‘alternative data sources’ to emphasise process. Such assumptions also value the notion of ‘verstehen’ and understanding situated meaning is an indispensable tool in grasping how life evolves, and the production and reproduction of underlying structures (Alvesson and Sandberg, 2011; Easton, 2010; Sayer, 2000). It is argued that situating social perceptions examines in great depth the ‘real’ underlying social and physical structures that constrain ‘actual’ lived events, and at the same time, the nature of the actors involved that modify their own environment (Ackroyd and Fleetwood, 2000; Bhaskar, 1978; Johnson and Duberley, 2000; Sayer, 2000). This critical realist approach might adopt quantitative data to analyse the structural configurations of networks and their material aspects (Easton, 2010; Sayer, 2000). Since everyday life is experienced, merging qualitative data helps grasp the situated meanings in networks, what the effects of structural configuration are, what we do and how an individual’s intentions, affections and desires can reshape networks (Ibarra et al, 2005; Ryan et al, 2012).

To formulate effective mixed methods research designs and models, researchers must consider the weight of quantitative and qualitative data (Johnson and Onwuegbuzie, 2004; Tashakkori and Teddlie, 2003). More importantly, the specific sequence and time orientation of mixing quantitative and qualitative approaches should be justified (Cresswell, 2003; Onwuegbuzie et al, 2013; Rocco et al, 2003). Mixed research can be user specific to investigate complex issues in the social world and contrasts the rigid menu approach of following either quantitative or qualitative research alone (Christ, 2013; Johnson and Onwuegbuzie, 2004). For example, there may be a two-stage sequential study with greater emphasis on qualitative (e.g. QUAL→quant). This involves exploring links between network

structure and cognitive order in a sample during the intensive qualitative stage, followed by the development of measurement items and statistical testing to validate the qualitative data. There may also be a two-stage sequential study with greater emphasis on quantitative (e.g. QUANT→qual). A survey of hypothesised network structural configurations inducing cognitive order can be tested in the quantitative stage through fusing measurement items from different disciplines, followed by the qualitative exploration of any inconsistent findings and insights regarding human agency. There is also scope to develop research designs with more than two-stages to understand complex processes (Johnson and Onwuegbuzie, 2004).

Conclusions

We began the paper by discussing a number of dualisms that are associated with the study of entrepreneurship. The entrepreneurial research community have been accused of a focus which can be summarized as ‘all Romeo and no balcony’ (Venkataraman and Sarasvathy, 2005). In other words, the entrepreneur has been viewed as an independent actor who operates outside the broader constraints of social structures such as class, education, gender and the legal system. Interestingly, positivist-realist social capital research tends to focus on the individual entrepreneur’s ‘direct’ ties (Carter et al, 2003; Davidsson and Honig, 2003; Manolova et al, 2007), and structuralist social capital research tends to focus on the enduring patterns of clustering and ‘indirect’ ties in a network (Ferriani et al, 2009; McEvily and Zaheer, 1999; Stam and Elfring, 2008; Stam, 2010). This confirms the agency-structure dichotomy in much of the research undertaken within the business and management communities. Equally, while we certainly acknowledge that there have been some important qualitative studies of the links between entrepreneurship and social capital (Ram et al, 2008; Jonsson and Lindbergh, 2011) – such studies are in a minority. As we argue above, there is very limited research in entrepreneurship in general or, more specifically, on the topic of

entrepreneurial social capital, which spans the agency-structure dichotomy.

The conflict between social science paradigms reflects the complex nature of multiple entities with social structures and agency viewed as incompatible (McKelvey, 1997:353). Critical realism espouses a worldview that can help explain the link between the material aspects of network structures influencing regular conventions, and the uniqueness of humanistic decision-making (Archer, 1995; Easton, 2002, 2010; Sayer, 2000). But the main ‘Achilles heel’ of critical realism is the degree to which real ‘things’ exist in the social world (Alvarez et al, 2014; Mole, 2012). Things like social institutions and networks depend on humans perceiving that they are real and exist (Alvarez et al, 2014). However, social structure is considered to be real and objective by critical realists because it limits and ‘conditions’ what agents can do, and therefore has real effects (Archer, 1995, 2000; Mole, 2012). Importantly, critical realism accepts that agents can develop emergent desires and intentions (Mole and Mole, 2010). The pluralistic epistemology of critical realism and merging quantitative and qualitative data or analytical techniques may encourage a more complete understanding of networks and constrained agency, blue-sky research, proof of concept studies and data mining (see Agndal et al, 2008; Audretsch et al, 2011; Coviello, 2005; Hite, 2005; Lee and Jones, 2008; Mosey and Wright, 2007; Totterman and Sten, 2005). We also suggest critical realism values entrepreneurial subjectivity and therefore ‘practical tools’ that help entrepreneurs ‘to operate in an increasingly networked world’ (Berry et al, 2004:548). Even Putnam et al (2003:271) emphasise the considerable importance of agency: ‘the success of a voyager depends in part on his or her navigational skills and in part on the wind and weather and tides’.

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Table 1 The positivist-realist paradigm and entrepreneurial social capital research

<i>Ontology</i>	Deterministic, reductionist, regulation, universalistic laws, prediction
<i>Epistemology</i>	Large-scale randomised surveys, objective measurement, accepted/refuted hypothesis, statistics, corroboration
<i>Strengths</i>	Generalisable results across networked societies, scientific testability, unambiguous and value free results, reduced bias
<i>Weaknesses</i>	Difficult to account for changing statistical signs or non-significant findings, oversimplifies agency and culture in networks, abstract measures, tractable results

Table 2 The structuralist paradigm and entrepreneurial social capital research

<i>Ontology</i>	Enduring and fixed network structural configurations, structurally induced rules and action, rational behaviour
<i>Epistemology</i>	Whole/egocentric questionnaires, fixed/free recall name generation, objective, mathematical algorithms, graph theory, statistics, corroboration
<i>Strengths</i>	Network structural configurations identifiable, network positions and roles predict certain benefits, scientific reliability, value free results, reduced bias
<i>Weaknesses</i>	Neglects situated meaning, oversimplifies everyday network action and behaviour, assumes actors are passive interchangeable atoms, atomistic

Table 3 The social constructionist paradigm and entrepreneurial social capital research

<i>Ontology</i>	Internal logic, human experience, multiple realities and inter-subjective social constructions, interpretation and understanding (verstehen)
<i>Epistemology</i>	Subjective narrative (written or spoken) and ideographic data, thick and descriptive reporting, storytelling, researcher and researched inseparable
<i>Strengths</i>	In-situ and relevant accounts of network action, situated meaning, exploratory and inductive theory building, practice relevant
<i>Weaknesses</i>	Role of social forces and constraint in networks underplayed, idealistic reporting, self-referential and discursive accounts with no data, smaller scale
