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Social structures and entrepreneurial networks

The strength of strong ties

Sarah L. Jack, Sarah Drakopoulou Dodd and Alistair R. Anderson

Abstract: *The entrepreneurial context provides a fertile arena for the study of networks. This qualitative study critically examines the nature, content and process of strong ties, which are found to fall into three categories: family, business contacts, and suppliers, competitors and customers. These nodal categories each provide a specific range of support to the entrepreneur. Their appropriate and effective utilization greatly facilitates enterprise performance.*

Keywords: *networks; strong ties; social structures; entrepreneur; social capital; family*

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Networking has long been the subject of considerable interest to organizational behaviour and management studies (Gatley, Lessem and Altman, 1996, p 78; Granovetter, 1973). Interest in networks has expanded so much that it is no longer contentious to maintain that these 'hybrid organizational forms' offer an alternative structure for the allocation of resources to compete with the dominant economic models of markets and formal organization (see, for example, Powell, 1987, 1990).

Since entrepreneurship focuses on change, an analysis of entrepreneurial networks provides a framework for understanding how resources, knowledge and information are collected, managed and applied. Furthermore, the entrepreneurial context is centred on one person, the entrepreneur, or on a small and tightly-knit entrepreneurial team. Information and opportunity search, resource acquisition and decision making are

thus highly centralized and personalized, as are the networks through which such activities are enacted. Narrowing the topic to the entrepreneurial context presents a particularly rich environment for enhancing understanding of networks and their effectiveness. This is because the relatively focused nature of such networks allows sharpness in delineating their structure and features, avoiding the distracting complexities of managerial networks. It is probably for these reasons that during the last 15 years entrepreneurship scholars, in particular, have embraced network theory as a mechanism for exploring the creation and development of new ventures, providing a firm bedrock of theoretical and empirical material on which ongoing studies can build. Findings provide firm evidence of the crucial importance of entrepreneurial networks (Aldrich and Zimmer, 1986; Birley, 1985; Carsrud and Johnson,

1989; Johannisson and Peterson, 1984; Johannisson *et al.*, 1994). The essences of entrepreneurial networks, nevertheless, provide broad implications for those in other, more corporate settings. The advantages to studying entrepreneurial networks are thus: (1) clarity of purpose, (2) ease of observation, and (3) the opportunity to build on an extensive literature.

The theoretical orientation of this study is Granovetter's (1973) strong and weak tie concept, which considers the strength of strong ties to lie in their provision of accurate, reliable, low-cost and appropriate resources, including information, contacts and finance. Conversely, the weakness of strong ties is seen to lie in their redundancy and poor capacity for bridging structural holes. However, less well understood are the actual processes and the utility of outcomes enacted through strong ties. The theoretical contribution of this study is thus to enrich our understanding about strong ties. It examines the effectiveness of strong ties and assesses the relative importance of different types of strong ties for entrepreneurs. At a more practical level it also adds depth to our knowledge of what makes entrepreneurial networks effective.

The paper begins with a review of the literature to illustrate how network ties are described. Justification for using qualitative methods for this study is then provided along with an account of the techniques used to examine the situations of 12 entrepreneurs. Findings show that strong ties cluster around three nodes: (1) family, (2) business contacts, and (3) suppliers, competitors and customers – and that each node fulfils a different network function.

Network ties and the entrepreneurial process

Entrepreneurial ventures are, by nature, constrained in terms of human, informational and financial resources, whilst also being especially dynamic in their quest to seize market opportunities. Supplementing the entrepreneur's own resources, networks improve entrepreneurial effectiveness by overcoming the liabilities of such resource constraints (Brüderl and Preisendörfer, 1998; Foss, 1994; Hansen, 1991; Jack and Anderson, 2002; Johannisson, 1986; 1987; Johannisson and Nilsson, 1989; Johannisson and Peterson, 1984; Ostgaard and Birley, 1994).

Some entrepreneurship researchers emphasize the generic social aspect of networks, pointing out that ties are formed within social activity that involves creating new ties and activating ties (Aldrich and Zimmer, 1986; Brüderl and Preisendörfer 1998; Johannisson *et al.*, 1994). Clearly, networks involve the direct, specific relations that an individual has with others (Reese and

Aldrich, 1995) and ties are the basis of networks (Aldrich and Elam, 1997, p 143). A network could be described as representing a constellation of ties so that, at a fundamental level, ties are the building blocks of networks. Several studies have focused on measuring the extent and range of contacts within a network (for examples, see Aldrich and Zimmer, 1986; Greve, 1995; Malecki and Tootle, 1996). Yet, despite the significance of entrepreneurial network ties, the nature and content of these ties has, thus far, to be fully explored. Furthermore, few scholars have attempted to identify different types of ties at any level of detail beyond Granovetter's strong and weak tie hypothesis.

According to Granovetter (1973, p 1361) the strength of ties within a network defines the strength and quality of relations and is shaped by the amount of time, emotional intensity, intimacy and reciprocal services involved in these relations. By differentiating between two types of ties – strong and weak – Granovetter (1973) describes how the diversity, homogeneity and heterogeneity of these ties impact on the actions of individuals. He argued that strong ties consisted of frequent interaction, occurring at least twice a week, whereas weak ties are said to consist of interactions occurring less than twice a week, but at least once per year. Granovetter (1973) and Burt (1992a; 1992b) argue that an ideal network should consist of both strong and weak ties because the nature of these ties influences the operation and structure of networks. Burt discusses the importance of 'bridging' structural holes. Relating this analogy to Granovetter's (1985) work means that we can see strong ties as being represented by sturdy bridges, and weak ties by flimsy, more delicate bridges into less familiar areas. Burt's structural holes are not 'bridged' directly, but by an oblique route perhaps involving several bridges. This also relates to social capital, which has been taken to be structural (Coleman, 1990) but also includes many aspects of the social context, such as social interaction, social ties, trusting relationships and value systems that facilitate the actions of individuals located in a particular social context (Nahapiet and Ghoshal, 1998; Tsai and Ghoshal, 1998). Furthermore, social capital is said to be both the origin and the expression of successful network interactions (Cooke and Wills, 1999). Building a social capital bridge is simply a linking of individuals, but the strength of the bridge's construction serves as an indicator of the amount of traffic-carrying capability. So, a robust social capital bridge will allow better access to a richer range of resources and information (Anderson and Jack, 2002).

