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**LONGING TO BELONG:  
THE GOVERNANCE OF KNOWLEDGE-  
INTENSIVE ORGANIZATIONS**

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**Abstract**

**We extend the transaction cost economics framework to account for organizational forms including network organizations, research alliances and open-source communities. Drawing on social identity and embeddedness theories, we propose a social structure dimension to complement the transaction specification dimension and a novel form – democracy – to round out the market, (hybrid), hierarchy, clan array. The resulting taxonomy offers insight into the fit between forms and environmental conditions and into the evolution of organizational forms.**

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## INTRODUCTION

*“When the stone is too large or the production facility too complex for a single person, what is called for is cooperation, ... [G]rain farmers who need a large grain elevator do not form corporations which take over farms and make farmers into employees; instead, they form a cooperative to own and operate the elevator.” (Ouchi, 1980: 48)*

For decades, Williamson’s transaction cost economics (TCE) framework has helped researchers explain the arrangement of economic efforts into market, hierarchy or hybrid organizational forms (Geyskens, Steenkamp, & Kumar, 2006; Williamson, 1991). But events have conspired to strain the TCE framework. Globalization, the increased reliance on innovation and the widespread use of communication technologies have spawned a bewildering array of new organizational forms, especially in knowledge-intensive industries. Many of these forms, including research alliances, network organizations, open source communities and cooperatives, emphasize cooperation and democratic interaction instead of market competition or hierarchical control (Cantwell, 2003; Dhanaraj & Parkhe, 2006; Hindle, 2006; Jones, Hesterly, & Borgatti, 1997; Osborn & Hagedoorn, 1997; von Grogh & von Hippel, 2006). To make sense of these changes in environment, form and management, we re-visit the transactional and social foundations of organization and propose a market, hierarchy, clan, democracy re-conceptualization of TCE.

As early as the 1980s, TCE-influenced scholars puzzled over the organization of the Japanese firm whose job flexibility, horizontal coordination and long-term, inter-firm relationships contrasted sharply with the US norms of specialization, vertical organization and arms-length supplier relations (Aoki, 1990). One result was Ouchi’s now-famous notion that firms can manage complex, firm-specific and ambiguous sets of transactions through clan-style

organization that substitutes shared goals, group norms, redundancy and horizontal coordination for hierarchical command and control (Ouchi, 1980).

In the 1990s, intense interest in alliances led to the concept of firms as, and as embedded in, networks of relationships that promise learning- and legitimacy-based value beyond the value available through the economizing of transactions (Gulati, 1998; Gulati, Nohria, & Zaheer, 2000). In particular, strategic alliances were thought to offer innovation advantages over individual firms and collaborative learning advantages over markets, especially when tacit knowledge was involved (Dyer & Nobeoka, 2000; Kogut, 2000; Podolny & Page, 1998; Powell, Koput, & Smith-Doerr, 1996).

More recently, scholars have turned their attention to self-organizing, self-governing, knowledge-intensive open-source projects and quasi-organizations. Recent estimates suggest over 110,000 such efforts, with Linux and Apache being perhaps the best known (von Grogh et al., 2006). Unlike hierarchies, markets or hybrids, open-source organizations coordinate cooperative efforts through community-generated and enforced participation expectations, quality standards, communication processes, technology platforms, democratic decision-making and social norms (Lee & Cole, 2003).

Finally, parallel to the mainstream literature, a few authors have called attention to cooperative systems that manage the flows of knowledge particularly well and look more like civic democracies than either markets or hierarchies (Forcadell, 2005; Whyte, 1999).<sup>1</sup>

In the face of such challenges, Walsh, Meyer & Schoonhoven (2006) have declared organization theory adrift and unable to provide a coherent, consistent framework that makes

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<sup>1</sup> While unheralded, cooperatives are a vibrant part of sectors as diverse as financial services (the \$575 million Rabobank), retail (REI and Coop Nordic) and of course, agriculture (Dairy Farmers of America); in fact, in Europe, cooperatives employ more people than do large corporations. (Lotti, R., Mensing, P., & Valenti, D. 2006. Cooperative solution: This self-governing corporate structure protects communities and prospers in a globalizing world. *Booz Allen Hamilton Management Quarterly*, 47(3): 2-13.)

sense of either the disaggregation of conventional organizations or the proliferation of new organizational forms. We take a less pessimistic view and suggest that TCE can be amended and extended to account for these and other emerging examples by reconfiguring the market-hybrid-hierarchy continuum into a market, hierarchy, clan, democracy matrix. Recalling Knight's admonition to pay more attention to "human nature as we know it" (Williamson, 1981: 549), we draw on ideas of embeddedness and social identity to expand the TCE assumptions of individual autonomy, bounded rationality and opportunism to encompass collective identity, structured rationality and the "the longing to belong" (Granovetter, 1985; Hogg & Terry, 2000; Kogut & Zander, 1996: 502). In so doing, we propose a social structure dimension of organization to complement the transaction cost dimension in predicting and prescribing the organizational forms most suitable for particular conditions.

