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Social Origins of Great Strategies

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Abstract. We use network theory to define the social origins of great strategies. Our argument proceeds in four steps: (1) The bridge and cluster structure of social networks is a proxy indicator of variation in knowledge and practice (homogeneity within clusters, heterogeneity between); (2) people with strong connections to multiple clusters (network brokers) have breadth, timing, and arbitrage advantages in moving knowledge/practice from clusters where it is a commodity into clusters where it is valuable. (3) New strategy is a new perspective on, or new combination of, prior knowledge/practice; so (4) network brokers have a competitive advantage in detecting and developing new strategies, a subset of which are great strategies.

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Keywords: strategy formulation • social networks • information technology

1. Introduction

New strategy is what we have done in the past combined with a bit or a deluge of what was previously separate knowledge or practice. Textbook strategies can be cited as illustrations: Production costs can be lowered by integrating production more tightly with suppliers (e.g., Toyota, Dell). Revenue can be increased by integrating distribution more tightly with customer purchasing (e.g., Walmart, Lidl) or shifting production to focus on the services most valuable to clients (e.g., Ogilvy & Mather). In the wake of familiar images such as these, it seems fruitful to think about new strategies in terms of where new combinations of knowledge and practice are likely to occur. That is the premise for this paper: good strategies emerge in the same way that good ideas more generally emerge—at the intersection of alternatives, which we cast as a function of the social network around a business leader.

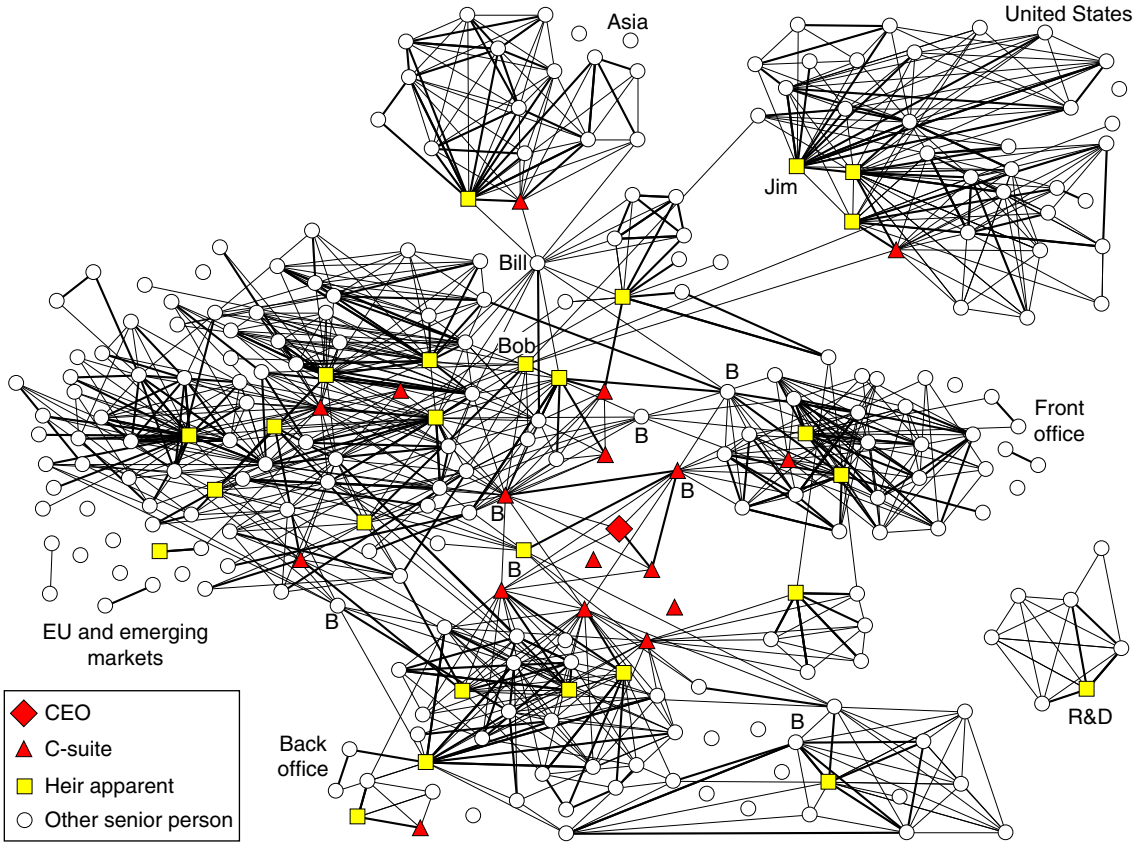
2. Information, Social Structure, and Good Ideas