The benefits of weak ties relate to their function as a critical element of social structure, enabling information to flow into other social clusters and the broader society

(Burt, 1992a). Hence, the value and strength of weak ties is not related to the weakness of the relationship, but lies in the possibility of connections to other social systems (Ibarra, 1993). Weak ties provide access to others and the possibility of new and different information from that which the individual receives through direct contacts (Granovetter, 1973, p 1371; Maguire, 1983). These arguments have been applied and tested within the entrepreneurial context. Aldrich *et al* (1987) note that networks in which members are not well acquainted, tend to have more varied resources and more diverse information when compared with networks of close friends. Such contacts are likely to move in different social circles and have access to different resources and information. A diverse set of weak ties can lead to: information; discussion and advice; capital; borrowable tangible resources; customer referrals; and supplier referrals (Katrishen *et al*, 1993); sources of advice (particularly from those with past experience), information, resources, opportunities, responsibilities and problems (Bloodgood *et al*, 1995). Therefore, the entrepreneur needs heterogeneous ties, providing more opportunities for diversity in resources and information (Mönsted, 1995). Hills *et al* (1997) follow this classic view, arguing that an entrepreneur who only interacts with a small group of tightly-knit friends has less chance of obtaining valuable information about an opportunity. Therefore, a personal network predominantly characterized by strong ties is perceived to be inefficient (Ibarra, 1993).

Strong ties offer contrasting benefits, and constraints. Granovetter (1985, p 490) noted that the information and support gained through strong ties offered multiple benefits: it is cheap; it is more trustworthy because it is richer, more detailed and accurate; it is usually from a continuing relationship and so in economic terms it is more reliable. Moreover, continuing economic relations are often entwined with social content that carries strong expectations of trust. Nevertheless, strong ties are generally perceived to be less beneficial than weak ties. Burt (1992b, p 64), as evidence, stated that strong mutual relations tended to develop between people with similar social attributes (such as education, income, occupation and age). Consequently, direct (strong-tie) network contacts are likely to provide redundant information since they can be anticipated to move in similar, if not the same, social circles. Thus, the homogeneity of strong ties is thought to be less effective, breeding local cohesion but also leading to overall fragmentation (Granovetter, 1973; Ibarra, 1993; Maguire, 1983).

However, within the entrepreneurship literature some accounts of ties are beginning to question the hypothesized utility and function of each type of tie. For

example, Johannisson (1987), Aldrich *et al* (1987), Hansen (1995) and Mönsted (1995) emphasize the importance of close ties in entrepreneurial networks, whilst Johannisson (1986) argues the need for both weak and strong ties.

A key research question for entrepreneurship, then, remains the issue of the relative effectiveness of strong and weak ties. Moreover, whilst the utility of weak ties is well documented through detailed empirical studies, the literature says little about the effectiveness and value of strong ties. An earlier quantitative study provided evidence that, when compared with their international counterparts, entrepreneurs in northern Scotland had especially high levels of strong ties in their networks (see Drakopoulou Dodd *et al*, 2002). Furthermore, these networks were also very interconnected,¹ had a fairly high number of family members, and the entrepreneurs spent a larger amount of time than previous studies had shown sustaining existing relationships rather than building new ones. The study did not indicate, however, that these networks, although especially rich in strong ties, were homogenous in terms of resource provision. Nor did the effectiveness of specific firms appear hampered by the relatively high levels of strong ties. These findings, as well as those of earlier studies discussed above, suggested that entrepreneurial strong-tie networks merited further, more detailed study.

The aim of this study is, therefore, to provide a contribution to the ongoing debate about network ties through a detailed analysis of strong-tie relationships within the entrepreneurial context. Through the study, the intention is to develop a stronger understanding of the characteristics, content and nature of strong ties.

Methodology

The research questions

The aim of this study was to develop and enrich understanding of the characteristics, nature and content of strong ties. Rather than testing extant theories, the intention was to develop further our theoretical understanding of strong ties. This entailed viewing networking as a process, rather than a stasis – getting inside the black box to examine the actual content of networks. To achieve this the research questions addressed were:

- (1) What is the content of strong-tie network exchanges?
- (2) What are the processes involved in strong-tie network exchanges?
- (3) What are the outcomes of strong-tie network exchanges?

- (4) Can the set of strong ties be usefully broken down into further analytic categories?
- (5) If so, to what extent does the type of strong tie determine the effectiveness of the network?

Methodological approach

Although network structure is an important issue, our research questions clearly focus on content, processes and outcomes of network exchanges, and are thus relational in nature (Hoang and Antoncic, 2003). Rather than measuring ties, the study called for a methodology that permitted a more detailed and richer analysis.

Whilst the actual structure of a network can certainly be measured using quantitative techniques, qualitative methods are needed to explore and understand what really goes on within and between ties. Such methods have been successfully used and adopted in previous studies (see Jack and Anderson, 2002) when exploring elements of the mechanisms used to deal with social structure, and the literature argues the case for qualitative work to provide richer and more dynamic theories (Chandler and Hanks, 1994; Hoang and Antoncic, 2003).

