A multi-dimensional view of entrepreneurship
Towards a research agenda on organisation emergence

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Abstract This paper attempts to synthesise the theoretical research on entrepreneurship and social capital undertaken in previous studies, and presents a multi-dimensional view of entrepreneurship. In examining overviews of past single perspective entrepreneurship research, this study shows that the primary role of entrepreneurs in organisation emergence is to acquire knowledge and create social capital properly. This process is necessarily accompanied by creation of knowledge communities to establish the domain consensus of new organisations among various stakeholders paying particular attention to the fragility and dysfunctional side of entrepreneurship and social capital. The paper concludes with a hypothesis and suggestions towards a future research agenda. It is hoped that, as a result of this theoretical development, this paper will help to focus greater attention on the concept of entrepreneurship in studies of management development.

1. Introduction
This paper explores theoretically from diverse viewpoints the role of the entrepreneur during organisation emergence and the development process. With globalisation accelerating, the competitive relationships between individuals, organisations, regions, and nations are becoming increasingly complex and interlocked, regardless of the size or development levels of the firms; industrial structures are also rapidly changing. Studies of entrepreneurship and new organisations confront the researcher with the difficult problem of identifying the essential properties in this multi-layered, dynamic process.

Under such globally and locally competitive circumstances, enablers to enhance the vitality of entrepreneurs have been discussed frequently in terms of relationships with the supporting foundations of the local economy and industrial clusters. This paper examines the theoretical roles and implications of “entrepreneurship,” which is a key concept for understanding future socio-economic changes, and attempts to move away from the single dimension view to a multi-dimension view, while focusing on organisation emergence.

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In the creation of a new organisation, the vision of the founder must be reflected in a specific strategic domain, which, however, cannot be established through one person’s single, key decision making. Instead this is created by the elaborate editing of knowledge through complex chain reactions. In this process, not only the traditional industry-university linkages, but also multi-dimensional partnerships with investors and customers are thought to play a vital role; however, the conditions and circumstances of this process have not been discussed much, either theoretically or systematically. This paper attempts to derive a new hypothesis in this regard, focusing on past literature and surveys.

Hence, this paper will present the future new research agenda on organisation emergence and development from a multi-dimensional view of entrepreneurship. We attempt to synthesise the theoretical research on entrepreneurship and social capital undertaken in previous studies.

2. Perspectives on entrepreneurship: macro level, micro level and meso level

Macro level perspective
Entrepreneurship is not a new subject in social science. The concept of entrepreneurship has regularly been studied from a very wide range of perspectives in every discipline from psychology to economics. In particular, entrepreneurial behaviour is one of the enablers of emerging and growing organisations that have been examined from multiple viewpoints in management research. These studies can be roughly divided into three perspectives, according to which factors of organisational growth are more emphasised, external or internal factors, and their interaction process.

The former approach is the perspective based on environmentalism, which is characterised by studies based on viewpoints of organisational lifecycle or organisational ecology (Quinn and Cameron, 1983; Whatten, 1987; Hannan and Freeman, 1989). These macro perspectives focus on the determinants of organisational growth for the long term and their effects. The focus of inquiry in this discussion is what entrepreneurs can achieve in terms of wealth creation. It is generally the point of view taken by economists such as Schumpeter and Kirzner.

This macro approach can be divided into types of study: on the one hand, studies that attempt to identify environmental factors that give rise to large numbers of entrepreneurs and to identify various cultural traits of specific locations or ethnic groups that encourage economic success; and on the other hand, studies that shed light on institutional factors such as labour markets. For example, the opportunity structure theory (Kim et al., 1989; Fernandez and Kim, 1998), which focuses on the occupational choice of immigrants and independent enterprises, regards the differences of language, nationality, and educational background as factors that alienate
such people from the labour market. While the opportunity structure theory focuses on alienating factors of the labour market, Pennings (1982a, b) statistically identified the direct relationship between the economic growth rate of an urban area, the number of universities and the clustering phenomenon of start-up small and medium-sized businesses in a specific field, and noted that growing industrial agglomeration promotes entrepreneurial activities and facilitates flows of technology and human resources. Kats (1991) also showed in his study that growth in the number of small and medium-sized businesses in the early 1970s was attributable to the rapid increase in entrepreneur training programs in the late 1960s all over the USA. Although this perspective, based on environmentalism, provides a deeper insight into the role of the entrepreneur in economic society, it seems to not address the major driving forces behind organisational growth.

Micro level perspective
On the other hand, the second perspective is to consider the concept of the entrepreneur from the psychological or sociological points of view at a micro level. There are two approaches to the micro level studies of motivation and background of entrepreneurial activities: the emotionally deterministic approach and the socially deterministic approach. One of the pioneer studies based on the former that provided a micro-analytic framework is “Achievement Motivation” by Macleland (1961), who statistically identified the causal relationship between economic progress and achievement motivation. However, as Kets de Vries (1977) points out, this approach is an over-simplification because it overlooks the fact that various experience-based processes indicate an interplay between high achievement motivation and entrepreneurial traits; therefore, the point of the argument has shifted to the social environment surrounding entrepreneurs (Bygrave, 1989; Gartner, 1988, 1989). Researchers now consider that entrepreneurial activities are not directly induced by high achievement motivation but through interactions with social factors that support and promote independent enterprises.

In this sense, we need to pay attention to the dynamic interaction process between the internal factors and external factors in order to set the theoretical perspective. These micro and macro approaches should be systematically examined within the framework of the interdependence of entrepreneurial activities and the environment from the point of view of internal and external resources. The perspective that places greater stress on internal factors and their interactions in an organisation is examined in a series of studies that focus on organisational growth theories. Such studies support the traditional lifecycle model, whereby each organisation goes through several growth stages by trial and error (Penrose, 1959; Haire, 1959; Greiner, 1972).
**Meso level perspective**

These growth-based organisational studies, derived from an organisational approach which focuses on the acquisition, accumulation, and distribution of resources, are also called the “resource-based view of the firm”. They helped accumulate empirical knowledge on the diversification of firms in the 1970s and the 1980s (Rumelt, 1974; Wernerfelt, 1984; Barney, 1986; Mahoney and Pandian, 1992). If each firm possesses core management resources as advantageous organisational assets, the resources enable the firm to achieve great operational success if effectively used. This resource-based view of the firm also greatly influenced studies of firms’ start-ups (Chrisman, 1999).

The basic premise of the resource-based view of strategy is to understand the success or failure of firms in the combination of internal and external resources. As in the case of high-tech firms, where empirical studies often focus on original technology development and procurement of funds, these views assume that the existence of dominant resources and technology is a prime prerequisite for the birth and development of a new firm. To be sure, it is not easy to create a new firm and achieve remarkable growth in an established economy. The proper accumulation and distribution of management resources may be equally important for small and medium-sized firms. Isolated resources are distinguished from the integrated organisational competences that combine them.