We begin with a statement from Stigler's (1961, p. 215) classic paper on the economics of information: "The expected saving from given search will be greater, the greater the dispersion of prices." When price varies widely between sellers, it is worth a buyer's time to search for the lowest price. It makes little sense to search for the lowest price of a commodity; all prices are about the same. The value of search creates an incentive for entrepreneurs to aggregate price information for local transactions, as in medieval markets, or by developing "specialized traders whose chief service, indeed, is implicitly to provide a meeting place for potential buyers and sellers" (Stigler 1961, p. 216). Contexts in which diverse information and heterogeneous knowledge domains are available are more likely to generate new ideas and novel combinations of ideas. In short, the value of search is proportional to information variation, and search is more efficient for people more exposed to the variation.

Stigler's economics of information can be seen at the heart of the network theory of competitive advantage. Variations in the information to which people are exposed are not simply a matter of chance. Information is unevenly distributed across the social networks of organizations and markets. Networks are composed of clustered dense connections, with occasional bridge connections between clusters. This is the bridge and cluster structure popularly discussed by Travers and Milgram (1967) as a "small world." Information is less variable within clusters than between clusters. People more connected across clusters have information advantages akin to Stigler's "specialized trader."

Strategy is a more complex bundle of information than price. Still, price, too, has its dimensions. Stigler (1961) begins with the claim that price typically has multiple dimensions. There are issues of service quality and history, convenience, and delivery—in all, a great many dimensions that can affect the felt price to a customer. Strategy surely has more dimensions than price, but similar to price information, strategy knowledge and practice varies across markets and organizations, with certain people serving as information aggregators—for example, this manager experienced in IT strategies, that consultant specializing in supply chains.

Figure 1. (Color online) Social Network at the Top of a Leading Healthcare Company



Note. Lines indicate frequent and substantive work discussion, bold lines especially close relations.

For example, Figure 1 is a map, a sociogram, of the social network among senior leaders in a large European healthcare organization. Lines between the symbols indicate relationships between people. People are close together in the sociogram to the extent that they have a strong connection with each other and with the same colleagues (spring embedding algorithm; see Borgatti 2002). The sociogram was prepared for an executive education program intended to help the indicated heirs apparent understand the network dynamics of leadership in their company. The main point, for the moment, is the obvious social clusters. To the top right of the sociogram, company leaders in the United States are strongly connected with one another with little connection outside the United States. At the top of the sociogram, company leaders in Asia are strongly connected to one another with little connection outside Asia. To the bottom right of the sociogram, an important group in the company's research and development (R&D) operations floats cut off from the rest of company leadership.

Business practice varies between the clusters. People in the R&D cluster are guided by state-of-the-art scientific practice. They explain and describe their activities in terms of science. People in the U.S. cluster are adapted to American legal code, business practice, and local institutions. Similarly, people in the Asia, European Union (EU), front-office, and back-office clusters are efficient with their local language, within the social and professional institutions associated with each cluster. In contrast to Stigler's price, which can be communicated unambiguously across locations, business practice is information "sticky" within each cluster (Von Hippel 1994). It is a kind of information expressed in local professional language, embedded in the history and operations of local institutions. Communicating across clusters is inhibited by differences between local understandings. In short, the social structure of an organization or market is a proxy for the distribution of information. The empty spaces between social clusters are holes in social structure, or more simply "structural holes" (Burt 1992), and the holes demark information less variable within clusters than between clusters.