The sample

The authors used the definition offered by Shane and Venkataraman (2000): ‘entrepreneurial processes consist of distinctive activities such as opportunity identification, resource mobilisation, and the creation of an organisation’. This definition suggests that the entrepreneurial process is ongoing and does not stop once a business is actually created. Gaining a full understanding of entrepreneurial networks is likely to be facilitated by a study that analyses the experiences of entrepreneurs over a fairly long period of time. A sample composed of established, but growing, entrepreneurial firms is hence especially well suited to our research questions.

Drakopoulou Dodd *et al* (2002) demonstrated that northern Scotland offered an environment especially rich in strong-tie entrepreneurial networks. This was therefore the region selected for the present study and from which the sample was selected. A local business directory was used as the initial sample frame, from which some 68 respondents were selected randomly. These were contacted by telephone initially, and asked about the relationship between network ties and entrepreneurship. The preliminary interviews were used to:

- (1) gather basic data about the respondents’ enterprises and networks;
- (2) identify and clarify the areas within the topic that needed to be investigated in depth; and
- (3) pilot the suitability and relevance of the study techniques.

Table 1. Overview of respondents’ businesses.

Respondent	Activity	Established	Background and route to entrepreneurship
Adam	Manufacturing	1977	Identified a local opportunity
Barry	Computing services	Various dates	‘Serial entrepreneur’ – originally employed in oil industry, but then started a number of businesses
Bill	Light engineering	1979	University, then joined local business and became a partner
Graeme	Computing services	1990	Worked for major oil company allowing him to recognize related opportunities
Grant	Chemical supplies	1981	Accounting and business degree. Gradually taking over family business
Kathy	Video production	1985	Sales and marketing, set up business with partner when employer (same industry) went into liquidation
Mary	Counselling services	1997	Housewife who identified need through own experience
Nigel	Freight forwarder	1992	Freight forwarding, set up own business in competition with in-laws
Shaun	Stationery supplies	1983	Took over family business
Stuart	Language school	1995	Various jobs on leaving university; turned hobby into business
Tony	Construction	1974	Management buy-out
William	Oil supply services	1973	Take-over of previous employer’s business

The preliminary interviews raised concerns about the feasibility of exploring the issues with all 68 respondents. It was evident that some respondents were more forthcoming and willing to take the time to discuss

their situations. Therefore, these interviews also provided a way to identify respondents to participate in an in-depth study. The sampling technique used was purposeful, and from the preliminary interviews it seemed that 12 respondents would be a sufficient number to provide the type of rich and detailed information required to allow the issues being dealt with to be fully examined. Therefore, entrepreneurs were identified who were willing to participate, were forthcoming and prepared to discuss their situations and the issues being investigated at length, who exhibited well developed strong-tie networks and managed a diverse range of growing entrepreneurial firms (see Table 1 for an overview of the respondents and details of their age and gender, industrial sector in which they operated and the size of their businesses).

Whilst the sample entrepreneurs are not *de facto* representative of the entire entrepreneurial universe, the purposeful selection of rich examples of strong-tie networks provides useful and rigorous data about strong ties. The methodological techniques provided sufficient depth of data to allow a meaningful analysis, and hence to generate an in-depth understanding of what actually goes on within and between ties. Quotes from the data are used to provide valuable supplements, to add voice to the text and help categorize the data (Wolcott, 1990). We also attempt to link the practices inductively with the background of the respondents and demonstrate veracity by telling a convincing story (Steyaert and Bouwen, 1997).

Methods adopted

The objectives of the research were related to understanding rather than measuring (Oinas, 1999). Since we were looking for the meanings that lie behind actions, the very nature of the issues being dealt with were not amenable to quantification (Hammersley, 1992). The techniques used to generate the data were semi-structured interviews, non-participant observation and informal discussions with the entrepreneurs and, in some cases, with their network ties. The use of multiple methods reflects an attempt to secure an in-depth understanding, involving an interpretive naturalistic approach to the subject matter (Denzin and Lincoln, 1994).

Visits were made to the business premises of each respondent. Interviews were carried out by two of the researchers. Questions were asked and explanations sought about the types of ties used, the areas that respondents tended to discuss with each strong tie, the kind of help these people provided, and how often, where and when they interacted with their ties. Respondents were also invited to describe the relationship they had with each strong tie, and to recount the

history of these relationships, with special emphasis on their relevance for the entrepreneurial venture. The interviews varied in duration from a couple of hours to many hours, whilst the direction and length of interviews were determined by the form of the emerging data. Some respondents were interviewed several times. Open semi-structured interviews were used to explore the content and nature of strong ties. Questions were not asked in any specific order, but were governed instead by the actual situation (Gummesson, 2000). Supplementary information about the history and background of the entrepreneur, and the firm, from non-entrepreneurial sources was also gathered (Denzin, 1979). This material represented a resource for comparison with, and triangulation of, the emerging research themes.

Data analysis

Imposing order on the data and constructing interpretations in qualitative research is, in many ways, more difficult than in quantitatively based research (Curran and Blackburn, 2001, p 112). The research process generated large amounts of data. Once the data have been collected, they have to be sorted before being analysed. So that data analysis was comprehensible, categories in the data were identified and then used to organize and sort the data.

According to Wolcott (1990), the critical task in qualitative research is not to accumulate all the data you can, but to 'can' (ie get rid of) most of the data you accumulate, to discover essences and then to reveal those essences with sufficient context, yet not become mired trying to include everything that might possibly be described. Bearing this in mind, interviews were taped and then transcribed; these were then analysed to determine categories and general patterns of activities. Data analysis used the constant comparative method (Alvesson and Sköldböck, 2000, p 28; Glaser and Strauss, 1967; Silverman, 2000) and analytic induction (Glaser and Strauss, 1967). Analytic induction, using grounded theorizing techniques (Glaser and Strauss, 1967), involved looking for patterns in the data and comparing one incident with the next. The 'raw' data transcripts were first written up as cases. These were then analysed and compared to identify general patterns and to refine description and explanation. This constant comparison, in addition to providing a basis for the analysis, guided the research and enabled the authors to develop understanding. To achieve high-quality data analysis, a clear framework based on the themes identified in the literature was the initial focus of the study. This was refined and revised in the light of emerging data. The themes used for this framework were: entrepreneurship, networks and strong ties.