Firm-specific management resources derived from the firm’s founders or business administrators tend to determine the start-up process of a business as well as its early performance because an owner of scarce resources is more likely to obtain profits. Therefore, each new venture focuses on accumulating specific management resources through unique business development. In addition, because it is difficult for other firms to imitate or acquire through market dealings such path-dependent and firm-specific management resources, they can be an important advantage over existing large firms.

The discussion deriving from Penrose (1959) indicates that internal factors that drive the long-term growth of a firm are assumed to be unutilised resources. Such resources originally have various potential uses, and, as she points out, they can be turned into utilisable resources for specific functions by properly directing them according to the entrepreneur’s knowledge. This point suggests that this perspective, based on resource-based growth theory to explain the scope of entrepreneurial behaviour’s role context in the meso-level is not enough to clarify and examine entrepreneurial phenomena substantially.

The founders or business administrators of a firm are expected to play their entrepreneurial role of newly creating utilisable resources by interpreting and exploring new business opportunities, and conceiving new combinations of existing resources. They are, in other words, the creators of new knowledge in that they sort out available resources and reinterpret them from new perspectives to create new value. It is the master utilisation of resources, as well
as entrepreneurial confidence and vision in the behaviours of other firms and consumers that can truly influence the knowledge of members of an organisation. However, the resource-based view of the firm definitely tends to devalue the human actor behind a firm’s resources and to understate potential diversity and the possibility that such resources can be harnessed by human knowledge and beliefs. Every resource depends on a human actor’s interpretation and utilisation. The essential role of entrepreneurial behaviour should be addressed more theoretically.

3. Functional views of entrepreneurship  
**Innovation and taking risks**  
The definition of entrepreneurship has been traditionally concerned with roles and functions of the entrepreneur. The concept of entrepreneurship is defined in many ways. At the same time, it is often pointed out that the conceptual framework of entrepreneurship is not always clear (Low and MacMillan, 1988; Shane and Venkataraman, 2000). In the broadest sense, entrepreneurship is defined as activities to promote socio-economic stabilisation and effective utilisation of resources by stimulating socio-economic progress, creating new values, and providing employment opportunities. This concept is considered to have some major functions in terms of entrepreneurial activities.

Entrepreneurs are likely to take proactive action with risk bearing to promote innovation (Miller, 1983, Covin and Slevin, 1991). First, most prior discussions on entrepreneurship have focussed on innovation factors. Repetitious and routine activities of an organisation are fundamentally changed through innovation to create a new environment, and in principle it is entrepreneurs that play such innovative roles. This definition of an entrepreneurial act is derived from the Austrian view suggested by Schumpeter (1971). The carrying out of new combinations to connect resources and people is a major function from their point of view.

The second aspect of entrepreneurship is risk taking. Entrepreneurs are likely to take great risks to explore business opportunities and promote innovation. Knight (1921) places greater stress on this aspect of entrepreneurship. As she points out, there is no guarantee that developed products will sell in the real market economy. Thus, to respond to such a market, entrepreneurs must confront this uncertainty, because they are under pressure to behave according to their speculations, which are not always correct. According to her, it is entrepreneurs that can effectively cope with uncertainties. Combining the foregoing discussion on innovation, taking innovative action ahead of others is always accompanied by risks that are different from those of routine activities, in that mere knowledge obtained through experience may not be sufficient to cope with this uncertainty.
Proactiveness

The third characteristic function of entrepreneurship is its proactiveness in taking action ahead of competitors, and in gaining insights into market opportunities through proactiveness. While the foregoing discussion on innovative activities emphasises the execution phase, the proactive aspect places greater stress on insight into market opportunities to induce innovations. Kirzner (1973), among others, insists on the importance of such insight. Assuming that the knowledge of those trying to enter the market is insufficient, he believes that there are always opportunities to gain unknown profits, and that the role of entrepreneurs is to identify and utilise such business opportunities ahead of others.

However, these theories cannot completely explain the mechanisms of such functions as a pursuit of innovation and risk bearing in entrepreneurial processes. Stand or attitudes in some contexts toward business opportunities, as well as the motives of entrepreneurs for starting an enterprise are also important factors to be examined. Since identifying business opportunities is closely related to motivation, such a dynamic process must be explained (Kirzner, 1997). It is known that motivation has a great influence on the survival, growth, and profitability of newly created organisations (Bird, 1988; Kats and Gartner, 1988; Norris and Carsarud, 1993; Scott, 2000).

Entrepreneurial intention is formed through rational and analytical thinking in social, political, and economic contexts and through instinct and holistic thinking based on individual backgrounds, personalities and abilities (Bird, 1988). How they recognise and understand business opportunities largely depends on prior knowledge and context (Scott, 2000). In general, there are three kinds of entrepreneurship: novice entrepreneurship, serial entrepreneurship, and portfolio entrepreneurship. The mode of information searching and its direction and quality in each category largely vary depending on individual experience and skills (Cooper et al., 1995; Westhead and Wright, 1998, 1999). Although the behavioural traits of each entrepreneur have both internal and external factors, there is no doubt that his/her knowledge system has a great impact on the way the entrepreneur encounters and understands various resources[1]. Each entrepreneur does not develop nor utilise business opportunities in a void, for instance. Thus, entrepreneurs are not so much independent decision-makers as entities that function in social networks (Aldrich and Zimmer, 1986).

Network expansion

Entrepreneurship is often said to be a network activity (Birley, 1984). Expansion of a network is indispensable to firms at their start-up stage (Relnolds, 1991). As Granovetter (1973) puts it, economic activities are at the same time social activities. A business network is not a mere part of a social network but is born from a complex, rich social network. For entrepreneurs,
human relations are always a resource[2]. In other words, the entrepreneur is the tertius guldens, “the third who benefits”, using the phrase of Simmel (1950) (Burt, 1992). They are individuals who profit from the disunion of others in some sense, and have an important function in filling up the structural hole[3] in networks.

There are two kinds of network for entrepreneurs: formal networks (investors, accountants, lawyers, SBA) and informal networks (family, friends, and business contacts). Such networks may gradually develop from small and individual ones to extended networks and vice versa (Dubini and Aldrich, 1991). Social networks are regarded as a united whole of emotional and physical solidarities and are thought to have instrumental, as well as expressive, value in that potential profits may be gained through such networks (Kanai, 1989). Prior studies assume that the density, reachability, and diversity of a network determine a time and space framework within which entrepreneurs, as entities of “bounded rationality” (Cyert and March, 1963), can communicate with each other (Dubini and Aldrich, 1991).