Information differences between clusters may or may not be consequential, but they set a stage for two kinds of leadership: specializing within a cluster (closure) or building bridges between clusters (brokerage). Closure is about strengthening connections within a cluster to gain advantage by getting better at what we already know. Leaders like Jim in Figure 1 have specialized in making local operations reliable and efficient. They are experts in distinguishing good performance from bad

within their domains. Brokerage is about connecting across clusters to synthesize new practice from diverse information otherwise segregated in separate clusters. The persons labeled "Bill" and "Bob" in Figure 1 are examples, along with several other people identified with the letter "B" in the figure. Network brokers can distinguish local good from bad but can also contrast local operations to operations elsewhere. Might operations over there be a benchmark for us? Might there be a synthesis of operations elsewhere that would give us a competitive advantage? The brokerage and closure contrast is analogous to Kotter's (1990) familiar behavioral distinction between managers (optimizing for closure) and leaders (optimizing for brokerage), but the network contrast focuses on information advantages behind the behavioral distinction, and it is more precise with respect to measurement.

Relative to local warlords like Jim in Figure 1, network brokers like Bob and Bill have three advantages in integrating information across cluster differences: breadth, timing, and arbitrage. With respect to breadth, Bill and Bob's bridge relations give them access to more diverse information. With respect to timing, Bill and Bob are positioned at a crossroads in the flow of information between groups, so they will be early to learn about activities in multiple groups; either will often be the person introducing to one group information on another. Bill and Bob exemplify what early diffusion research identified as an opinion leader, a person responsible for the spread of new ideas and behaviors (see Katz and Lazarsfeld 1955 for more details on opinion leaders; see Burt 1999 for opinion-leaders as network brokers). Third, Bill and Bob are more likely to know when it would be rewarding to bring together separate groups, which gives them disproportionate say in whose interests are served when the contacts come together. Moreover, the structural holes between their contacts mean that they can broker communication while displaying different beliefs and identities to each contact. Their connections across social clusters give them an advantage in translating opinion and behavior familiar to one group into the dialect of a target group. People who connect across structural holes are presented with opportunities to coordinate people otherwise disconnected, which puts them in a position to derive ideas or resources from exposure to contacts who differ in opinion or practice. Thus, a structural hole is a potentially valuable context for action; brokerage is the action of coordinating across the hole over bridges between people on opposite sides of the hole; and network entrepreneurs, or more simply, network brokers, are the people who build the bridges. Network brokers operate somewhere between the force of corporate authority and the dexterity of markets, building bridges between disconnected parts of markets and organizations where it is valuable to do so. Brokers translate what is known here into what can be understood and seen to be valuable over there. Network brokers are the social mechanism that clears a sticky information market.

Brokerage is usually concentrated in the hands of a small proportion of the leaders in an organization. For example, Figure 2 displays the network of advice relations between human resources (HR) managers in a global consumer goods company operating in several locations with two main headquarters, one in the European Union and the other in the United States. The size of the nodes is proportional to the brokerage role of managers (the bigger the circle, the more the manager connects unconnected clusters within the company); the color represents the country in which manager work. The point is that removing the top 10% of network brokers in this company removes 38.3% of the connections within the network. Removing 25% of the brokers removes 64% of the connections.

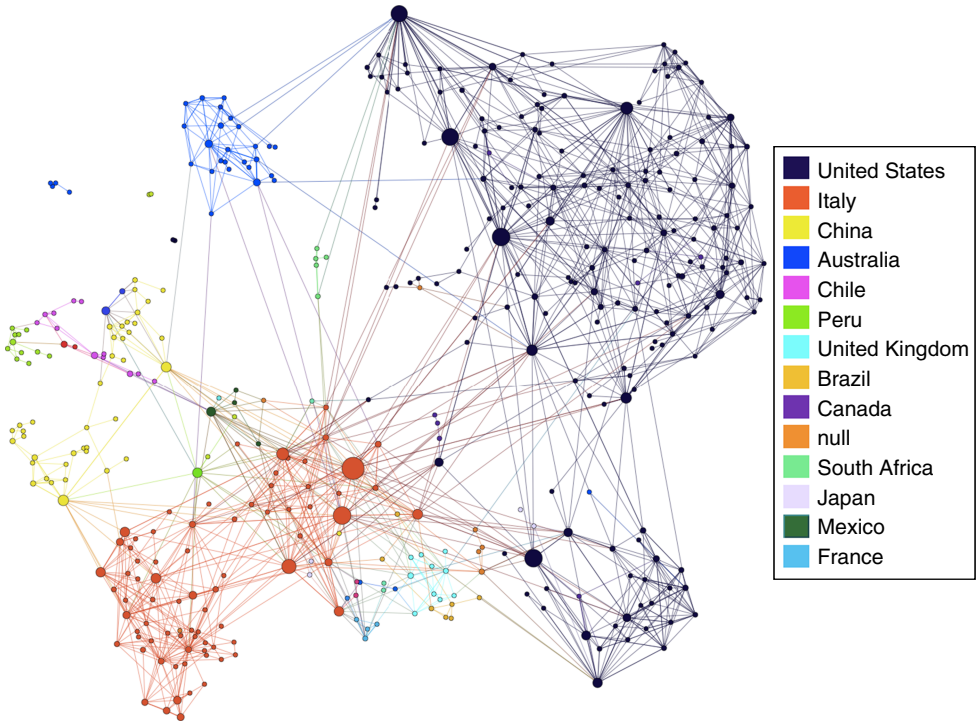
Network brokers are rewarded for their market-clearing behavior with accolades, compensation higher than peers, and elevation to leadership positions. Images of sticky information within groups and network brokers between groups are rooted in the golden age of social psychology (Festinger et al. 1950, Leavitt 1951, Katz and Lazarsfeld 1955), made precise in subsequent network theory (Granovetter 1973; Freeman 1977; Lin et al. 1981; Burt 1982, 1992; Cook et al. 1983). Argument and evidence are reviewed elsewhere (Burt 2005, 2010; Burt et al. 2013).

