1 ENTREPRENEURSHIP THROUGH SOCIAL NETWORKS

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The formation of new businesses can be conceptualized as a function of opportunity structures and motivated entrepreneurs with access to resources. On the demand side, opportunity structures contain the environmental resources that can be exploited by new businesses as they seek to carve out niches for themselves. On the supply side, motivated entrepreneurs need access to capital and other resources so that they can take advantage of perceived opportunities. A cursory examination of this formulation reveals two essential issues that research on entrepreneurship must address: (1) entrepreneurship is a process and must be viewed in dynamic terms rather than in cross-sectional snapshots; and (2) entrepreneurship requires *linkages or relations* between key components of the process.

Entrepreneurs must establish connections to resources and niches in an opportunity structure, and at some point they must have been affected by relations with socializing agents who motivated them. Stevenson[2] noted that entrepreneurs are driven by opportunity-seeking behavior, not by a simple desire to "invest" resources. By contrast, managers are driven by a concern to invest the resources they manage, treating resources as an end in themselves rather than as a means to an end the way entrepreneurs do. Thus, for entrepreneurs the critical connection is to opportunities, whereas for managers it is to resources.

Traditional approaches to research on entrepreneurship neglect the relational nature of the process. Instead, they treat entrepreneurs either as atomized decisionmakers, operating as autonomous entities, or as prisoners of their cultural environment, predisposed to entrepreneurship. The approach we take, by contrast, focuses on entrepreneurship as embedded in a social context, channelled and facilitated or constrained and inhibited by people's positions in social networks. Our critique of traditional approaches and our proposed alternative are based on Mark Granovetter's thoughtful and thorough critique of explanations for "economic action."[3]

TRADITIONAL CONCEPTIONS OF ENTREPRENEURS

Traditional views of entrepreneurship have emphasized psychological and economic models, and a special kind of social-cultural model. In this paper we cannot do full justice to each model and so our objective is to highlight the deficiencies of each in dealing with the embedded nature of social behavior. (The embedded nature of social behavior refers to the way in which action is constrained or facilitated because of its social context.)

Following Granovetter, we have identified two undersocialized approaches to entrepreneurship that treat entrepreneurs as though they were "free agents," operating atomistically in an environment where their cognitions and beliefs drive their behavior.

Personality Theories

Personality-based theories of entrepreneurship posit that people's special personal traits make them prone to behaving and succeeding as entrepreneurs.[4] The list of traits is nearly endless but includes internal locus of control, low aversion to risk taking, aggressiveness, ambition, marginality, and a high need for achievement.

Problems with the Personality Approach

Three problems plague personality-based approaches to explaining entrepreneurship: empirical research does not find strong evidence supporting such approaches, similar approaches in the leadership field have made little progress in finding a generic "leadership" trait, and personality-based models underpredict the true extent of entrepreneurship in the United States.

First, rigorous empirical research has had trouble identifying any traits strongly associated with entrepreneurship, as Brockhaus and Horwitz pointed out at our conference. Most research on entrepreneurs suffers from selection bias—picking successful people and not evaluating their attributes against a comparison group. Research using appropriate comparison groups and other controls has uncovered inconsistent and weak relationships between personality characteristics and entrepreneurial behavior.

Second, a companion tradition in psychology studying leadership has foundered on a similar problem: After three decades of study, using a personality-based approach, investigators still have difficulty identifying leaders outside of the group context in which leadership is displayed. A fair summary would be that no one style of leadership is successful all the time—leadership is very much a contingent phenomenon, with different people exhibiting leadership in different situations.[5]

Third, the personality approach substantially underpredicts the extent of entrepreneurship in the United States as it overstates the extent to which entrepreneurs are different from others. Over their lifetimes, many people attempt, or at least strongly consider, setting up their own business. Hundreds of thousands try every year, and tens of thousands succeed in carrying through by establishing businesses that survive and prosper. All these people cannot be deviant, different, or special, possessing personality traits that the rest of us lack. Considering both the proportion of adults expressing an interest in self-employment and the proportion that actually attempt it, well over half the population must possess "entrepreneurial traits"!

Economic, Rational Actor Theories

Neoclassical economic theories view entrepreneurs as rational, isolated decisionmakers. These models assume that, with clear vision of one's goals and all the required information, a person makes a *decision* to enter self-employment. The motivated person scans the market and chooses the niche that will maximize his or her returns on assets invested in the business. Recent modifications of the neoclassical approach take account of cognitive limits to rationality and information processing, recognizing the level of uncertainty involved in most economic decisions. However, even models of bounded rationality and satisficing behavior retain an emphasis on individual decisionmakers and fail to recognize the embedded nature of economic behavior.