Cooper et al. (1995) in their survey of actual conditions looked at entrepreneurs’ information searching activities and found that the actual conditions of such activities vary widely depending on whether they have prior knowledge about the business area they are entering and whether they have confidence in their success. Entrepreneurial activities do not result from a single decision or process but are a diachronic process based on multiple decisions and actions.

In addition, the entrepreneurial network before and after starting a particular enterprise is not led by a single entity and should be understood from multiple viewpoints of various entities and their organic interactions. The reason why a certain network lends impetus to creation is thought to be because it provides opportunities to newly combine heterogeneous ideas, promote their realisation, and create new activities and potentials through interactions. The importance of networking, the specific roles of key players, and their interactive processes need to be examined.

Team building and organisation creation
The major characteristic of studies on entrepreneurial functions at the start-up stage is that they tend to be extremely practical and normative in analysing factors required for start-ups and their gradual development (Vesper, 1989; Timmons et al., 1989, Timmons, 1994). Entrepreneurs are in a business to build value. The common question is how could they actually build value? Five factors are identified as essential to start-ups: technological know-how; product/service ideas; personal contacts; physical resources; and customer orders (Vesper, 1989).

Although the combination of these important factors in the best order can be considered as a normative model, there is no doubt that such a combination
varies depending on individual activities for various entrepreneurial opportunities and interactions. Since these factors are closely interlinked, it is difficult precisely to distinguish factors from each other, and it is also considered less reasonable and proper that linkages of the factors should be formulated into several fixed patterns (Van de Ven et al., 1984).

In addition, there are three issues that entrepreneurs are likely to confront at their start-up stage; potentially profitable ideas; effective sales development plans; and fund procurement, all of which can be combined into one issue: the need for effective and persuasive business plans. This is why so many prior studies discuss the need for proper business plans and research into know-how.

In the formation process of an organisation, it is naturally its founder that has always attracted the attention of researchers because of his key role and this has been analysed as a major factor in operational success. However, the focus of discussion has recently shifted from the entrepreneur himself as an independent hero acting in a social network to the formation of an entrepreneurial team and its roles (Cooper, 1986; Vyakarnam et al., 1997). Timmons et al. (1989) point out that a start-up team, with the entrepreneur as a key person, plays the main role in applying proper resources to a particular business opportunity, and that such activities can be clarified in an overall business plan. Thus, a start-up team is a group of people who participate practically in forming a business together with the founder. Entrepreneurship’s function is essentially the creation of new organisations in this meaning (Gartner, 1988; Low and MacMillan, 1988; Davidson et al., 2002).

Although start-up teams are highly valued in the evaluation process of venture capital firms, their theoretical examinations are hardly adequate[4] (Timmons, 1994). Also, in empirical studies, there is no further development of the hypothetical discussions on the correlation between the scale of a start-up team and entrepreneurial performance (Van de Ven et al., 1984; Cooper et al., 1989; Kazanjian and Rao, 1999). However, many empirical studies support the view that a firm established by a team tends to achieve greater success than an individually established firm (Cooper and Bruno, 1977; Bird, 1989; Doutriaux, 1992; Vyakarnam et al., 1997). The main roles of a start-up team are to orchestrate various resources required for start-up so that they complement each other, and to set up and carry out business plans. Conceiving a business plan is essential to implanting the philosophy and values of the entrepreneur in the team, implementing various strategies and operations, and determining financial and investment directions (Dollinger, 1999). However, it is not easy for entrepreneurs to collect various heterogeneous resources widely from social networks to set up long-term, attractive themes of activities and especially to implement them. The whole process is not a simple linear process of good inputs producing good outputs.
**Dysfunctional aspects of entrepreneurship**

Therefore, the social context of entrepreneurs should be examined carefully, based on inter-organisational interactions with the active environment in its own context. However, very few studies have been done addressing dysfunctional aspects of entrepreneurship in their interactions. There have been numerous failures of new business everywhere. There is little theoretical or empirical research concerning entrepreneur activity, particularly on dysfunctional aspects.

Kets de Vries (1977, 1985, 1998) pointed out that dysfunction[5] is the essence of entrepreneurship because of entrepreneurs’ fear of success and failure, strong vision and obsession, high degree of independence and dependency on stakeholders and that they inevitably face a lot of challenges to maintain the balance[6]. The difference between the opportunist dealer and the successful entrepreneur is that the latter can convince others to share the vision. This force of will and great effort is fundamental to entrepreneurship.

The role of entrepreneurship might need to be understood in both the “functional” and “dysfunctional” aspects of organisation emergence and development. Most of the entrepreneurship research has a tendency to concentrate on the positive side to explain how innovation or network building can technically be conducted by entrepreneurs. Possible problems arising from describing entrepreneurial activity theoretically are not well identified and seldom resolved. Functions are tied to dysfunctions – they are two sides of the same coin. If any system has strong functions, it comes with inevitable dysfunctions, as strong medicines usually come with unexpected side effects. Like drug development, in this sense, there is the effect of dysfunction related to entrepreneurship. Entrepreneurial activity has a tendency toward creative destruction where new combinations of ideas naturally lead to the same constructive development and also to some conflicts and misalignment. To minimise potential conflicts, it is important to consider aspects of social interaction and agreement.

**Social interaction**

Related to this, there is a series of studies that argues that social interactions are essential in the formation of a new venture (Eisenhardt and Schoonhoven, 1990; Francis and Sandberg, 2000; Lechler, 2001). These studies insist on the importance of friendship, affections, and confidential relationships, and point out that emotional or psychological energy has been less valued in recent discussions of strategies and management. They hypothesise that if collaborative experiences are shared among the members of a start-up team, the process of decision making is quicker and involves many heterogeneous members, which leads to constructive conflicts. The team is thought to serve as a medium of task performance so that the accumulation of social interactions has various functions, such as facilitating communication and coordination,
cross-subsidisation, and sharing of norms. Lechler (2001), for example, used a quantitative evaluation model to reason that the higher the quality of social exchanges in a start-up team, the more customer-satisfactory its business planning will be.

The argument that the main role of a start-up team is to design strategic business plans has two connotations in terms of strategic as well as organisational theories. Business plans allow the entrepreneur, using relationships with his/her social network, which may become easily confused at the start-up stage, to function for specific purposes and to draw a line marking the boundary with the outside. In the process of organisational growth, promoting resource exchanges and drawing a distinct boundary through information collection and sense making are essential (Kats and Gartner, 1988). Based on their business plans and future vision, those involved in the start-up can “capture a new reality different from that of repetitious and routine activities through socially-shared knowledge” (Berger and Luckman, 1967).