Interview transcripts, field notes and observations were searched for information that related to these themes.

Limitations

It is recognized that the approach used has some inherent limitations. The study area was restricted to one geographical area; a small number of respondents was used; and the methodology employed inhibits generalizability (Larson, 1992; Chandler and Hanks, 1994). However, the value of this research design lies in its capacity to provide insights, rich detail and thick description (Geertz, 1973) and to produce a grounded model (Larson, 1992).

Findings

A significant finding concerned the closeness of the ties and the intensity of these ties. With the exception of one respondent, every interview emphasized the development of close, trusting relationships. However, frequency of contact seemed to be irrelevant, which runs counter to part of Granovetter's account. The 'strength' of the bond was an enduring relationship, based on trust and knowledge of the other, likely to have been accumulated over time and through experience. This suggests a continuity over time, but not necessarily predicated on frequent contact.

When we analysed the types of ties and the networks, it was evident that the entrepreneurs used three key network nodes: (1) family, (2) previous business contacts, and (3) customers, competitors and suppliers. By nodes we mean that the ties were clustered around particular affinities, that these different ties fulfilled different purposes, and each had different levels of intensity. However, what distinguished these ties at a categorical level was the basis of the relationship, rather than the intensity of the tie. Although the intensity of contact varied from very high in the family, to somewhat lower in the customers, competitors and suppliers node, our respondents placed a similar importance, for the *specific purpose of the value generated* within that node, on each node. Each node, therefore, delivered a different type of utility to the entrepreneur, although all three nodes were required for the development of very effective networks.

The network node of family ties

Family ties were very intense ties, providing a foundation for the business in a variety of ways. These played the most significant role in entrepreneurial development, with trust presenting a crucial factor to this relationship. As could be expected, family ties were close ties, as bonded links. Family members were used to (1) promote entrepreneurship, (2) identify

opportunities, (3) provide financial support, (4) offer practical assistance, (5) provide specialized advice, and (6) act as sounding boards. The entrepreneurs emphasized the reliability of family members.

An important family role was as primary initiator of the entrepreneur's business. In some cases older relatives provided the 'family' business to the entrepreneur, through normal inheritance channels. Some respondents had been brought in, or even brought up, to the family business in the expectation of eventually taking over. Grant commented,

I graduated in June . . . two weeks later I had a suit on and was out selling, and I remember thinking, 'how on earth did that happen?'

In another case, a parent had created a business late in their own professional life, which was planned as a business for their offspring to run after completing their education. Sometimes this was not planned, as Shaun remarked,

At the start it was not really my idea, I was really only responding to a request for assistance.

In other cases, respondents identified a family member as the instigator of the notion of entrepreneurship as a career choice. For example, Adam's father-in-law had the business idea; he provided technical expertise and access to a network of contacts and had acted as a 'business sage':

Father-in-law was saying, 'why don't you start your own business?' which was a bloody stupid idea! I had no money, no assets, nothing. . . He convinced me you don't need money . . . and away we went.

Mary identified her (entrepreneur) husband as crucial to the business. He had pushed the respondent to start her new venture and continued to encourage her, as well as providing finance:

He said to me, I think you've got what it takes to do it. I think you could do it. I think you should give it a try.

Family members also provided hands-on practical support in a variety of ways to the entrepreneurs. Nigel's father-in-law allowed him to use the name of his own business to generate credibility, which in turn delivered, 'recognition, good credit standing . . . a cheap office', as well as providing one member of staff salary-free from his own business (his daughter, the entrepreneur's wife). Shaun described his father, supposedly retired, as the 'general dogsbody'. The father was called in to help with any crisis, to fetch and carry and to act as a 'reliable' general emergency resource. Other respondents emphasized the benefit of specialized advice from family:

Well it's easy really, my brother-in-law is an accountant, so I get the best advice for my business (William).

Other family specialists included senior HRM executives, researchers, bookkeepers and marketers.

Network theory suggests that one danger in strong ties is the likelihood of homogeneity, which in turn dilutes the richness of information and other resources available to the entrepreneur. Interestingly, we found many instances in which respondents valued the *heterogeneity* of family ties. This was not precisely the same kind of heterogeneity described in the literature, of extending contacts and information sources. Instead, the family members filled an additional role of offering diverse ways of viewing issues, or access to technical, organizational or interpersonal skills that the entrepreneurs lacked. Perhaps because we know members of our families so well, and our understanding of their attributes is therefore so clear, we are able to be precise in our understanding of how their qualities can compensate for our deficiencies. Such a perception, at any rate, was strongly articulated by Kathy who said of her husband:

He comes from a completely different angle – he's an engineer, and as you know, engineers think in a completely different way from normal people.

This tendency to balance a facts-driven approach with feelings, intuition, by using family sources, was also articulated by other respondents. Graeme, talking about his wife's impact on the business, said:

A woman's view on the sort of stuff we do is tremendous; in fact, it's made me . . . I describe myself as a recovering engineer . . . if I go back there I'll start thinking like that again.

In as far as we can generalize, family nodes were particularly important at start-up. As already established in the literature, we found that family were important providers of capital. In the case of new starts, family resources partly or wholly funded several of the ventures of respondents. Family investors were important in the early stages of the business's development, and as well as providing direct finance, some permitted the entrepreneur to re-mortgage the family home. This should probably be considered as a family finance function. Until a business idea has been proved in the marketplace, negotiating commercial support can be difficult. The family's trust in, and affection for, a would-be entrepreneur seems to encourage it to provide essential support, which otherwise might not be available. Business instigation, finance, hands-on support, emotional support and providing a diversity of views and skills, were key network functions found in the family node of network contacts. All of these are especially salient at the start-up stage. Family network

Table 2. Examples of functions and dimensions of the family node of entrepreneurial networks.