Problems with Economic Approaches

Two problems confront investigators choosing economic, rational actor models of entrepreneurship: Cognitive limits on human behavior are much more stringent than typically recognized, and a strong research tradition in social psychology demonstrates the powerful influence of social factors on cognitions and information processing.

First, empirical research on cognition, perception, and decisionmaking by social psychologists has found that people do not behave the way atomistic models predict they should. A collection of papers edited by Kahneman, Slovic, and Tversky[6] has brought together a vast body of studies showing that people trying to make decisions have problems with (1) judging the representativeness of the information they receive; (2) making proper causal attributions; (3) limiting themselves only to information easily available, rather than searching for the information necessary to make informed decisions; (4) mistaking covariation for causal connections; (5) being overconfident; and (6) wildly overestimating their ability to make multistage inferences. Treated as isolated individuals, people do not measure up to the standards set by atomistic models.

Second, a person who behaved the way atomistic models describe would be an example of social pathology, not a rational decisionmaker, as the person would have to reject all social contact. Ever since the original Sherif[7] autokinetic experiments, social-psychologists have been aware of the effect of social influence on decisionmaking. Persons do not make decisions in a vacuum but rather consult and are subtly influenced by significant others in their environments: family, friends, co-workers, employers, casual acquaintances, and so on.

American farmers are often cited as a classic example of how decisionmakers behave in a true competitive market, atomized and confined to taking individual actions that are futile in the face of unintended collective outcomes. However, the current predicament of American farmers is *not* because they made decisions as atomized individuals over the past decade but rather because they were influenced by their relations with significant others: bankers and commercial credit lenders, agricultural extension agents, and the farm-oriented business press. Farmers borrowed money to expand when they were advised to do so by persons whom they trusted. Paradoxically, we suspect that those farmers who are best off today are precisely those few who *were* most uninformed and socially isolated over the past decade, thus avoiding the influence of expansionist-oriented influentials!

Deterministic, Oversocialized Models of Entrepreneurship

Some theories posit a "propensity to entrepreneurship" based on national origins, culture, or religion. Certain groups are believed to possess beliefs, values, and traditions that predispose them to succeed in business, regardless of where they find themselves. At one time or another, various groups have been labeled this way, including the Jews, Chinese, Japanese, and Lebanese. Such models are deterministic and oversocialized because they presume the existence of a stereotypical standard that all members of the group display, and presume that behaviors are evoked regardless of the group member's situation.

Problems with the Sociocultural Approach

The major problem with this approach is that the groups alleged to possess a propensity to entrepreneurship display their predisposition only under limited, country-specific and historically specific conditions. Prior to immigration, persons originating from alleged entrepreneurial cultures are mostly indistinguishable from others around them, but in their new surroundings they take on entrepreneurial characteristics. For example, (1) Koreans in their native land versus those migrating to Los Angeles, Atlanta, or Chicago[8] (2) Dominicans in their native land versus those migrating to New York City[9]; and (3) Indians on the Indian subcontinent versus those migrating to England, many of whom come from farming or peasant backgrounds.[10] Research findings strongly suggest that we should attribute the flowering of a group's predisposition to situational, rather than deterministic, conditions.

A strong case is often made for "American exceptionalism," alleging that America is "the land of opportunity" that socializes its citizens into becoming aggressive risk takers. Popular magazines and self-help manuals published today tout the entrepreneurial character of Americans and the rebirth of the entrepreneurial spirit. Were such arguments valid, we would expect the rate of business formation in the United States to be much higher than, say, in Western European nations, and the rate of failure to be lower. In fact, accumulating evidence shows that the rates of business formation and dissolution in Western European nations are much the same as in the United States. Pom Ganguly's research for the British government's Department of Trade and Industry has found that new businesses are being added to the British economy at a rate of about one for every ten existing businesses, and businesses are being dissolved at a rate of about one for every twelve existing businesses.[11] These rates are nearly the same as those found by the U.S. Small Business Administration, using the newly constructed Small Business Data Base.[12] Similar results are emerging for other Western nations.[13] "National character" arguments must give way to models based on an underlying similarity in the economies of all Western advanced industrial societies. Rather than posit overdeterministic models, we should turn our attention to the situational conditions under which entrepreneurs enter business.