3. Risk of Productive Accident

At the heart of network advantage is access to variation in knowledge and practice. Brokers, exposed to more diverse knowledge and practice, have an advantage in detecting and developing good ideas. The link between structural holes, creativity, and innovation is a development more recent than the earlier work linking holes with performance (Burt 2004, 2005; Uzzi and Spiro 2005; Perry-Smith 2006; De Vaan et al. 2015; Perry-Smith and Mannucci 2017), but the link was quickly picked up as a recurring theme in the popular press (Erhard 2004, Hagel and Brown 2005, Brooks 2014).

By way of illustrative anecdote, consider Ray Kroc—the person who built McDonald's into the franchise giant it is today. In a 1974 talk Kroc gave at Dartmouth College, he reflected on his experience selling restaurant supplies as a foundation for him seeing the potential in the McDonald's process: "I made up my mind that if I ever got into the food business, I would do what this one was doing, or what that one was doing, and I wouldn't do what that other one was doing. And I got so that I could assess value." We are reminded of Steve Jobs' advisory on creativity in organizations (Wolf 1996, italics in original):

Figure 2. (Color online) Social Network of Advice Relations Among HR Managers in a Global Consumer Goods Company



Note. Lines indicate advice on work issues, color indicates country, and symbol size indicates realtive centrality.

> Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really *do* it, they just *saw* something. It seemed obvious to them after a while. That's because they were able to connect experiences they've had and synthesize new things. And the reason they were able to do that was that they've had more experiences or they have thought more about their experiences than other people. Unfortunately, that's too rare a commodity. A lot of people in our industry haven't had very diverse experiences. So they don't have enough dots to connect, and they end up with very linear solutions without a broad perspective on the problem.