Kagono (1988) points out that entrepreneurship refers to the activities of changing the existing business paradigms, and to the editing mechanism of structuralising various kinds of knowledge for the creation of a new business. He argues that the prime role of entrepreneurs is not only to utilise business opportunities, which already existed prior to the formation of a new venture, but also actively to connect the establishment of the new organisation with future or unknown opportunities. The other connotation is that future strategic directions are clarified by business plans at start-up. Most prior discussions have focused on the collection of resources and risk bearing, and what coordinates such activities is entrepreneurs’ learning ability and continuous organisational knowledge creation. The breadth and depth of each entrepreneur’s vision in the longer term is possible from the diversified knowledge of the members of the start-up team and the scale of its network.

Each entrepreneur’s utilisation of various kinds of information and resources and his emotional energy are synchronised through various dynamic social interactions, so that a mere business idea can be turned into a new business concept. Kanai (1994) assumes that entrepreneurs’ motivation to create something and their business concepts[7] determine their interpretation and utilisation of management resources, insisting that mere business ideas and the accessibility of such resources are not sufficient conditions for start-up. The strategic business concept of a start-up team makes it possible to utilise various resources without using past industrial practice established by existing large firms, providing a crucial advantage for new ventures.

Organisation domain consensus in emerging process
According to discussions in the field of business administration, each firm recognises its own business and defines it in the rapidly changing environment (Drucker, 1954; Meyer, 1975; Hofer and Schendel, 1978;
Abell, 1980; Sakakibara, 1992; Yamada, 2000). The concept of corporate
domain[8] shows the sphere and directions of corporate activities. Determining
what idea or goal to pursue, what kind of customers to deal with, and what
products or services to provide internally or externally may greatly influence
the activities, survival rate, and growth of each firm and the quality of its
activities (Hofer and Schendel, 1978). Abell (1980) attempted to define the
concept of business domain from the three aspects of customer segmentation,
customer function, and technology. He attempted to modify the traditional
two-dimensional way of defining the concept, such as technology versus
markets or products versus missions, for easier description and comparison of
domain changes.

In defining business domains at the start-up stage, superior innovation
needs to be sought in the sense that the core entrepreneurial activity of
producing new products or services is based on such a definition. However, the
way of defining specific business domains must not be arbitrary or one-sided
as the entrepreneur’s function alone. Domains can be operational only if the
organisational stance towards such domains is accepted by those who provide
support. Therefore, domain consensus, which provides shared awareness for
both insiders and outsiders, needs to be obtained between each firm and
society, and between the members of an organisation and their customers
(Thompson, 1967; Sakakibara, 1992).

Domain consensus is a socially reached agreement on what activities a
particular organisation will or will not perform. In this sense, obtaining domain
consensus is definitely a prime task for entrepreneurs at start-up. Well-established domain consensus is essential for the initiation of any
entrepreneurial activity. Therefore, to understand and analyse the organisation
process of a firm at its start-up stage, complex exchanges and communication
processes between those involved in the start-up must be examined. In other
words, the complex structure and process of social interactions between each
organisation and society, not to mention among the members of the
organisation, must be considered (Figure 1).

In addition to the entrepreneur him/herself and his/her partners, various
individuals and organisations with their own ideas participate in a start-up.
These include venture capitalists, bankers, and local universities, supporting
administrative agencies, potential customers, and mentors. The differences
between their ideas or expectations tend to give rise to a domain gap. This
domain gap, in the broad sense, refers to the nonconformity between the
administrators of a start-up and the external environment with regard to
business domain (Sakakibara, 1992). However, the fact that domains are
defined and their gaps rise shows that there are dynamic social interactions
seeking consensus between various entities inside and outside start-up teams.
By examining this process in detail, start-up teams may identify several
patterns of diversification in their primary task of obtaining social validity for
their parent organisation, supporting groups, potential customers, and various other involved parties (Figure 2).

Burgelman (1988) insists that strategic building should be understood as a social learning process and, in the case of an in-house venture, provides a framework in which strategic concepts for new businesses are institutionalised and recognised. Developing new business concepts after identifying business opportunities and enhancing organisation abilities requires constant learning and the interplay of recognition and business activities and hindsight rationalisation. This social learning process can resolve the above-mentioned domain gaps present at the start-up stage.

Organisation domains established at the start-up stage show each organisation’s cognitive structure of the internal and external environments.

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**Figure 1.**
Basic definition of domain consensus

**Figure 2.**
Dynamics of domain consensus in organisation emergence
When facing environmental diversity and uncertainty, each organisation tends to create a new environment (Weick, 1979, 1995). Domain gaps arising from the diversity of information present in the environment can be a dynamic source of learning and knowledge for emerging organisations.

The function of entrepreneurs and their start-up teams should be examined in terms of domain consensus building and interactions with the environment. The analysis of social interactions within the start-up team alone cannot adequately explain their dynamics. The entrepreneurial group plays an important function in filling the structural hole in networks. It is not a simple nor easy communication process although the structural hole that generates information benefits also generates control benefits, giving the entrepreneurs an advantage in negotiating their relationships. There are two tactical options. The entrepreneurial group can be played off against one another when they compete for the same relationship. Second, they can be played off against one another when they make conflicting demands on the same group in separate relationships. Presumably, there is a high possibility of tension here. What is essential is that the control is quite uncertain in the relationship during the negotiation process, especially among various stakeholders. The knowledge and control benefits are multiplicative, augmenting and actually interdependent on one another, emerging from the wellspring of new organisation dynamism.

In this uncertain process, valid network formations may occur, for example, new partnerships between an entrepreneur and incumbent organisations to reinforce the existing network structure or reshape it. As to our recent empirical survey research in the small to medium-sized enterprise (SME) sectors in Japan, it turned out that 61 per cent of new business founders have a management partner outside their company with whom they have worked in a previous job or with whom they have had a professional business relationship [9] (Yamada, 2003). Next, we will theoretically examine the core partnerships to show how the dysfunction and potential conflicts for entrepreneurs are mitigated by partnership.

4. Concept extension of entrepreneurship

*Partnership and regional context*

Entrepreneurs, in the emergent phase of creating organisations, work in creative partnership with many kinds of people, such as central and local government, previous employers, venture capitalists etc. They have frequently succeeded in ambitious projects in the most unpromising situations with minimal resources. There are several reasons for entrepreneurs to build partnerships. Entrepreneurs need a good business partnership to decrease uncertainty, encourage each other and to complement immature skills and knowledge and bring heterogeneous resources together in new and creative ways to address practical problems.
There is very little research concerning task and role within this entrepreneurial partnership [10]. One reason might be the myth of the entrepreneurial hero. However, entrepreneurship is not now considered in this way. The emergence of a new organisation can be understood at an inter-organisation level. The behaviour of entrepreneurs in an emerging organisation should be examined in the specific local contexts. The social context of entrepreneurship is largely avoided by academics even if it is a fundamentally local process (Schoonhoven and Romanelli, 2001). Every new organisation has its origins locally.