THE EMBEDDEDNESS OF ENTREPRENEURIAL BEHAVIOR

As an alternative to under- and oversocialized models of entrepreneurship, we propose a perspective that views entrepreneurship as embedded in networks of continuing social relations. Within complex networks of relationships, entrepreneurship is facilitated or constrained by linkages between aspiring entrepreneurs, resources, and opportunities. We take a population perspective[14] on organizational formation and persistence, recognizing the interaction of chance, necessity, and purpose in all social action.

The Population Perspective

From the population perspective, net additions to populations of businesses reflect the operation of four evolutionary processes: variation, selection, retention, and diffusion, and the struggle for existence.[15]

Any kind of change is a *variation*, and the evolutionary process begins with variations that may be intentional or blind. Some entrepreneurs are driven by a single-mindedness of purpose as they attempt to adapt their plans to environmental exigencies. Other entrepreneurs stumble onto opportunities and resources by chance, perhaps never intending to create a new enterprise until an accidental conjuncture of events presents itself. The process of organizational creation depends only on the occurrence of attempted variations and not on the level of ambitions, foresight, or intelligence people bring to the process. (Of course, whether the attempts succeed is another matter.) The higher the frequency of variations, whatever their sources, the greater the chances of net additions to organizational populations.

Some variations—attempts at forming new enterprises—prove more beneficial than others in acquiring resources in a competitive environment and are thus positively selected. *Selection* criteria are set through the operation of market forces, competitive pressures, the logic of internal organizational structuring, and other forces usually beyond the control of individual entrepreneurs. Organizations founded through maladaptive variations in technology, managerial competence, or other attributes are likely to draw fewer resources from their environments and are therefore more likely to fail. Over time, populations of enterprises are more apt to be characterized by the attributes of surviving organizations than by the attributes of those that failed.

What is preserved through *retention* is the technological and managerial competence that all enterprises in a population use, collectively, to exploit the resources of their environment. The survival of a particular business is not terribly consequential to the survival of the population as a whole, as the total population's survival depend on the total pool of technological and managerial competence. Th variations possessed by a particular enterprise contribute to the tota pool but do not determine its collective fate.

The competencies of a population are held by the entrepreneur and their employees. Retained variations are passed on, with more o less variation, from surviving entrepreneurs to those who follow an from old to new employees, some of whom may leave to form thei own businesses. Linkages between enterprises facilitate the *diffusio* of beneficial variations, whereas isolated organizations contribut little or nothing to future generations. Not all variations are diffuse to new entrepreneurs (because of hostility, pique, mistakes, stupid ity, unwillingness to learn, etc.), introducing a large element of un certainty into the process.

A competitive *struggle over resources and opportunities* occur fueling the selection process. Sometimes opportunities are so divers and resources so abundant that a high proportion of entrepreneur are successful and the business population grows rapidly. In ne industries, first movers have substantial advantages and enjoy rapi growth. As industries evolve, however, or resources become mor scarce, shakeouts occur and competition increases the mortality rat with populations stagnating or declining.

Using evolutionary principles, the population perspective explain how particular forms of organizations come to exist in specific kind of environments. A specific environment constitutes an opportunit structure containing a resource pool uniquely suited to organiza tional forms that adapt to it or help shape it. A form well-adapted t a specific environment is probably not the fittest form imaginabl and is vulnerable to entrepreneurial successes in founding new orga nizations with more adapted forms. Nonetheless, it is tolerably fi and probably more fit than previous failed forms.

The population perspective makes minimal assumptions about th cognitive capabilities of humans as information-processors and re ders practically irrelevant any speculations about entrepreneuri personalities. People become entrepreneurs through the conjunctur of the four processes outlined above, and entrepreneurship takes o meaning only within the context of these processes. People are inte tional or purposeful in their actions, but social conditions are suc that we usually cannot attribute organizational formation to any pa ticular, identifiable, intentional act or set of acts.

Environments, as opportunity structures, are diverse, uncertain, and imperfectly perceived, and it is seldom true that a particular individual will both have an accurate view and be aware of it. People are limited by bounded rationality, suffer from limited or biased information and poor communication, and are subject to processes of social influence and reconstructions of reality. Hence, comprehensive explanations of entrepreneurship must include the social context of behavior, especially the social relationships through which people obtain information, resources, and social support.

The Characteristics of Social Networks

The starting point for studying entrepreneurship through social networks is a relation or transaction between two people. Relations may be treated as containing: (1) communication content, or the passing of information from one person to another; (2) exchange content, or the goods and services two persons can exchange; and (3) normative content, or the expectations persons have of one another because of some special characteristic or attribute. The strength of ties depends on the level, frequency, and reciprocity of relationships between persons, and varies from weak to strong. Most research has focused on single content types of relations, and so there is a paucity of information about the effects of types of relations on one another and on the durability of relations composed of different combinations of relations.