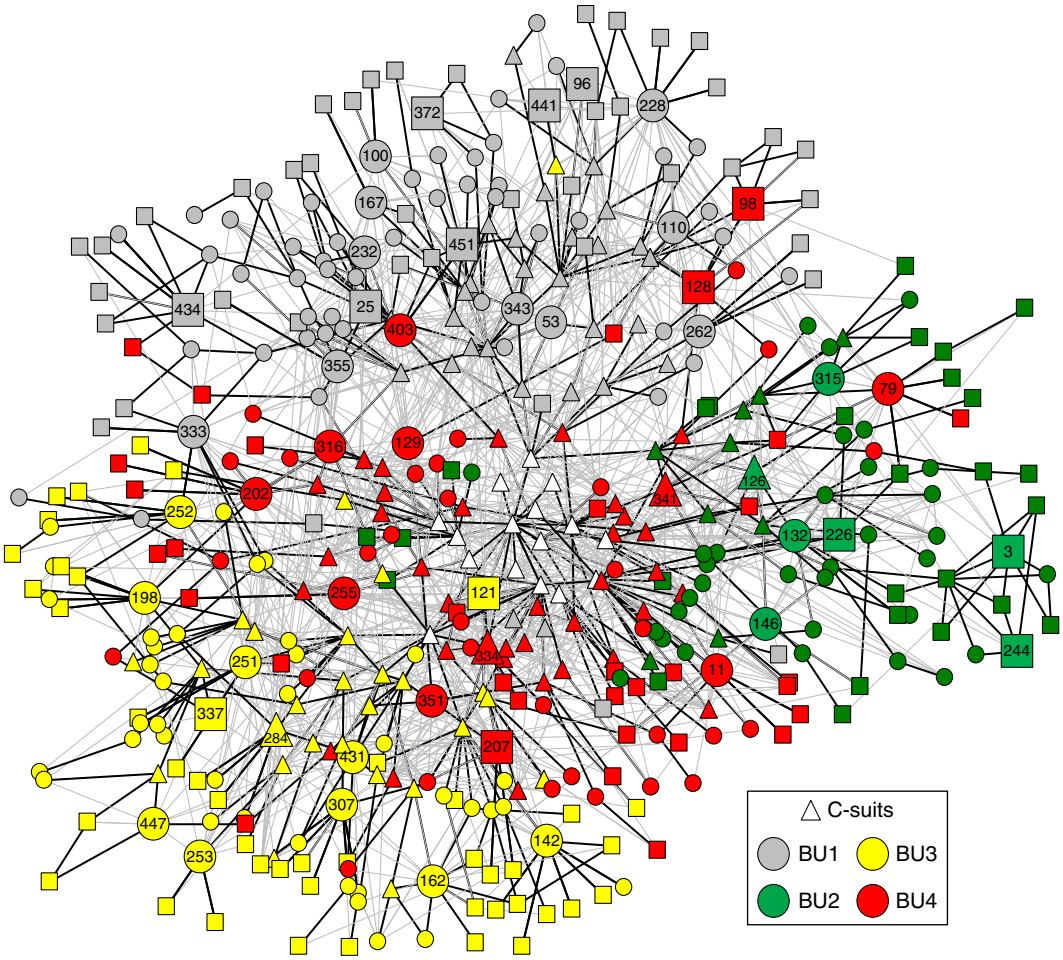
Jean-René Fourtou, then CEO of chemical giant Rhône-Poulenc, offered similar imagery to a reporter asking about the role two Nobel Prize–winning chemists played in the company (Stewart 1996, p. 165):

> Have you noticed, Fourtou asked, that really top scientists get their best ideas from people outside their own discipline? "Shock comes when different things meet. It's the interface that's interesting." Fourtou believes the creative interaction of unlike minds cannot be managed, only permitted. He says: "The most important thing is just to let them meet." Though a leader may need to nudge discussions toward something a company can use, sometimes the best management is none whatsoever, Fourtou argues: "*Le vide* has a huge function in organizations." The term means a vacuum or gap, emptiness, the Void. [In the context of the current paper, the Void structural hole.] "If you don't leave *le vide*, you have no unexpected things, no creation."

And much about potential strategy sources within a company can be discerned from the company's senior management network structure. Consider Figure 3. This is a sociogram of leaders at the top of a large American financial organization. Again, the sociogram was prepared for an executive education program designed to help the leaders deemed heirs apparent to understand the network dynamics of their company. Distinctions between social clusters are obscured by the dense undercoat of weak connections between clusters, but business-unit clusters are visible in the close proximity of leaders in the same business unit: BU1 at the top of the sociogram, BU2 to the right, BU3 to the bottom left, and BU4 clustered around strong relations are concentrated within business units. The interesting point here is the fourth business unit (red symbols in Figure 2). BU4 is a consulting organization whose operations take their senior people across the other three business units and across outside companies. Two years earlier, leaders in the fourth business unit were scattered across the enterprise. Over time, they have moved to the center of the sociogram in Figure 2, encircling the most senior leaders in the organization; BU4 leaders are particularly well informed about how to integrate operations across the enterprise. It is here we find a rich pool of network brokers, people like Kroc whose networks of experience give them an advantage in detecting and developing strategic opportunities.