In recent years, a growing number of studies have focused on learning and knowledge creation to explain the advantage of regionality and industrial agglomeration [11]. Although the production sites of manufacturing industries are increasingly moving away from urban centres to suburbs, local cities, and developing countries, certain high-cost regions in advanced economies still keep their competitive edge. This phenomenon clearly shows that learning, as well as knowledge creation, are not easily transferred to other regions, thus demonstrating the advantage of regionality and agglomeration in entrepreneurial activity.

These studies regard the social infrastructure and learning environment in a region as the determinants of competitiveness and innovation and suggest that proximity, research and development (R&D), and industry-university linkage and the sharing of implicit knowledge are factors. The organisational knowledge creation theory of Nonaka and Takeuchi (1995) is also frequently applied to various studies in the regional context.

These studies highlight the relationship between industry supporting organisations and new firms with the potential to become star players in the region [12]. There are three major infrastructures in a learning region: physical and communicative infrastructure, production infrastructure, and the human infrastructure (Florida, 1995).

Porter (1998) points out that while there have been frequent discussions on the influence of economic policies, studies from the viewpoint of the location itself tend to be undervalued. He emphasises that a “cluster” – a state in which related firms and organisations are concentrated in a specific geographical area – has a positive effect on mid-term success. A cluster is a concentration not only of similar firms producing finished products or services, but also of distributors, manufacturers of complementary products, government, universities, think tanks, and vocational training schools – all of which provide professional training, education, information, research, and technical support. The number of such organisations is likely to determine the scale and sophistication of the cluster. Entrepreneurial activities in such a cluster usually aim at enhancing production efficiency and innovation. The basic functions of clusters are sophistication of accumulated technologies and effective utilization of human and financial resources for R&D (Porter and Stern, 2001).
According to Porter, the growth of industrial clusters depends on the competitive environment of firms, demand conditions, material (input resources) conditions, and supporting industries (Porter and Stern, 2001). This view is also consistent with that of Trist (1983) who considers the focusing and development of domains as an important factor in inter-organisational relations. Most researchers agree that in such an agglomeration or cluster, universities play a vital role as a medium promoting communication among various firms and other players.

Starting up in a certain region means a domain selection for the firm. Establishing regional domains to promote a certain clustering pattern is as important a mid-term strategic decision for the firm as the process of determining its own domain at start-up. In this case, the entity that makes such a decision is inevitably the aggregation of various individuals and organisations, including administrative officers of the local government, governors, and residents of the community, core firms and non-profit organisations (NPOs). Therefore, domain gaps arise due to complex power games and interest differences. Under such circumstances, universities are expected to play a main role in resolving these gaps.

University-industry relationship
Attention is being focused on the roles of local universities for encouraging start-ups and improving the innovativeness of localities themselves (Branscomb et al., 1999). Also, with attention concentrating on the importance of knowledge as a factor for economic re-vitalisation (Drucker, 1993; Nonaka and Takeuchi, 1995), universities must inevitably play a role in enhancing the flow of knowledge across organisations. However, there have been few theoretical studies with regard to universities (Merton, 1973; Rosenberg and Nelson, 1994).

The university-industry linkage includes education and collaborative research and is now recognised as one of the most important issues for revitalising industries. First, the university-industry linkage is greatly affected by each country’s history and is not a recent phenomenon even in the USA [13]. The university-industry-government linkage is valuable not only for cross-industrial exchanges but also for efficiency. First, universities and research institutes have sophisticated and state-of-the-art know-how including basic research. Second, since universities and public institutions have networks and social credibility different from those of industry. They may be able to create connections to obtain information and know-how at home and abroad. Third, objective broader viewpoints of universities and research institutes may enable better judgements on the possibility of technological developments or the commercialisation of products. The use of opinions from people outside of profit-seeking domains may be extremely valuable; firms may be able to create social value as well.
However, this kind of role or partnership cannot always be provided by universities. Entrepreneurs are facing difficulties in achieving their own domain consensus. Some results of a survey showed that university-industry linkage is far from the expected level with regard to stability and information disclosure [14]. Because mutual confidence has not reached the expected level, domain gaps have remained unfilled for the most part (Ijichi, 2000). Ijichi (2000) points out that a sharp distinction between public and private interests may exist in university-industry interactions and argues that there is a need to confront issues of non-profitability in management concerning promoting entrepreneurship and partnering with entrepreneurs.

Social capital and knowledge communities
Innovation through university-linkage provides a basis for discussing regional entrepreneurial activities and economic growth. However, for such a linkage to function, various entities including entrepreneurs, researchers, investors, and policy makers must be deeply rooted in the social network of innovative knowledge creation. The domain definition of each entity must also be based on consensus and mutual trust. The importance of mutual trust [15], developed through the social interactions of start-up teams, was discussed earlier in this paper. There are also several studies that place greater emphasis on the concept of social capital to explain the importance of the knowledge community in a wide range of disciplines (Bourdieu, 1983; Coleman, 1988; Baker and Obstfeld, 1999; Burt, 1992, 1997; Putnam, 1995; Fountain, 1998; Nahapiet and Ghoshal, 1998; Adler and Kwon, 2002). Social capital, as a core community resource, is thought to not only reduce transaction costs but also to have several benefits.

The concept of social capital has a number of definitions [16]. As a comprehensive overview, Adler and Kwon (2002) defined it thus, “Social capital is the good-will [17] available to individuals or groups. Its source lies in the structure and content of the actor’s social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor”. This definition provides an important perspective for further discussion. Social capital reduces transaction costs by developing regularity and standards of conduct within a network and promotes mutual cooperation and knowledge exchange and creation. Social capital can determine the quality of network relationships. At the same time, social capital has a negative as well as a positive function [18]. Thus, entrepreneurs need to be aware of the nature of social capital in the relevant context.

For example, the role of social capital in a certain region can also be discussed in terms of the maturity of the entrepreneurial infrastructure that is a base for spontaneous growth of new ventures (Flora and Sharp, 1997). Specifically, industry-university linkage is a complex process different from that of linear models for R&D that follow a basic, application, development sequence. To capitalise on various business opportunities, entrepreneurs must
explore various methods of directly assessing, for example, customer requests and proposals from production sites. This requires networking and communication, so that more sophisticated knowledge and basic research can be used and so that the latest implicit knowledge can be exchanged through contacts with universities.