Relations between pairs of individuals—entrepreneurs, customers, suppliers, creditors, inventors, and so forth—whatever their content and whatever a person's social role, could be extended and persons included in ways that would expand a unit of analysis indefinitely. A central interest of network theorists, therefore, has been to find ways to set meaningful limits to the scope of a social unit under investigation. The concept of role-set, action-set, and network provide us with some tools for setting such boundaries.

A *role-set* consists of all those persons with whom a focal person has direct relations. Usually the links are single-step ties, but indirect links can be considered by specifying how many steps removed an interacting person can be from the central focal person and still be treated as in the set. We have borrowed the concept of a role-set from Merton, who defined it as "that complement of role relationships which persons have by virtue of occupying a particular so status."[16] Merton gave an example of the status of public sch teacher and its role-set, relating the teacher to pupils, colleag school principal and superintendent, board of education, and pro sional organizations of teachers. For entrepreneurs, we could th of partners, suppliers, customers, venture capitalists, bankers, ot creditors, distributors, trade associations, and family members.

One of the interesting issues highlighted by the role-set conc concerns conflict produced by divergent expectations from meml of an entrepreneur's role-set. Entrepreneurs stand at the cente potentially conflicting demands and expectations from their r sets, such as between expectations from spouses that some time be spent at home versus demands from partners that weekend used to catch up on paperwork. Business survival may depend u the strategies entrepreneurs adopt to resolve such conflicts.

An *action-set* is a group of people who have formed a tempo alliance for a limited purpose. The concept of action-set has l used by anthropoligists, who have found a specific action or be ior, rather than status, helpful as a frame of reference in stud social change. Rather than the ego-centered analysis of rol studies, action-set research examines the purposeful behavior c entire aggregate of persons. Action-sets may have their own int division of labor, behavioral norms vis-à-vis other persons, or cl defined principles for the recruitment of new members. An ac set may be centered around the behavior of one individual, as in sortia of high-tech firms led by the enterprise with the most m power, but that is an empirical question.

A *network* is defined as the totality of all persons connected certain type of relationship and is constructed by finding the between all persons in a population under study, regardless of h is organized into role-sets and action-sets. Given a bounded sy investigators identify all the links between people within the bo ries. Network analysis assumes that a network constrains or f tates the action of people and action sets and thus is more tha sum of the individual links that comprise it.

Critical Dimensions of Networks

Before demonstrating the application of network concepts to t planation of entrepreneurship, let us briefly review three dime of networks that are useful in social analysis: density, reachability, and centrality.

The *density* of a network refers to the extensiveness of ties between persons and is measured by comparing the total number of ties present to the potential number that would occur if everyone in the network were connected to everyone else. The simplest measures of density just consider the presence or absence of a tie, but more sophisticated measures take account of the strength of ties.

Reachability refers to the presence of a path between two persons, of whatever distance. Persons can be ranked by how many intermediaries a path travels before one person is indirectly linked with another. An example of the use of indirect ties in connecting distant individuals was provided by Travers and Milgram in their experimental study of communication channels, referred to as the small-world phenomenon.[17] Arbitrarily chosen persons in Nebraska were given letters to send to a target person in Boston, with the stipulation that the letters had to be channeled only through persons known to the senders. Out of 296 starts, 64 letters reached the target person, with the mean number of intermediaries being 5.2. The importance of linking pins was shown in that 48 percent of the completed chains passed through three central individuals before reaching the target.

The *centrality* of a person in a network is determined by two factors: (1) the total distance from a focal person to all other persons, and (2) the total number of other persons a focal person can reach. (For a comprehensive review of the centrality concept, and alternative definitions, see an article by Linton Freeman.[18]) The more persons that can be reached and the shorter the aggregate distance to these persons, the higher the centrality of a focal person. Persons who have extensive ties to different parts of a network can play a key role in entrepreneurial processes. Persons playing central roles may have ties to more than one action-set or other subset of a network, and they can serve three important functions: (1) they serve as communication channels between distant persons; (2) they may provide brokerage services linking third parties to one another by transferring resources; and (3) if they are dominant or high-status individuals, they may serve as role models for others or may use their position to direct the behavior of action-sets or individuals.

NETWORKS AND ENTREPRENEURSHIP

We turn now to four applications of network concepts to the of entrepreneurship. The first application focuses on the effe social forces that increase the density of networks, and the se application focuses on the role of "brokers" and other perso organizations that increase reachability in networks. The third cation applies Granovetter's discussion of the importance of li diversity to the question of which positions in networks are likely to produce entrepreneurs.[19] The fourth application focus the importance of the social resources embedded in entreprer networks.