Relationship	Illustrative quotation	Network function
Father (Grant)	<i>I would never have started this business if it hadn't been for him</i>	Business instigation
Brother-in-law (William)	<i>He actually took shares with his family and put capital in</i>	Capital provision
Sister (Kathy)	<i>My wee sister is an HR professional, so it's also cheaper talking to her about legalities and so on</i>	Hands-on support
Wife, brother-in-law (Adam)	<i>If my family . . . hadn't supported me, I would have felt like saying 'don't do this'</i>	Emotional support
Sister (Kathy)	<i>We are too bloody soft. . . she is very focused . . . and she often sets me back on the right path</i>	Diversity of views and skills
Relationship	Illustrative quotation	Network dimension
Husband (Kathy)	<i>If you can't share it with your life-long partner, who can you share it with?</i>	Tightly coupled, intense personal relationship
Husband (Mary)	<i>He's just total support, all the way</i>	Non-transactional

ties also continued to provide general support to the established business. Because the contacts were trusted, our respondents came to rely upon the general physical help and assistance in the day-to-day running of the business. However, after start-up, family ties did not seem to play a strategic role. Nevertheless, most of the businesses were built on a foundation of strong family ties.

Reciprocity within families, reward for their support and resource provision might be expected to be important. However, we found no such expectation, or any evidence of 'paying back', within an exchange arrangement. A related, but unexpected aspect to these relationships was that for some of the instigating relatives who were not themselves entrepreneurs, the entrepreneurs appeared to be living out their relatives' dream, as well as their own. Table 2 illustrates the family node of entrepreneurial networks.

The network node of business contacts

The second important node was previous business contacts, which had originated from links in other business contexts. In many cases relationships had grown closer in the shift to the new entrepreneurial context. Certainly, the relationships were characterized by quite a high degree of intensity, although less so than in the family node, and were quite tightly coupled.

Respondents met these contacts regularly, even if infrequently, and almost always found a social occasion to round off the business aspect.

Integrity was a word that cropped up frequently in describing what the parties shared. Integrity represented mutual fairness, sincerity and trust. This included, but was not restricted to, integrity within the relationship, since it also encompassed a commitment to quality work and professional integrity. Graeme expressed this as a shared commitment to changing industry practices:

There is no compromise there, and it's the integrity bit . . . because the two of us together can change things.

These relationships were almost all with people in the same industry, or with other entrepreneurs. The original relationships had varied from previous boss to work-mate, but the new relationship was one of equal status. This is in spite of an expected tendency for younger entrepreneurs to choose an older mentor because 'age and experience is just a treasure chest of usefulness' (Stuart) and 'everyone needs a grey-hair' (Graeme). A major benefit ascribed to these business contact relationships was the ability to disagree, sometimes even argue, within the relationship: 'he calls a spade a spade . . . he can be rather abrasive, but I rather like that' (Adam). Others talked about the creative tension involved in being challenged.

The major business functions provided by relationships on this node included business information and advice, idea-validation, and introduction to, and legitimation of, new contacts:

We have got to know and trust him, and we can see a role for that sort of particular background: experience, knowledge, advice in the business (William).

Perhaps the most important function of relationships on this node was the exchange of business information:

We just talk. It's just who's doing what, really. He's well-connected, and I'm relatively well-connected (Barry).

Indeed, a fair proportion of the talk appears to be about *people*, including competitors, customers and other industry players. Given the shared industry background, this is not surprising. However, note the very human-centred nature of these typical quotations:

His experience is in running big or very big companies, in a similar sort of area. So he really does understand the psyche of our customers (William).

Understanding people, knowing what people are doing, introducing the entrepreneur to people, or checking out whether people 'share our values' (Graeme) is the main content of the business information exchange. (As we discuss later, more general background information on

industry trends seems to be sourced from the customers, competitors and suppliers node).

Another role for these ties, then, was introduction: introducing new customers, suppliers and new ties. This node provided the weak ties as 'friends of friends'. In splendid example, Graeme noted:

His name is Buck; somebody 4–5 years ago coined the expression, 'bucknet'. If you want to be connected with anyone world-wide this guy operates in this way.

The node also fulfilled a 'screening' role, finding out about people, how trustworthy, how reliable they were, and so on. The role seems to epitomize social capital, as Graeme said:

It is so important to know where people are coming from . . . what are their beliefs, their values.

Kathy echoed this view, noting: 'We know friends who are friends of our friends', suggesting that the screen of a friend's contacts meant that the contact was better. This is a reflection of classic social capital as the glue that binds networks and as the lubricant that eases the flow within the network (Anderson and Jack, 2002).

Respondents also used this link to sound out new ideas, to check on the viability of ideas, as 'weathervanes', as a respondent commented. These contacts were often sounding boards for new strategy selection, which several respondents described as being an ongoing conversation. Graeme commented that: 'Most of my thinking is done in conversation', and William told us that 'Strategy – that's the skill I have. To manage a conversation in the right way!' Some of our entrepreneurs have even understood their own strategy creation and development as a *conversation* with business contacts. Other entrepreneurs, as opposed to business contacts from the same industry, were helpful because 'so many of the problems are the same' (Grant). Other entrepreneurs had been through many of the same difficulties, and were able to give very practical advice on problem solving:

He had experience himself. . . almost everything he said worked . . . it just made such good sense (Stuart).

In terms of reciprocity, reflecting the equality of these relationships, the entrepreneurs supply much the same function to the business contacts as they receive from them: 'We mentor and network each other' (Graeme). However, as business friends, these contacts have the right to expect, and to give, a substantial amount of leeway to each other:

It's a double edged sword, because he puts us in positions which we wouldn't tolerate from anyone else . . . the collateral damage is balanced by the strategic gain (Graeme, discussing the same contact).