Universities play a key role in accumulating high-quality knowledge, and are a central part of regional industrial clusters where various entrepreneurial activities are performed. University-industry relationships are three-dimensional, linking education, research, and business creation – all of which complement each other. Although each has its own time span – long-term, mid-term, and short-term, respectively – they are considered to be closely related.

The educational function is the most basic dimension of university-industry linkage. Education services offered by a university not only include conveyance of basic knowledge and enhancement of students’ mental faculties, but also application of practical knowledge. The former is a common function of universities. In terms of the latter, universities have internship programs that provide “on-site knowledge” regarding firms and administration. The education linkage is the most important of the three, because the function, to complement the flexibility of a social network, depends on the reputation built by abundant human capital, including university graduates (Pennings et al., 1998; Florida and Cohen, 1999). R&D that undervalues the long-term process of building mutual trust and the short-term expectations and business investments may induce erroneous decisions and also hinder effective policy making and management strategies.

Except in rare cases, fruitful university-industry exchanges can be achieved only if domain consensus is reached and if those involved are confident of carrying out their expected roles. Based on the demographic data of Dutch accounting firms for over 100 years, Pennings et al. (1998) conducted an empirical study and reported that the bankruptcy rate of firms immediately after their start-up was as high as 61 per cent, which is comparable to that of firms older than 15 years and which clearly shows the weakness of social and human capital. Social capital may be the key ingredient for start-up teams based on technological know-how.

In the process by which new knowledge is created from external communication relationships in different contexts or conditions based on industry-university networks, differences arise depending on whether such exchanges take place in their true sense or not. Merely providing places in their artificial or superficial sense may not lead to the creation of practical knowledge communities. Although relevance to social capital is not necessarily clarified, there are several studies on this issue (Itami, 1999; Kanai et al., 1999; Baker and Obstfeld, 1999; Kurogh et al., 2000).
Baker and Obstfeld (1999) argue that social capital can be simply built through entrepreneurial activities as a function of network expansion[19]. On the one hand, their analysis suggests that providing long-term cross-subsidisation should lead to the formation of social capital. On the other hand, the balance of benefit and risk in the social capital creation context should be examined from the point of contingent factors, as Adler and Kwon (2002) point out. The social structure and sources of social capital, such as opportunity, motivation and ability change, especially in the emergence of new organisations that entrepreneurs launch.

Nonaka (1998) and Kanai and Ishida (2000) used the concept of “ba,” a Japanese word meaning “place(s),” to explain the foundations for the effective creation, distribution and interaction of knowledge. Ba is defined as a dynamic context, the sharing of space and time under conditions determined by interactions[20]. Itami (1999) and Kanai et al. (1999) identified five determinants of ba: membership, agenda, sensory codes, information carriers, and collaboration incentives. The most important point in their discussion is that they are emphasising the fragility in the fusion process of various factors among heterogeneous actors in the process of organisational emergence.

The creation of ba requires knowledge sharing among individuals regardless of their titles, or in some cases, when they are released from their duties. It is important for entrepreneurs to diversify combinations of resources as openly as possible and to enhance dynamics by internalising the power base of external resources while externalising internal resources in the implementation of networking. This is an extremely fragile process. Kurogh et al. (2000) point out that the process of knowledge creation and sharing requires love, trust, care, commitment, and direct management.

Multi-dimensional view of entrepreneurship
In recent years, there has been a series of studies that attempt to include the important activity of creating social capital and communities in the scope of entrepreneurial roles (Henton et al., 1997; Leadbeater, 1997; Brinckerhoff, 2000; Yli-Renko et al., 2001; Lucio, 2001). Henton et al. (1997) proposed the new concept of civic entrepreneur, which combines the two important American traditions of entrepreneurship and community activity. Civic entrepreneurs function as a medium to create collaboration networks of businesses, government, educational organisations, and communities. They are not necessarily involved in starting a business, but have a leading role in forming communities that support start-ups.

For example, Frederic Terman (Saxenian, 1994) helped develop the foundation for a region of technology and industry, and built a community of engineers and researchers on the periphery of Stanford University. Later, his efforts led to an extensive industrial complex called the Industrial Park. The Park has grown to become one of the largest industrial regions in the USA and
provided the foundations for Silicon Valley today[21]. These civic entrepreneurial activities of Terman and Miller should be clearly distinguished from their traditional roles as supporters or coordinators of entrepreneurs. The communities built by their activities have helped entrepreneurs start new businesses, but from their standpoint, this is the product of their carrying out their own domain definitions.

It should be noted that social activities, including regional community formation, are performed not only through the creation of firms but also through the creation of NPOs. In general, NPOs are different from businesses in that they are based on different organisational principles and their profits are not redistributed to their members. However, in many cases, it is difficult to draw the line between business-type NPOs and socio-centric NPOs, because both types have the same mission to resolve social problems to create a new consensus for building the domain. In addition, those who utilise business power and present a new scheme to resolve social problems, that may include community disruption, are called social entrepreneurs (Leadbeater, 1997; Brinckerhoff, 2000). They address various social issues including welfare, education, environment, poverty, community redevelopment, aid to developing countries, and revitalisation of towns or regions.

Besides business people, researchers and administrators sometimes serve as leaders of regional innovation, before and after business creation, providing necessary support. How they are understood in terms of entrepreneurship depends on what activities are emphasised.

This concept extension of entrepreneurship is not new. In her detailed case study, Ostrom (1965) regards the role of the administrative body in resolving the problem of a ground water basin as that of a public entrepreneur. She clearly distinguishes this activity from those based on pure economic motives[22]. While greater emphasis has been placed on the one-sided, self-interested aspect of entrepreneurship, researchers, particularly in Britain and the USA, have been focusing on the view of entrepreneurship based on expansive, social motives (Kanai and Ishida, 2000).

For regional economic revitalisation, multi-dimensional entrepreneurship, which includes civic, social, and cultural factors, must be positively implanted in the regional context. One of the reasons why this process is stagnant is because society’s stance towards entrepreneurial activities tends to be resource-based and boundaries are drawn between economic, public, and industry activities in a single dimensional view.

Lousbury and Glyn (2001) point out, in their research paper on cultural entrepreneurship, that corporate culture as well as social and institutionalised capital are key factors, and argue that entrepreneurs develop their views towards business based on their own situations, establish their reputations as an intangible asset, and obtain necessary external resources to achieve fortune. Herenkson and Rosenberg (2000) compare and analyse the entrepreneurial
activities of university researchers in Sweden and the USA. These studies show the importance of having a multi-dimensional perspective on entrepreneurship.