Increasing Density through Raising the Salience of Group Boundaries and Identity

Conditions that raise the salience of group boundaries and ide leading persons to form new social ties and action-sets, increas likelihood of entrepreneurial attempts by persons within that and raise the probability of success. Increasing density can oper two levels. First, at a local level, increasing density may lead to tion formation between persons, thus enhancing their coll action capability. Repeated action-set formation, in turn, enh the institutional infrastructure facilitating entrepreneurship. Se if density increases not just at a local level but also at the sy level—such as for an entire ethnic group or as a result of infra tural development—then everyone is in a position to collect the binations of resources necessary for successful ventures. The a tages of local action-sets would thus be eliminated and the group would have an advantage over outsiders.

Opportunities are irrelevant unless taken advantage of, and ple vary widely in their ability to seize opportunities. Auste Aldrich, Bonacich, Light, and others have argued that the possi of exploiting opportunities is linked to a group's internal orgar capacity.[20] Ethnic groups with a high level of self-organizati densely connected network—provide co-ethnics with a coll capacity for organizing new ventures. Indeed, the most salien ture of early business efforts by immigrant groups is their depen on an ethnic community for support. Support is provided at two levels: informal support from the friends and relatives of aspiring business owners, and support from the larger network of ethnic institutions, including religious associations, fraternal organizations, and other small businesses. Strong community support, based on ethnic ties, allows small firms some degree of independence from the host community.[21]

Immigration, especially chain migration, may establish densely connected communities of co-ethnics who cooperate when confronted with host hostility.[22] The early opposition towards Japanese immigrants on the west coast of the United States by labor unions, who feared that Asians would replace them at lower wages, obstructed Japanese entry into the mainstream economy. In response, the Japanese pooled their resources and ultimately captured a significant portion of California's agricultural sector until their internment during World War II. The strong ethnic solidarity formed by union and public hostility generated ethnic networks that supported subsequent generations.[23]

Mutual aid, in the form of capital, credit, information, training opportunities, and the regulation of competition, gave Chinese and Japanese immigrants to the United States a strong base on which to develop small business. In contrast, black migrants from the South to Northern cities after World War I and continuing into the 1950s had few collective organizational traditions to follow, except for religion.[24]

Strong ties carry with them a history of past dealings in or out of a business setting that can form a basis for trust. Whereas banks and other formal institutions outside an ethnic group may have little or no objective credit history for an aspiring entrepreneur, within the group strong ties keep alive the memory of past experiences from which to infer trustworthiness, and these relationships may carry strong expectations of trust.[25] Another strength of strong ties is that "strong ties have greater motivation to be of assistance and are typically more easily available."[26]

Mutual benefit associations, cooperative housing and buying arrangements, joint capital raising activities, and other collective actions provide support for potential entrepreneurs. Recent groups in the United States who have followed this model include Cubans in Miami; Dominicans in New York City's garment trade; Koreans in Los Angeles's liquor, wig, and other retail stores; and Indians in California's motel business. Most small firms are capitalized from the owner's savings, but other sources of funds are often sought. The Chinese *hui*, the Japanese *ko* and *tanomoshi*, and the Korean *kye*—rotating credit associations clothed in their respective cultural traditions—have provided simple mechanisms for immigrants to raise business capital.[27] In these cases, social conditions have raised the salience of group boundaries and identity, leading persons to form stronger ties with one another and often to the creation of effective action-sets.

Increasing Reachability and Connectedness Facilitate the Spread of Information and Resources in Networks

Broker roles are central positions in networks, resulting from people's attempts to minimize their transactions costs. Such positions exist because of their function of linking persons having complementary interests, transferring information, and otherwise facilitating the interests of persons not directly connected to one another. Many entrepreneurs enjoy a broker's position, and indeed Schumpeter's classic definition of an entrepreneur as someone who combines old resources in novel ways seems to equate the entrepreneurial with the broker role. However, we are interested in brokers who are not themselves entrepreneurs but who facilitate the actions of entrepreneurs. (Also, we believe many entrepreneurs do not themselves enjoy the advantages of a broker role.) For example, venture capitalists are as important for their broker role as for the funds they provide to struggling entrepreneurs because they bring together technical experts, management consultants, and financial planners to supplement the entrepreneur's limited knowledge and experience.