Not all combinations of segregated knowledge or practice will be great, or even useful. A subset of

Figure 3. (Color online) Social Network at the Top of a Leading Financial Services Company



Note. Job rank indicated by symbol shape (triangle for level 1, circle for level 2, and square for level 3); large numbered symbols are heirs apparent; bold lines are reporting relations, or especially close survey citations; and light lines are any weaker connection (less close survey citation, 316 evaluation, or substantial email).

strategies will be judged "great" by history because they combined at the right time, in the right place, the right bits of previously segregated bits of knowledge or practice (the "halo effect"; see Rosenzweig 2007). A further complication is that great strategy is often the indirect result of network brokerage. Able management consultants are the ultimate network brokers in the sticky information market for strategy. Consultant connections across structural holes within and between organizations position consultants to take bits of knowledge/practice that are commodity in this and that organization, to deliver a combination as a brilliant new strategy for a third organization where the combination will create value. Whether great or pedestrian, direct from one's own experience, or indirect from the experience of an able consultant, strategy has a social origin: network brokerage across structural holes within or between organizations.

At the other extreme of great is really poor strategy. Most combinations of segregated knowledge and practice are best left segregated. "Surf and turf" is distinct from "surfturf." Surf and turf means the seafood is on the same plate as the steak, not that the two are synthesized into a meat mush. Conjunctions can be a clue to things best left separate (they have already been juxtapositioned and judged best left distinct). There are exceptions: paella can be a lovely mélange of fish, seafood, pork, and poultry. Contingency is the point. Successful brokerage depends on known contingency factors—such as having sufficient social standing with a target audience to be taken seriously as the source of strategy, as well as situation-specific contingency factors such as timing a strategy proposal in the history and contemporaneous flow of events. Access to structural holes does not guarantee broker success as a strategist. Access only defines a "risk of a productive accident" (Burt 2005, p. 95) in which a network broker happens upon a rewarding opportunity to combine or move information across the structural hole between groups. The "productive accident" imagery is nicely

illustrated in the following abbreviated passage quoting an executive headhunter (Burt 2005, p. 94–95, brackets in original):

> [A headhunter] needs to be a true broker. A true middleman. [. . .]oftentimes when I've made initial contact with people that maybe are at a controller level or a VP of finance, we'll be talking for ten or fifteen minutes, and they'll say, "I'm not sure why you're calling. Are you looking at me as a candidate or are you looking at me as a potential customer?" And I'll say, "I'm the middleman. I'm looking at developing a relationship with you, and I'm sure something will fall, one side or the other, if I'm successful at developing that relationship." Note the unspecific, long-term goal. . . . The relationship could turn into an opportunity to place someone or recruit the person with whom the headhunter is talking, but either way, this relationship feels to the headhunter like it is a productive relationship to establish and maintain. That sense of investing in people with whom you think good things could happen before you are sure what those things are captures the essence of brokerage and the critical role that trust plays in brokerage. . . . In short, people often decide on colleagues before they decide on ventures: I build this relationship to put myself at increased risk of productive accident.

4. Social Capital as a Forcing Function for Human Capital

Much about creative innovation can be traced back to a dash of luck and business leaders putting themselves at risk of productive accident, but such a view ignores the fact that people given a choice often ignore contradictions. A person with parochial exposure to what has been is a person with limited imagination about what can be. Creating strategy is about being different from what is habitual, in relation to the past, and what is conformist, in relation to contemporaries. Great strategies are variations and deviations from what has been done in the past and what the "others" now do.

"Habitual" has a point of reference in time and refers to the recursive replication of activities over time. Paradoxically, personal experience enriches understanding, but it can also limit understanding. Many decision makers are trapped in their personal experiences (Gargiulo and Benassi 2000). They see, hear, believe, or understand knowledge that is consistent with what they have already experienced. Social network exposure to information heterogeneity amplifies individuals' openness and ability to recognize the differences by accessing experiences that they did not yet had. By broadening their framing of problems, they can consciously "match" productions to avoid overlaps. Exposure to diverse knowledge and practice limits a person's overestimation of information confirming a person's initial hypotheses. Exposure dilutes the tendency to accept information conforming to dominant expectations and beliefs. Moreover, a social space that provides diverging views toward a problem contributes to nurturing an effective adjustment process of initial judgments, which are often insufficient (Tversky and Kahneman 1974).