Entrepreneurship is a creative, and at the same time, destructive activity that develops new domains through knowledge creation. However, there are various approaches and motives for establishing domains involving many kinds of stakeholder. Although somewhat deviating from the main discussion, Florida and Cohen (1999) assume that intellectual workers are motivated not so much by material or financial incentives as by honour, involvement, and social meaning. This assumption might also suggest extended entrepreneurial activities in a knowledge society.

There are two hypotheses on the causal relationship between a knowledge community and social capital related to successful entrepreneurship. One hypothesis is that superior entrepreneurial knowledge communities are created from certain heterogeneous entities of social capital. The other is that the driving force of superior knowledge communities creates social capital. This potentially reciprocal relationship shows that entrepreneurs make endless efforts to carefully seek new differences and meanings among entities. This is the source of vitality in entrepreneurial networking, and entrepreneurs’ commitment to such activities based on their spontaneous motives is the most important factor.

In similar a context, Arthur et al. (2002) proposed the concept of non-financial capital and career capital to cover the human, social and cultural capital in the process of project-based learning. In their discussion, each individual seems to have career capital in career development, and the sponsor-organisation is supposed to possess non-financial capital as intangible assets. There are some missing links between the levels of organisation and individual as the unit of analysis in understanding the long-term project learning process while a new organisation is emerging. These discussions are related to some extent to our question of what is the primary role of entrepreneurship from the multi-dimensional point of view in the knowledge-based economy era.

The function of entrepreneurship could develop and establish a new domain consensus among various stakeholders toward promoting new knowledge creation. This entrepreneurial collaboration process occurs in a dynamically changing environment. In particular, collaboration is an important process in that it involves not only inter-organisational interaction, but also within-organisational interaction, extending to new parties in the same way as corporate venturing or R&D activity. Entrepreneurial collaboration naturally depends on trusting relationships between partners.

From a multi-dimensional point of view, the function of entrepreneurship includes the aspects of creating the necessary social capital to build partnerships among several stakeholders for innovation. The successful collaboration process needs a high level of cooperative interaction, sharing
knowledge and vision, and a strong process of coordination development (Jassawalla and Sashittal, 1998; Tjosvold and Tsao, 1989). In this sense, the term multi-dimensional view of entrepreneurship can be used to describe both phenomena, new knowledge creation development (new products and service creation) and knowledge community development. These two phenomena cannot be divided in understanding the multi-dimensional view of entrepreneurship.

5. Concluding remarks
This paper has theoretically examined the concept extension of entrepreneurship from multiple viewpoints and draws the following hypothetical conclusion. The primary role of entrepreneurs in organisation emergence is to properly acquire knowledge and take advantage of social capital. Traditional studies on the role of entrepreneurs at the start-up stage tend to be extremely practical and normative in examining the necessary resources and their gradual growth. In most cases, they merely list indispensable management resources, and insist that such resources should be obtained in social networks whose scale and density vary depending on the stage of development.

This paper attempts to shift the focus on entrepreneurs’ roles from the predominant single dimensional perspective to the strategic-domain perspective based on a multi-dimensional view, assuming that the use of any management resource depends on the interpretation of entrepreneurs’ or start-up teams’ partnership paying attention to the context. The multi-dimensional focus of this paper identifies two basic roles of entrepreneurs. First, entrepreneurs clearly define their organisation domains, contemplate the gaps between various interested parties rooted in the region, and obtain their consensus. This process is necessarily accompanied by knowledge creation in knowledge communities within a social network.

The second role of entrepreneurs in emerging organisations is to create or obtain social capital necessary for establishing their domain and building consensus. Various interested parties, including involved supporters, have their own domain definitions based on their own contexts. Their activities may be based on public interest, and they may become estranged and lapse into disruption in the prisoners’ dilemma situation. This is particularly true of collaboration, or supporting activities, by different sectors or industries in undeveloped relationship settings. Therefore, social capital, which serves as the driving force behind such activities, is an essential condition for the creation and functioning of knowledge communities as practical units. Also, we have attempted to suggest that this reciprocal relationship process between a knowledge community and social capital related to entrepreneurship can only be understood from a multi-dimensional point of view.
Theoretical implications

The theoretical implications of this study are as follows. First, the emergence of an organisation is based on knowledge creation theory, which differs from traditional management and operation theories. The process of organisation formation includes domain establishment for new products and services to create new value. Nothing comes from nothing in socio-economic activities; there must be various organisations or networks in the region to enable the creation of new organisations. Various kinds of knowledge and technology and the interactions between entities with different purposes promote the creation and growth of organisations, which in turn affects regional economics.

In the reverse situation, the disruption of the domain consensus of existing organisations causes domain gaps, leading to new knowledge conceptions and entrepreneurial activities. In this way, we push forward a nascent stream of literature focusing on a multi-dimensional concept extension of entrepreneurship to emphasise the role of social capital. Our point of view as to the relationship between entrepreneurship and social capital is cautiously optimistic but it is important to synthesise the two concepts on current topics in phenomena of wider entrepreneurial activities. The concept of entrepreneurship might be given greater attention in studies of organisational learning and management development as a result of this paper’s theoretical development.

Second, while modern capitalism has become pervasive and people’s sense of value has diversified, communities are often disrupted and problems arise that existing administrative bodies cannot cope with. To resolve these social problems, the situation in which government and administration monopolise associated markets may be changed with the development of multi-dimensional linkages among entrepreneurs, administration, and NPOs beyond traditional and organisational boundaries. To understand this trend theoretically, it is necessary to re-examine the activities of entrepreneurs and other interested parties arising from the gaps or overlaps of the defined domain. Even for the successful case of one start-up or one NPO activity, the multi-dimensional view of entrepreneurship requires analysis of domain gaps and consensus from various viewpoints, including organisational and strategic. The elements of this multi-dimensional view of entrepreneurship may stimulate an even stronger engagement between knowledge community development and management research on change and innovation. This paper encourages the exploration of multiple levels of analysis and the reciprocal study of contexts and actions in a changing environment.

Practical implications and suggestions for future research

As for practical implications, domain gaps and consensus building taking account of the fragile and contingent nature of social capital, are two important issues for the management of relationships between entrepreneurs and various
interested parties. There must be knowledge that cannot be obtained from the perspectives of mere promising technology and expanding markets. Although various heterogeneous entities and the interactions of their knowledge are often emphasised in the discussions of how superior knowledge communities are created, managers or entrepreneurs who own or create social capital itself should also be included in this argument. Also, the dysfunction of entrepreneurship and social capital can be considered in future discussions in a multi-dimensional way, in the phase, not only of the organisation emergence, but also the organisation development.