Table 3. Functions and dimensions of the business contact node of entrepreneurial networks.

Respondent	Illustrative quotation	Network function
Barry	<i>It's . . . just bouncing off who's doing what, really</i>	Information about people
Graeme	<i>If you want to be connected with anyone worldwide, this guy operates in this way</i>	Introductions to people
Graeme	<i>We use each other as judges of character</i>	Validation of people
William	<i>He has tremendous skills in mentoring</i>	Mentor
William	<i>The clarification of my thinking is done in conversation</i>	Strategy development
Respondent	Illustrative quotation	Network dimensions
Barry	<i>He and I have been working together in various industry sorts of things since 1995</i>	Shared industry bond
Graeme	<i>We've got to that level of relationship and advise each other on family matters like kids going to university</i>	Friendship
Graeme	<i>Some say you guys are always fighting, how can you say you are really close?</i>	Ability to disagree
Kathy	<i>John will often say 'you need to take June out for lunch for helping us with that'</i>	Social reciprocity

The trust and integrity, and friendship, upon which these relationships are based, means that the entrepreneurs assume that giving and taking will even out in the long run. For other entrepreneurs, especially those with an older business contact, the reciprocation for the alter ego seems to be in terms of satisfaction:

I think it's a fact that people enjoy having their knowledge and skills put to good use . . . he hasn't had much reward for it, he has just been a friend and a mentor (William).

Table 3 shows the functions and dimensions of the business contact node.

The network node of customers, competitors and suppliers

The final network node constituted customers, competitors and suppliers. The key role for this group was the provision of market information, both general and specific, which was used to build up a picture of trends, changes and developments, as well as trying to

work out why these changes were happening. Specific information from these contacts was sought out in many areas, including:

- (1) from competitors – customer creditworthiness, equipment and insurance prices;
- (2) from customers – competitor pricing and new business ideas; and
- (3) from suppliers – information about the competition.

The role of certain customers, with whom the entrepreneur enjoyed a trusting but not especially personal relationship, seemed particularly important in pushing the entrepreneur towards trying out new product and market development:

Whenever I have had a good idea which has been important for the business it's been because of the customer saying 'why don't you do this?' (William).

Meeting the customers' needs for service, quality and timeliness were areas in which the entrepreneurs in our sample took special pride. They appeared to believe that it was customer service that had led to the development of relationships in which information and sharing ideas were the norm. Underpinning this service was a notion of mutual honesty:

I am a great believer in honesty, and I am honest with these people, they are honest with me and this is the basis of a relationship that we have had for many years (Shaun).

We were surprised to see the degree of mutual support that entrepreneurs gave to and received from the competition. Many of our sample had created a niche market for themselves, and this, they felt, allowed them to avoid head-on competition. Instead, they relied on some kind of gentleman's agreement with the competition. This was true whether their niche was defined locally, nationally or internationally:

It's a very specialist market; we have got just three competitors . . . so we tend to be fairly open with each other (Adam).

Indeed, the term 'competitors' was not always felt to describe the relationship effectively:

We call them competitors, but we don't actually cross swords with anyone . . . all (of us) have found a little niche . . . when we do overlap with a couple of the companies, we seem to get on fine – they've got their customers and we've got ours (Grant).

Suppliers, as well as having their formal role of selling goods and services to the entrepreneurs, were felt to be a valuable source of general market information and specific information about the competition:

Some of our suppliers deal with our competitors and if you just get the right person at the right time and give them a cup of

Table 4. Functions and dimensions of the customers, competitors and suppliers: contact node of entrepreneurial networks

Relationship	Illustrative quotation	Network function
Competitor (Kathy)	<i>Sometimes we just talk generally about where the industry is going, why things are so quiet, why they are so busy</i>	General market information
Supplier (Shaun)	<i>Maybe we know of a company who we are dealing with and we've heard . . . there are problems there</i>	Specific information
Competitor (Shaun)	<i>We wouldn't generally compete knowingly against each other because one of us would suffer, and that wouldn't be fair</i>	Avoidance of direct competition
Relationship	Illustrative quotation	Network dimensions
Competitors (Shaun)	<i>People who are up to no good, or who are making life difficult, the word will be out fairly quickly</i>	Honesty and loyalty
Supplier (Stuart)	<i>The intensity is much less . . . but they were helpful when they needed to be</i>	Professional, loosely coupled, low-intensity relationships
Customers (Shaun)	<i>Over 30 years in the business . . . you develop business relationships that become friendships</i>	Some affection evident

coffee and a chocolate biscuit, then you never know what information you can find out about competitors (Kathy).

There was also some evidence that a strong relationship with suppliers improved their performance for the entrepreneur's business too:

When you know who you are dealing with, the product is good and the service is good . . . we share similar problems, face similar things in the marketplace and we make each other aware of what we hear is going on (Shaun).

Table 4 demonstrates the functions of customers, competitors and suppliers in entrepreneurial networks.

Some respondents used the expression 'loyalty' to demonstrate the depth of the relationship. We could, therefore, define this as simply relationship marketing. For this node, the relationships were more clearly transactional and were seen to have developed over time:

With no great intensity . . . she's been there when I needed her and there have been certain other social visits . . . but when we've met for professional reasons, she's shared ideas (Stuart).

Nonetheless, they were characterized by a high expectation of mutual honesty and with some, mutual affection, albeit limited, was often evident:

One of our competitors has a company out at X and they are lovely people. I will sometimes call one of the directors there for long chats (Kathy).

Reciprocity was viewed in terms of excellent service and mutual honesty: with customers, loyalty and shared information; with suppliers, avoidance of mutually destructive, aggressive competition; with competitors, shared information.