"Conformist" has a point of reference in the social space, referring to replication of activities among members embedded in a social collective. Individuals who share previous ties take as reference what they have done together in the past, develop more likely inertial attitudes toward the past, and are therefore less likely to push towards deviating from what has been done in the past (Soda and Bizzi 2012, Ter Wal et al. 2016). Closed networks are conducive to the development of a "collective mind" (such as shared representations, languages, and meanings; see Orr 1990, Krackhardt 1992, Lawler and Yoon 1996). A collective mind increases the chances for individuals to filter out information and ideas for which a shared meaning does not exist, and to filter in information for which this meaning exists (De Carolis et al. 2009). Put differently, network closure facilitates the consolidation of common meanings and languages within a group, enhancing their myopia in developing new ideas and envisioning new opportunities (Burt 2010, chap. 8, appendix G, for a review). In popular imagery, the condition is "groupthink," a condition popularly linked with poor strategy (Janis 1972).

The critical step is to find a network broker who sees the value of brokering knowledge or practice from one or more groups to a target group such that the target rises above the habitual or conformist. Differences between groups have to be juxtapositioned to highlight the brokerage opportunity. Juxtapositioning can be engineered or allowed to emerge naturally. Engineered examples are holding conferences that explicitly bring together two groups to confront their contradictions or maintaining separate laboratories working on the same problem (see the Fourtou quote above). Labs kept separate inevitably go down different development paths. Experts in the separate labs can later be brought together to confront their contradictions. The natural solution is to develop business leaders whose networks cut across the structural holes between groups in an organization or market. Every leader is not to connect to every group. Rather, each leader connects to some groups outside his or her own such that every pair of separate groups has leadership in one group monitoring activity in the other. Potentially rewarding brokerage then becomes apparent to a leader who has colleagues in both groups or operates in one group and has a close colleague in the other. A network spanning structural holes is a social forcing function exposing individuals to understandings or practice they did not know they did not know. The natural solution can include an engineered event

focused on confronting contradiction, but the distinguishing virtue to the natural solution is that brokerage can become self-governing—crafting and pursuing strategic action where it creates value.

Throughout, it is helpful to recognize that brokerage advantage is less often about getting novel information than it is about applying novel interpretations to information (Burt 2010). Network structure shapes the way a person interprets information. It is one thing to be exposed to diverse knowledge and practice that defines an opportunity. It is quite another to recognize and develop the opportunity. Diverse information is readily available from professionals, social media, or word of mouth. For example, it is easy to look up an economic concept in *Wikipedia* and cite a reputable article on the concept. It is quite another to know the concept well enough to transform it into related economic concepts more suitable to specific application in a target audience. A strategy has to "feel" right. It has to make sense to key stakeholders. That feel, and the ability to communicate it, depends on your experience and the bits of knowledge and practice with which you are familiar. Relative to a person who has spent his or her time in a single business function, a person connected to multiple business functions is more likely to see new strategies that integrate or synthesize knowledge or practice across previously separate functions. The same holds for recombinant information across multiple industries, countries, products, or channels. The kind of diversity to which a person is exposed sets the stage for the kind of strategy likely to bubble up in the person's imagination. And the idea morphs as it winds its way through colleague and technical constraints. What began as broad vision ends up one of many possible implementations, the original idea subject to reframing or reimagining each step along the way. Experience helps. Experience coordinating people with different understandings develops a talent in network brokers for converting and synthesizing information between groups. People behaving as network brokers develop skill with analogy, metaphor, and simile. They develop tolerance for ambiguity, for conflict between the ways two colleagues understand a situation, for seeing the time is ripe for that particular new combination of knowledge or practice. We believe this is the "experience" to which Steve Jobs refers in his opinion cited above (cf. Gavetti and Menon 2016 on "strategic foresight"). In sum, the social capital of brokerage across structural holes develops human capital skills for recombinant information, skills for translating this group's familiar practice into that group's novel solution.

5. Close

The preceding articulates a network perspective on the social origins of great strategies. Our argument proceeds in four steps: (1) The bridge and cluster structure of social networks is a proxy indicator of variation in knowledge and practice (homogeneity within clusters, heterogeneity between). (2) People with strong connections into multiple clusters (network brokers) have breadth, timing, and arbitrage advantages in moving knowledge/practice from clusters where it is a commodity into clusters where it is valuable. (3) New strategy is a new perspective on, or new combination of, prior knowledge/practice, so (4) network brokers have a competitive advantage in detecting and developing new strategies, a subset of which are great strategies.

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