To illustrate the importance of broker roles, let us consider an example of a population divided into two major types of social roles—such as entrepreneurs and venture capitalists—where some method of interrole communication is desired by persons in each role. Communication is possible if all entrepreneurs are directly linked to all venture capitalists, thus creating a very complex set of relations. The total number of relations established would equal the number of entrepreneurs times the number of venture capitalists, assuming a link is established in each direction. If there were five entrepreneurs and five venture capitalists, the total number of links would be twenty-five.

Each new person added to either side would increase the number of required links linearly (e.g., if another entrepreneur is added, five more links are created). If another person were added to both sides, the number of linkages would increase as the square of the number added (e.g., if one pair is added, the number of ties jumps from twenty-five to thirty-six). In a large population, the maintenance of such a large set of linkages would be extremely costly, especially if the number of entrepreneurs and venture capitalists were increasing rapidly.

The evolutionary model from the population perspective would predict that any innovation or random variation that created a less costly solution to the problem would be quickly selected. Any cost-saving variation would give the entrepreneur using it a relative advantage, and thus a selective survival advantage, over other entrepreneurs in a resource-scarce environment. Similarly, any new organizational form that enabled entrepreneurs and venture capitalists to communicate with one another more quickly would be in a niche with an initially overwhelming advantage, as there would be a strong demand for its services.

If an intermediary or broker organization were created, linking entrepreneurs and venture capitalists—such as venture capital "fairs" or the joint seminars described by David Brophy[28]—the number of connections in the network would be reduced to the number of entrepreneurs plus the number of venture capitalists. That is, five plus five, joined by a central organization, rather than the five times five situation previously. Each person or organization would have one link to the broker, and the process of sorting out the various messages and information channels between them would be internalized by the broker. This is a complex task, but the broker specializes in the role and only a fraction of the ties would have to be active at any one time. Once introduced into a population, we would expect this function to persist, and the concept of the broker should become part of our industrial culture, passed on via imitation and tradition.

Voluntary associations, trade associations, public agencies, and other social units increase the probability of people making connections with one another. Rates of entrepreneurship should be higher in highly organized populations (i.e., populations with a high organizing capacity). The complex pattern of social organizatio scribed by Everett Rogers and Judith Larson in their book S *Valley Fever* illustrates the synergistic effects of brokers, c meeting points—such as well-known "watering holes" and r, rants—and family and friendship networks that supported th start-up rate in the Silicon Valley.[29]

Social networks build slowly, and thus it could be years bef area reaches a density threshold where reachability and hence preneurship is facilitated. Formal studies are lacking, but it i impression that the time to maturity for the Silicon Valley an Route 128 complex in Boston was several decades. Accordingl expect the Research Triangle of North Carolina to age anothe ade or so before any significant entrepreneurial activity occu present, the spin-off and new start-up rate appears very low.

The Importance of Diversity in an Entrepreneur's Network: Too Much Solidarity Stifles the Entrepreneurial Soul

Mark Granovetter has developed an argument linking the diversi ties in which a person is implicated to the scope of opportu open to that person.[30]

> The argument asserts that our acquaintances ("weak ties") are less lik be socially involved with one another than are our close friends (" ties"). Thus, the set of people made up of any individual and his acquaintances will constitute a low-density network (one in which ma the possible relational lines are absent), whereas the set consisting of the individual and his or her *close* friends will be densely knit (many of th sible lines present).[31]

A potential entrepreneur may have a small group of friends she knows well, each of whom knows the others quite well. she may also have many casual acquaintances, each of whom has a circle of close friends. These close friends of his casual acq tances are unlikely to be known to the potential entrepreneur thus his or her only possible ties to them are through the c acquaintance. The weak tie between the potential entrepreneu his or her acquaintance is therefore "not merely a trivial acquaint tie, but rather a crucial bridge between the two densely knit cl of close friends. . . . It follows that individuals with few weak ties will be deprived of information from distance parts of the social system and will be confined to the provincial news and views of their close friends."[32]

Research in the Boston area by Granovetter has documented that lack of access to the information provided by weak ties puts people at a competitive disadvantage in the labor market, as such people will obtain only redundant information from close acquaintances, who travel in the same circles as the job seeker.[33] People with a more diverse role set, connected to distant others via brokers or other intermediaries, will have access to a wider range of information.

Following the logic of this argument, entrepreneurs are more likely to be found in positions whose centrality is high and which are connected to lots of diverse information sources. Entrepreneurs activate their weak ties for at least two purposes: to gain access to business information and to attract customers. First, information about new business locations, potential markets for goods and services, sources of capital or potential investors, innovations, and standard business practice is likely to be spread widely among individuals. Other things being equal, someone with a small role-set of overlapping ties is at a disadvantage when competing for information with someone who has a large role-set of divergent ties. There is also a disadvantage we might call the "weakness of strong ties," wherein those persons with whom we are tightly linked lead to the introduction of extraneous socio-emotional content into information exchanges, clouding their meaning.