The paper is structured as follows. The first section integrates transaction cost economics, the knowledge-based view of the firm, the embeddedness framework of economic sociology and the social identity theory of social psychology to clarify the transactional and social structural conditions that shape organizational form. The second section combines these dimensions with the literature on organizational democracy to amend Ouchi's well-known market, bureaucracy, clan continuum. The result is a two-by-two transaction-specification/social-structure matrix that describes and prescribes four pure organization forms: market, bureaucracy, clan and democracy. This section also elaborates the matrix by describing how various composite forms fit into the matrix and by using the matrix to explain the evolution of organizational forms. Finally, the paper concludes with a brief discussion of the theoretical, empirical and practical implications, extensions and limits of the market, hierarchy, clan, democracy framework.

## **TWO DIMENSIONS OF ORGANIZATIONAL GOVERNANCE**

### **The Transactional Dimension of Organization**

Transaction cost economics builds on Coase's (1937) definition of the firm as a nexus of transactions and aims to define the boundaries between firm and market. The goal of TCE is to determine the governance structure that provides the most cost-effective coordination given both particular transaction attributes and specific possible alternative governance structures (Williamson, 1993b, 1999). The relative efficiency of the market, hybrid and hierarchy options is partly determined by trade-offs between motivation, coordination and control efficiencies (Williamson, 1991). The content of these trade-offs rests on TCE assumptions about human nature. TCE starts with the classical economics assumption that human actors are atomized individuals whose self-interest-seeking must be harnessed or coordinated if they are to work together (Smith, 1789). TCE then incorporates the organizational theory insight that human rationality is bounded, thus preventing complete contracts and requiring some sort of ongoing controls (prices, procedures, feedback loops) to facilitate adaptation to unforeseen changes (March & Simon, 1958). Finally, TCE adds that people are capable of opportunism – “self-interest seeking with guile” – that both enhances motivation and complicates coordination and control (Williamson, 1981: 554; 1993a, 2002).

TCE uses markets as the benchmark governance structure, arguing that markets are particularly effective for the governance of well-defined, easily-measured, short-term spot transactions (Coase, 1937; Ouchi, 1979). Hierarchy is called for to govern hard-to-specify transactions characterized by infrequency, information uncertainty, moderate complexity, imperfect performance measures and asset specificity, especially the “human asset specificity

that arises from learning by doing” (David & Han, 2004; Nickerson & Zenger, 2004; Williamson, 1981: 555).

Between market and hierarchy are contractually defined, market-hierarchy hybrid forms including franchises, conventional supply chain relationships (such as General Motors’ relationships with its several tiers of suppliers), operational joint ventures, and information-technology-mediated vendor relationships (Hennart, 1988; Williamson, 1991; Zaheer & Venkataraman, 1994). Such hybrid arrangements mix market-style incentives with hierarchical controls, often complemented with attention to reputation (Luo, 2002; Mudambi & Helper, 1998). At the hierarchical end of the continuum, arrangements such as franchises and vertically organized supply chains capture hierarchical advantages of consistency and efficiency, albeit at the risk of centralization and rigidity (Choo, 2005; Szulanski & Jensen, 2006). At the market end of the continuum, arrangements such as radically decentralized firms and product-development alliances leverage the power of market incentives to spur innovation and creativity, but at the risk of the loss of control of the knowledge pool, and especially the ability to integrate new knowledge (Carson, Madhok, & Wu, 2006; Foss, 2003).

Taken together, TCE defines a continuum of forms along a transaction specification dimension ranging from highly idiosyncratic to codified and standardized (see Figure 1). Standardized transactions are transparent to all involved and can be specified relatively easily in a contract; idiosyncratic transactions are specific to the parties and context involved, and very difficult to describe in a written contract. Transactions become less codified and standard as (locational, physical or human) asset specificity increases, exchanges become less frequent, information more uncertain, performance measures less perfect and knowledge more tacit (David et al., 2004; Geyskens et al., 2006; Williamson, 1991).