From network nodes to a network continuum

The previous section has described three clearly differentiated network nodes of strong entrepreneurial network ties, each with its own characteristics. These bundles of ties each exhibited specific characteristics and outcomes. The nodes provided a particular context of interaction that was based upon the nature of the relationships involved. When we analysed the content and process of these interactions we found that the different nodes provided different forms of resources. Figure 1 combines the *outcomes* of the three nodes into a single table, moving along a continuum from the more intense family relationships, to the less intense suppliers, competitors and customers node.

A clear example of the differing resources provided by each of the three nodes is illustrated by row 3 of Figure 1. This row shows that the family node delivered practical, hands-on support:

She is the sensible one. She does all the books and minimizes our exposure (Adam).

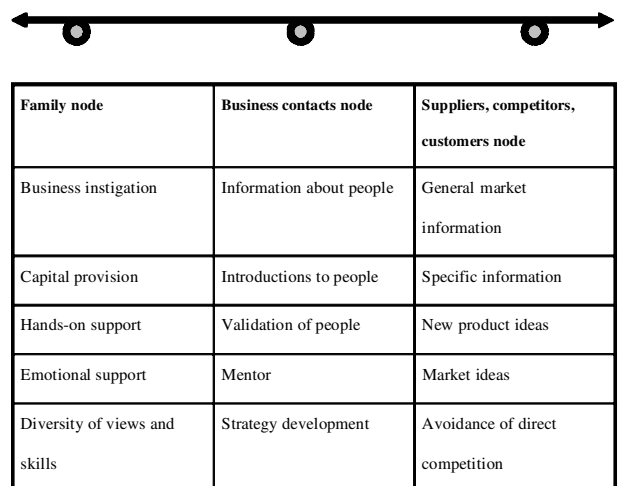


Figure 1. The strong-tie continuum: nodal outcomes.

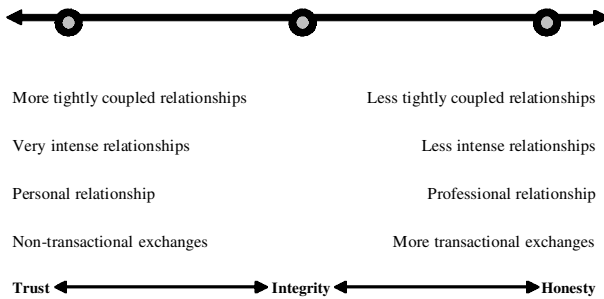


Figure 2. Relationship characteristics of the strong-tie continuum.

By contrast, the business contact node gave access to validation about people:

He has always been in touch with the business and he had had a major impact on us, identifying the priorities and the people we need to get in touch with (William).

The supplier, competitor and customer node provided new product ideas specifically related to the business:

Our customers make suggestions about what they want. I suppose they really help to point us in the right direction so there's benefits for all of us (Nigel).

Each nodal category was found to be homogenous in terms of relationship-type, and each provided quite specific types of resources. Furthermore, as Figure 1 shows, the range of resources provided by each nodal category was quite extensive. Yet, the scope of the ties' potential resources was heterogeneous.

When the relational characteristics of the ties located on the nodes is considered, as shown in Figure 2, a fuller continuum of entrepreneurial network strong ties emerges. The family ties node is characterized by tightly coupled, very intense, non-transactional personal relationships. The suppliers, competitors and customers node, at the second pole, is characterized by more loosely coupled, less intense, more transactional professional relationships. Note that even the suppliers, competitors and customers node relationships exhibited a significant degree of intensity. The business contacts node is located midway between the two poles, in terms of all the relationship characteristics cited.

Given the potential diversity of strong-tie relationships, and their dynamism, the continuum is helpful in as much as it allows us to define recognized nodes, whilst also accounting for less typical cases, which can be mapped on to the continuum. Importantly, it permits a much richer understanding of entrepreneurial strong-tie relationships than is possible if their study is restricted to comparisons with weak-ties dichotomy. A

further interesting and significant finding about this schema is that the intensity of the relationship does not appear to be determined by the frequency of contact, as suggested by Granovetter's model. Interestingly we note that our respondents described the three categories as respectively anchored in trust, integrity and honesty.

Deviant case

To develop and refine this schema into an explanatory model the emerging explanations were tested using a 'deviant' case for validity and reliability (Silverman, 2000). Tony represented a respondent who did not fit any of our explanatory categories. He seemed different in every way and presented a conceptual challenge to our emergent themes. He had not used his family at all; family was, as he put it 'family', business was separate. He suggested that family involvement was probably a function of firm size. He said most of his contacts were 'in-house'. He did not socialize with customers, although he did have many friends. Tony kept business and friendship detached. He said, 'You work with people so many hours a week and that is enough'. Moreover, 'You cannot classify people as friends if they are business associates'. He did not use any customers or suppliers for information; he even suggested that it was not really helpful to know what others were doing. He made no attempts to build contacts; he claimed that his business worked on quality and price, nothing else. This situation made us re-examine our emergent themes and explanatory links; how could he operate so differently? His business held the solution. Tony was a contractor, supplying civil engineering and building services. Although this was a little different from other respondents, it was not categorically different. However, we found that his customers were different – he supplied mainly local authorities and public bodies. In essence, he competed on price for jobs, and in this context personal contacts have only limited value in open tendering. Calls for tenders are widely advertised, customer-supplier loyalty is not a factor and contracts are allocated on the basis of the cheapest price. We noted that Tony had never expanded his business into the private contracting field. We obviously do not know whether this was the chicken or the egg! Nonetheless, the deviant respondent's attitudes and behaviour could be explained by the very different competitive context in which networks carried no advantage.

Discussion of findings

Our study considered the process of tie creation and use of entrepreneurs' strong ties, and our findings suggest that it is helpful to move beyond the strong- and weak-tie dichotomy if we are to understand entrepreneurial

networks. Instead, our work illustrates that strong-tie entrepreneurial networks are a continuum of different sorts of ties distinguishable by the nature of the link, as tightly or loosely coupled.