Second, entrepreneurs ask both their strong and weak ties to become customers. Then, in turn, these new customers may tell their strong and weak ties about the new venture. It is the weak ties who can expand the pool of customers; strong ties deliver redundant information.

Perhaps these ideas are a way of rethinking the traditional relation posited between "marginality" and entrepreneurship. Marginality is important but as a characteristic of the social structure, not as a personal characteristic of entrepreneurs. Instead, marginality refers to the weak ties potential entrepreneurs have to diverse information sources and to potential customers, putting them in positions to capitalize on opportunities that remain unknown to the less marginal person.

Nine studies reviewed by Granovetter have tested the strength of the weak ties argument and have provided partial support for it.[34] None of these studies, however, focused on entrepreneurs or on persons classified as self-employed. The theoretical importance of weak ties would be broadened by specific research on how small businesses are founded and how they subsequently fare.

The Importance of Social Resources: It is not just What You Know but Who You Know

Lin and his colleagues have added a component to the strength of ties literature.[35] In his theory of instrumental action, Lin suggested that in a hierarchical social structure, a person in a "position nearer to the top of the structure has greater access to and control of valued resources not only because more valued resources are intrinsically attached to the position, but also because of the position's greater accessibility to positions at other (primarily lower) rankings."[36] He defined social resources as valued resources that are accessible through ties with others. Therefore, all weak ties are not equally useful for acquiring social resources. Weak ties to those contacts with the most social resources—that is, contacts as high in the social hierarchy as possible—will provide the greatest access to social resources. Lin's research on the status attainment of job seekers has weakly confirmed the social resources argument, but his research must be replicated before we can place high confidence in his results.

Extending the argument, successful entrepreneurs will be found in positions with weak ties to people who are in positions to provide timely and accurate information, to people with the resources to act as a customers, and/or to people with resources to invest.

Entrepreneurship is a social role, embedded in a social context. Investigators cannot treat entrepreneurs in isolation as autonomous decisionmakers or lump them together with others with similar social characteristics, without regard to context. It is the effects of social networks in facilitating or inhibiting the activities of potential entrepreneurs.

NOTES TO CHAPTER 1

1. We are deeply indebted to Valerie Haines and Peter Marsden, colleagues at the University of North Carolina, for their comments and suggestions.
2. Howard Stevenson, "A Perspective on Entrepreneurship," Harvard Business School, No. 9-384-131, November 1984.
3. Mark Granovetter, "Economic Action and Social Structure: A Theory of Embeddedness," *American Journal of Sociology* (forthcoming); see also Ronald S. Burt, "Tertius Gaudens, Structurally Autonomous Entrepreneur," Columbia University, 1983. (Unpublished.)
4. See Robert J. Brockhaus and Pamela S. Horwitz, "The Psychology of the Entrepreneur," in this volume.
5. Richard Hall, *Organizations: Structure and Process* (Englewood Cliffs, N.J.: Prentice-Hall, 1982).
6. Daniel Kahneman, Paul Slovic, and Amos Tversky, *Judgment under Uncertainty: Heuristics and Biases* (New York: Cambridge University Press, 1982).
7. M. Sherif, "A Study of Some Social Factors in Perception," *Archives on Psychology* 187 (1935). The autokinetic effect is a visual illusion—a fixed pinpoint of light shown to subjects in a totally darkened room appears to move, smoothly or erratically. Subjects' judgments of the extent to which the light moves are strongly influenced by the reports of others in the room—typically, persons who are confederates of the experimenter.
8. Pyong Gap Min and Charles Jaret, "Korean Immigrants' Success in Small Business: Some Cultural Explanations," Department of Sociology, Georgia State University, August 1984. (Unpublished.)
9. Roger Waldinger, "Immigrant Enterprise and Labor Market Structure," Working paper, Joint Center for Urban Studies, MIT and Harvard University, 1982.
10. Howard Aldrich, John Cater, Trevor Jones, and Dave McEvoy, "From Periphery to Peripheral: The South Asian Petite Bourgeoisie in England," in Ida Harper Simpson and Richard Simpson, eds., *Research in the Sociology of Work*, Vol. 2 (Greenwich, Conn.: JAI Press, 1983), pp. 1–32.
11. Pom Ganguly, "Births and Deaths of Firms in the UK in 1980," *British Business* 29 (January 29–February 5, 1982).
12. U.S. Small Business Administration, *The State of Small Business* (Washington, D.C.: USGPO, 1984).
13. Robert Brockhaus, personal communication,
14. See Howard Aldrich, *Organizations and Environments* (Englewood Cliffs, N.J.: Prentice-Hall, 1979); and Bill McKelvey and Howard Aldrich, "Populations, Natural Selection, and Applied Organizational Science," *Administrative Science Quarterly* 28: 1 (March 1983): 101–28.