The most important practical implication is that training in social skills is not only significant to network expansion, and indirectly management development, but also can help many entrepreneurs’ succeed in new business creation to directly manage stakeholders’ relationships. At the same time, this theoretical development suggests that plural relationships might be more important in between entrepreneurial partners than just the exploitation of business opportunities in the long-term.

This study merely sets out to provide hypotheses on the research agenda on organisation emergence in a knowledge society. The assumptions and arguments in this paper will need to be examined in the future based on empirical studies. There are still many issues remaining, including the roles of the entrepreneurs in the domain change to guarantee long-term growth and the analysis of strategic domains in a comparison between spontaneous entrepreneurial activities in a region and the activities of an immigrant or international entrepreneur based on a different background in society.

While many aspects of the collaborative process among different actors have been discussed in the management literature, the connection between collaboration and partnership has remained largely unconsidered from an entrepreneurial point of view. Relational quality and stability are crucial in order to utilise resources and knowledge embedded inside the organisation across the boundary (Arino et al., 2001). Therefore, a potentially important context for the process of entrepreneurial partnership evolution would need to be clarified. Partnership has been an overused term in the literature for a long time, without ever having a strict definition.

The concept of partnership is especially unclear with respect to the unit of time and level of analysis in organisation emergence and development. Coincidently, some writing on leadership has begun to deal with this type of partnership as a form differentiated from team concepts (Heenan and Bennis, 1999; Sally, 2002; Segil et al., 2002). What seems to be lacking, however, is to construct the framework of entrepreneurial partnership evolution as perpetual collaboration creating innovation through successive organisation emergence and the development. The quality and the character of relationship emergence among joint-leaders or joint-entrepreneurs should be examined well in future research, based on multi-dimensional view of entrepreneurship.
Notes

1. To become an entrepreneur is, so to speak, a trial-and-error learning process of obtaining knowledge and creating something new through various activities (Minniti and Bygrave, 2001). Such entrepreneurial activities should be understood as process-conscious activities rather than a single event. Entrepreneurial opportunities are more like dynamic, long-term opportunities, which may change throughout the career of each entrepreneur. In fact, it is known that there are entries into certain businesses from various other fields according to the potential career lifecycle of each entrepreneur (Harvey and Evans, 1995).

2. For example, venture capitalist funds are not resources per se, but will have a value depending on the knowledge of the entrepreneurs who encounter and utilize such funds. The ability to create new knowledge by combining internally and externally acquired knowledge is thought to be an innovative ability that affects the success of small and medium-sized firms (Lipparini and Sobrero, 1989).

3. A “structural hole” is defined as a relationship of non-redundancy between two contacts for network benefit (Burt, 1992).

4. Traditional organisational theories argue that the foundation for organisational homogeneity and inertia is built by the primary group or the leader of a new organisation, who imprints a sense of value at start-up in the members of the organisation. But there is no further development in these theories (Selznick, 1957; Stinchcom, 1965).

5. The discussing dysfunction with organisation started from the problem of “bureaucracy” with the classic assertion of Merton (1968). It is rather hard to grasp in the case of organization emergence but essential to understand the “function” of entrepreneurship correctly.

6. Kanai (1989) pointed out that entrepreneurial networking activity can be characterised by the several features of paradox. Also, Kets de Vries (1977) summarised the entrepreneur’s inseparable shadow as the various psychological forces: environmental turbulence, perception of rejection, high perception of control, identity confusion, Anger, hostility and guilt.

7. Kanai (1994) emphasised the difference between a business concept and just a business plan. A business plan is just written in a paper but a business concept includes the more detailed information and process knowledge among entrepreneurs and the stakeholder.

8. It is thought to be Drucker (1954) who first posed one of the most important questions for firms, “What business are we in?” He takes the case of Sears as an example in his book to point out that any business is created and managed by humans, and entrepreneurial activities cannot be defined and explained in terms of the profit maximization alone.

9. This empirical survey research in the SME sector in Japan was led by the Japanese SME agency. The partner outside of a company tends to have experience as a founder (59.5 per cent) and also in different industry segments (56.6 per cent).

10. For example, see the Marshack (1998). She explores the partnership of entrepreneurial couples in long time career level.

11. There have been remarkable studies with regard to regional learning and knowledge creation. The local milieu theory by GREMI (a European research group) which is represented by Camaguni (1991), the learning region theory suggested by Florida (1995), the collective learning process theory by TSER Network (Keeble and Lawson, 1998), and studies by Maskell and Malmberg (1999) and Boekema et al. (2000) are examples.

12. Both in the USA (Dorfman, 1983; Feldman and Florida, 1994; Saxenian, 1994) and European cases (Morgan, 1997; Scott, 1988; Collinson, 2000), the roles of supporting organisations are remarkable.
13. According to Mowley and Rosenverg (1989), universities, mainly those with agricultural science and engineering departments, were established in each state of the USA based on the land offers of the Morrill Act of 1862. These were committed to supporting local industries. The university-industry linkage in the USA was reformed in the mid-nineteenth century and the Second World War, when large-scale government investments were made. Recently, universities tend to make their own profits (Etzkowitz, 1999).

14. This survey research was commissioned by the Japan Small and Medium Enterprise Agency in 1999.

15. Yamagishi (2000) indicates that trust as a positive cognitive bias in processing information about the trustworthiness of potential interaction partners in the course of his long study using an experimental approach. His emancipation theory of trust will be related to the competence of entrepreneurial partnership at the empirical level of management research.

16. Hisrich and Levin call social capital on “umbrella concept” to cover many properties.

17. This good will is defined as the others’ valuable resource; sympathy, trust, forgiveness offered by friends and acquaintances (Dore, 1983; Adler and Kwon, 2002).

18. As with other investments, unbalanced investments in social capital transform potentially productive resources into a constraint and a liability. Also, there can be negative effects for the broader stakeholders when the social capital is beneficial to the focal actors (Adler and Kwon, 2002).

19. According to them, opinion gaps arise when various entities including entrepreneurs are linked in turn to the development of a network. Two kinds of strategy are likely to be conceived: non-consolidation strategies that focus on short-term profits by denying linkages to other entities, and consolidation strategies that attempt to gain advantages by filling the gaps among such entities.

20. There is the physical ba, the virtual ba, and the mental ba based on experiences or ideologies.

21. In addition, the Smart Valley initiative led by Professor Bill Miller at Stanford University, which aims at promoting business and personal exchanges, has been implemented to cope with the restructuring of industries in Silicon Valley. He established a non-profit organisation, Smart Valley Public Corporation, as a core entity for the area and has been an active leader of change.

22. Similar discussions are found in the other case study (Kanai, 1980), which examines the innovative process of administrative organisations and successful university-industry collaboration (Kanai et al., 1999).

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Further reading