Our sample reported a tripartite typology of strong-tie nodes, in which the defining characteristic was the nature and intensity of the relationship involved. The three nodes were found to be located at specific points along a continuum of relationship intensity. Family ties were most intense, based on ties of blood or marriage. Business contacts were quite intense and were based on mutual knowledge. Suppliers, customers and competitors were most loosely coupled and the relationship, though still based on trust, was maintained for mutual advantage. Characteristics and consistent outcomes were also ascribed to the relationships located on each of the three nodes. This, and the deviant-case test analysis, suggests that the node-based typology enjoys a certain robustness.

Our findings also provide evidence supporting the emerging view that strong ties may not in fact be characterized by the liabilities previously ascribed to them. They seem, rather, to be more valuable than originally anticipated, in terms of both the resource heterogeneity of strong ties, and their role in bridging structural holes. In contrast to much of the literature on the subject, was the finding that resource heterogeneity was spontaneously claimed by our respondents for many of their alter egos, including the most intense family ties. In practice, the social homogeneity of close ties did not seem to generate resource homogeneity.

Conclusion

The objective of this study was to develop and extend our understanding of Granovetter's (1973) strong- and weak-tie concept by exploring the characteristics, nature and content of strong ties. Our findings demonstrate that strong ties are indeed important, and our respondents emphasized the role of intense ties on which they were clearly dependent. Our analysis related the category of tie to the functionality of that tie, and found that the provisions of each category of tie differed. Family ties were critical at start-up and were important for the continuing development of the business. They provided hard financial resources and softer support mechanisms. The category of former business associates played a key role as sounding boards and mentors. These ties grew more intense over time, as trust developed within the relationship. Suppliers, customers and competitors acted primarily as informants, sharing information about competitors and the market. The different nodal categories of ties identified provided different resources,

and may be more or less important at different times in the firm's life. A defining characteristic of entrepreneurial networks is that they represent a social locus where organization and individual meet; they are the nexus of congruences.

This suggests a certain dynamism in the interactions between the entrepreneur and the socioeconomic landscape in which the entrepreneur and the business move. We tend to think of ties as fairly static, perhaps evolving, but slowly, and of course, as being either strong or weak. The literature certainly recognizes that the socioeconomic context also changes, but much of network literature also views much of this in freeze-frame, snapshots of the landscape at some fixed moment in time. This is perhaps a result of the quantitative methodological approaches more frequently used, which must by necessity capture essences that are frozen in time. But significantly entrepreneurship is about change; entrepreneurs both create change and respond to change; their natural milieu is in movement and change. Our study was able to capture some of these movements; we collected the histories of the business development; we saw how they evolved by navigating a pathway through the changing landscape. This in itself is not new, but what we feel this study contributes is a fresh perspective on how evolving ties provide a routemap, even a structural pathway for the navigation of change. To try to explain this interaction in space and time, imagine the socioeconomic landscape. We are at a fixed point, our beginning or starting point; this is both spatial and time-bound, now. This landscape stretches far before us; those parts near us, within sight, are becoming familiar. We know our family; they know us; so these strong links provide a secure base for the expedition. Less clear, but in the middle distance of this imagined landscape are our business contacts. They are familiar, but often from a different context, so in some ways familiar strangers. Their position on the horizon of our emerging landscape is less clear, but as we move forward, into the future of the business and forward into less known territory, they signpost this territory for the business because they know those aspects of the terrain. Farther still is the unknown and perhaps unknowable future of the business. This becomes a reality in terms of our customers and suppliers, our third node. These particular ties are the future, but they may also create the reality of our business.

Seen this way, we can imagine ties as a structural gridwork stretching out over time and space. Moreover, we can see how this relates to Burt's (1992a) conception of structural holes. If these holes are information and resource gaps in our socioeconomic landscape, ties do form, not only bridges, but also a latticework of interconnected ties in space and time. However, it may be

easier to grasp these as dynamic links, each with particular structural qualities.

We also found that, as a relational artefact, ties cannot be looked at in isolation, nor do they exist in isolation. Ties are bound up in the social and business context. This study suggests that entrepreneurs should focus their attention on existing ties. Furthermore, the nature and use of ties varies and may well change over time. This is clear, but less clear is the limitation of our study. Our sample was purposeful, selected on the basis of our knowledge of their strong-tie network, so we can expect a bias towards the use of strong ties. But even with that caveat, the evidence of heterogeneity of resources provided by strong ties was convincing. Moreover, the descriptive categories developed from the data, the nodes, were readily distinguishable in terms of the nature of the tie and the functionality of outcome: hence both structural and relational. This too may be an outcome of the uniqueness of our study context. A final caveat is that we hint at linearity in the model and this may be an outcome of our analytic approach. By looking at history, one tends to see progression, even if this is simply a serendipitous collection of unrelated points in time. Nonetheless, our results seem sufficiently interesting, and our approach sufficiently robust, to warrant further investigation. Accordingly, we propose that this research be expanded in scope and that our model is evaluated using a larger-scale quantitative study to extend the generalizability of our findings.

In terms of methodological considerations for network research, the use of qualitative techniques provided an effective way to explore, compare and contrast the characteristics, content and nature of strong ties. The richness of our data illustrates how some of the measures of structure can really only be explored using qualitative techniques. For example, our study demonstrated the importance of the intensity of the relationship. This would be very difficult to understand by a quantitative approach. Researchers may impose assumptions about structure, so that the position on the network is what is measured. Yet we have shown that structure and outcome appear to be related to the very nature of the ties. At the least, it is extremely difficult to understand the structure of a network without understanding the relationships from which it is formed. A snapshot at a particular point in time of that relationship is unlikely to capture all the richness of the dynamics.

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Note

¹ Interconnectedness measures the number of network contacts who know each other, as well as the 'central' entrepreneur.

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