15. See McKelvey and Aldrich, "Populations"; and Howard Aldrich, Bill McKelvey, and Dave Ulrich, "Design Strategy from the Population Perspective," *Journal of Management* 10: 1 (Spring 1984): 68–86.
16. Robert Merton, "The Role-Set: Problems in Sociological Theory," *British Journal of Sociology* 8 (1957): 106–20.
17. Jeffrey Travers and Stanley Milgram, "An Experimental Study of the Small World Problem," *Sociometry* 32 (1969): 425–43.
18. Linton C. Freeman, "Centrality in Social Networks: Conceptual Clarification," *Social Networks* 1 (1979): 215–39.
19. Mark Granovetter, "The Strength of Weak Ties," *American Journal of Sociology* 78: 6 (May 1973): 1360–80.
20. See Ellen Auster and Howard Aldrich, "Small Business Vulnerability, Ethnic Enclaves, and Ethnic Enterprise," in Robin Ward and R. Jenkins, eds., *Ethnic Communities in Business: Strategies for Economic Survival* (New York: Cambridge University Press), pp. 39–54; Edna Bonacich, "A Theory of Middleman Minorities," *American Sociological Review* 38 (October 1973): 583–94; and Ivan Light, *Ethnic Enterprise in America: Business and Welfare among Chinese, Japanese, and Blacks* (Berkeley, Calif.: University of California Press, 1972).
21. Kenneth Wilson and Alexandro Portes, "Immigrant Enclaves: An Analysis of the Labor Market Experiences of Cubans in Miami," *American Journal of Sociology* 86: 2 (September 1980): 295–319.
22. Bonacich, "A Theory of Middleman Minorities."
23. Edna Bonacich and John Modell, *The Economic Basis of Ethnic Solidarity* (Berkeley, Calif.: University of California Press, 1980).
24. See E. Franklin Frazier, *Black Bourgeoisie* (New York: The Free Press, 1957), and Nathan Glazer and Daniel Patrick Moynihan, *Beyond the Melting Pot* (Cambridge, Mass.: MIT Press, 1963).
25. Light, *Ethnic Enterprise.*
26. Granovetter, "Economic Action" (forthcoming), p. 14.
27. Mark Granovetter, "The Strength of Weak Ties; A Network Theory Revisited," in Peter V. Marsden and Nan Lin, eds., *Social Structure and Network Analysis* (Beverly Hills, Calif.: Sage, 1982), p. 113.
28. David Brophy, "Venture Capital Research," in this volume.
29. Everett Rogers and Judith Larson, *Silicon Valley Fever* (New York: Basic Books, 1984).
30. See Granovetter, "The Strength of Weak Ties," (1973); Mark Granovetter, *Getting a Job: A Study of Contacts and Careers* (Cambridge, Mass.: Harvard University Press, 1974); Granovetter, "The Strength of Weak Ties," 1982; and Granovetter, "Economic Action" (forthcoming).
31. Granovetter, "The Strength of Weak Ties," 1982, p. 105.
32, Ibid., p. 106.

33. Granovetter, *Getting A Job*. Scott Boorman has suggested that Granovetter's findings may apply only when jobs are scarce. Strong ties may well be more valuable in other labor market conditions, such as when one needs to have influence exercised on one's behalf. See Scott A. Boorman, "A Cominatorial Optimization Model for Transmission of Job Information through Contact Networks," *The Bell Journal of Economics* 6: 1 (Spring 1975): 216–49.
34. Granovetter, "The Strength of Weak Ties," 1982.
35. See, for example, Nan Lin, W.M. Ensel, and J.C. Vaughn, "Social Resources and Strength of Ties: Structural Factors in Occupational Status Attainment," *American Sociological Review* 46: 4 (August 1981): 393–405; and Nan Lin, J.C. Vaughn, and W.M. Ensel, "Social Resources and Occupational Status Attainment," *Social Forces* 60: 59 (June 1981): 1162–81.
36. Nan Lin, "Social Resources and Instrumental Action," in Marsden and Lin, *Social Structure and Network Analysis*, p. 131.