*Insert Figure 1 about here*

At one extreme are completely unambiguous transactions that are readily observed by all, can be exhaustively and clearly defined and can be codified and transmitted quickly and easily. Such transactions can be coordinated and controlled through a self-organizing process of repeated, transparently priced, arms-length exchanges – a market. At the other extreme are entirely idiosyncratic transactions, unique to a context, completely embedded in practice, essentially invisible to outsiders and learned tacitly only through direct contact with experienced colleagues. The coordination and control of such transactions require some exercise of legitimate authority to set priorities, define measures and guide efforts – a hierarchy. In between, are contractual hybrid forms<sup>2</sup> that govern transactions that are not completely standardized or transparent but which can be reasonably well specified by contracts and prices – if these market arrangements are augmented by the processes, procedures and authority of a hierarchy.

### **The Social Dimension of Organization**

Organizations are nexuses of human relationships as well as of transactions, and can be thought of as path-dependent systems of ongoing social networks with both relational and architectural aspects (Granovetter, 1992; Jack & Anderson, 2002; Zukin & DiMaggio, 1990). Just as the nature of transactions is related to the optimum choice of organizational form, so is the nature of social structures related to the optimum choice of organizational form. For example, in their review of the generally robust empirical support for TCE, David & Han (2004) point out that TCE predictions may well be contingent on relational factors. Indeed, Williamson

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<sup>2</sup> We use the term “contractual hybrid” to distinguish these often described hybrids from the more relational hybrids discussed both in the network organization literature and further on in this paper. As is fitting for hybrids, the distinction is not absolute, but a matter of emphasis. Contractual hybrids include relational governance components, but the formal contractual components are central; relational hybrids include contractual governance components, but the social, psychological and professional relationships are primary.

himself explores the possibility of adjusting governance forms to relational conditions when he discusses the difficulties of “metering,” or measuring the impact of, individual contributions to highly interconnected team efforts. At one extreme – such as some Japanese firms and various utopian communities – Williamson argues (somewhat grudgingly) that the work involves such specific, tacit knowledge and intricately collaborative choreography that it is best governed by a clan-like relational team structure (Williamson, 1981).

But the problem of metering tacit knowledge and joint effort is not a challenge only at the extreme; even in typical hierarchical structures engaged in routine work, firms struggle to link participants’ contributions to the success (or failure) of specific transactions (Nickerson & Silverman, 2003; Williamson, 1993b). Granovetter suggests that this is because people are “embedded in concrete, ongoing systems of social relationships” (1985: 487). Such embeddedness implies a joint-ness of effort and an interplay of social and economic considerations that make it fundamentally impossible to separate individual from collective input in any give interaction or transaction. Indeed, Granovetter’s attempt to find a middle ground between the economist’s under-socialized view of autonomous individuals and the sociologist’s over-socialized view of programmed individuals suggests a continuum of human experience summarized in Table 1. The central insight is that people are at all times and in all situations torn between autonomous and collective poles of human experience.

***Insert Table 1 about here***

This model suggests a more nuanced version of “human nature as we know it.” People are *both* autonomous beings who maximize self-interest through independent, rational action *and* social beings whose perception and pursuit of self interest are shaped by the groups to which they belong. Neither fully and always autonomous, nor entirely and always completely

embedded, people experience the world as individuals *and* as members of groups. Depending on the context (the labile behavior of adolescents comes readily to mind), human cognition can be marvelously autonomous and calculative or nearly robotically programmed by groupthink; depending on the situation, human behavior can be dramatically opportunistic or emphatically conformist, reflecting the tension between individual and group-defined self-interest seeking.

**Autonomous and collective aspects of cognition.** Taking rationality as a problematic but robust working hypotheses, Granovetter and others prod economists and sociologists alike to consider the ways in which relational and structural social constraints shape perceptions and choices, even while more-or-less rational choices alter those constraints (Foss, 1996b; Granovetter, 1985). For their part, social identity theorists suggest a mechanism that provides the link between individual and group cognitions (Bartel, 2001; Hogg et al., 2000). Central to the linkage is the ways in which individuals use self-categorization to define the self in relation to others. This self-categorization is based on prototypes resident in each person's mind but developed through interaction with others in a given group. Psychological pressures drive individuals to match self-conceptions to group conceptions, and individuals are active, if constrained, participants in both the cognitive search for fit with, and the interactive definition of, prototypes.

In a very similar way, tacit knowledge is developed and shaped by the interaction between individual and cognitive processes. Tacit knowledge is the complex, personal combination of mental models and embodied know-how that facilitates context-specific action (Bhagat, Kedia, Harveston, & Triandis, 2002; Nonaka, 1994). Tacit knowledge resides in each individual but must be learned through experience and interaction with others who already *know how* (Nonaka, Toyama, & Nagata, 2000; Sunaoshi, Kotabe, & Murray, 2005). Thus, tacit

knowledge can be seen as a socially constructed cognition that grows through multiple exchanges embedded within ongoing networks of strong relationship ties (Cowan, David, & Foray, 2000; Jones et al., 1997; Nielsen, 2005). Tacit knowledge is at once individual and collective; it is built up through interpersonal exchange and resides both within individuals and in the relations between and among people (Brown & Duguid, 1991; Nahapiet & Ghoshal, 1998; Spender, 1996).

According to the knowledge-based view of the firm, firms gain an advantage over markets to the extent that firms are “a social community specializing in the speed and efficiency in the creation and transfer of knowledge” (Kogut et al., 1996: 503). That is, firms gain an advantage over market organizations not only by aligning incentives to manage complex transactions, but also by creating the conditions, including social identity, that support the effective and dynamic development, sustenance and transfer of tacit knowledge (Almeida & Kogut, 1999; Foss, 1996a; Ghoshal & Moran, 1996; Grant, 1996; Kogut & Zander, 1992; Kogut & Zander, 1993; Turner & Makhija, 2006).

Even though hierarchies are partly designed to create and retain tacit knowledge, explicit knowledge is also critical for communicating the formal roles, processes and procedures that mark bureaucracies (Lee et al., 2003). Firms thus build advantage through their ability to create, codify, transmit and internalize an ever-increasing amount of relevant tacit *and* explicit knowledge (Nonaka, 1994; Nonaka et al., 2000). Hierarchical firms seem particularly effective at transforming tacit knowledge into explicit knowledge and then using this explicit knowledge as the foundation both for replicating firm resources and creating more tacit knowledge (Kogut & Zander, 2000).

Still, studies of the role of social capital in organizations suggest that the most valuable knowledge-based resources reside in tacit knowledge embedded in the social fabric of particularly close-knit, stable, motivated and bounded networks of skilled individuals (Anand, Gardner, & Morris, 2007; Nahapiet et al., 1998). Further, the creation, retention and transmission – the learning – of value-creating knowledge is strategically valuable precisely to the extent that it is socially and organizationally complex (Gupta & Govindarajan, 1991; Nahapiet et al., 1998; Nonaka et al., 2000; Sawhney & Prandelli, 2000). That is, some of the most valuable results of hierarchical organization arise not from efficiencies in command and control but from the social interaction fostered almost inadvertently within the firm. While markets may be impersonal models of efficiency, firms are, in part, social models of knowledge generation and innovation. To the extent that jointly created tacit knowledge is critical to firm success, it becomes relatively more important to encourage the kind of firm-specific collectivity that Williamson calls relational teams and Ouchi identifies as clans.

**Autonomous and collective aspects of motivation.** TCE emphasizes that people are capable of guile in the pursuit of self interest and so must be bound by structure, be it market, hybrid or hierarchy, to restrain opportunism enough to enable effective transactions (Eisenhardt, 1989; Nickerson et al., 2003; Williamson, 1993a, 1999). Stated more positively, to harness opportunism, “organizations will try to separate efficiency and redistributive issues, and to settle the latter issues first, so that they won’t interfere with decisions about how to best create value” (Milgrom & Roberts, 1990: 155). But even when framed this way, the assumption of opportunism widely criticized as an incomplete characterization of human motivation based on an insufficiently collective understanding of human experience (Angwin, Stern, & Bradley, 2004; Osterloh & Frey, 2000; Shapiro, 2005). While people are certainly opportunistic, people

are also social creatures who exhibit and experience solidarity without obvious opportunism. As Granovetter once commented: “In a family, there is no Prisoner’s Dilemma because each is confident that the others can be counted on” (1985: 490). Indeed, psychologists and sociologists have noted the extraordinary intensity with which humans strive to achieve acceptance by the group (Wrong, 1961); some observers have even argued that an extreme form of parochialism – marked by the willingness to die for one’s group – may have co-evolved along with more opportunistic forms of self-interest to form a fundamental motor of individual and group activity (Choi & Bowles, 2007).

But of course people are capable of both opportunism and solidarity, often in quick succession! Kogut and Zander capture the fundamental tension between opportunism and the pull towards solidarity when they posit a “basic dichotomy between self-interest and the longing to belong” (Kogut et al., 1996: 502). The result of longing to belong is solidarity, that is, the intrinsically motivated effort in support of the group with which one identifies (Akerlof & Kranton, 2005; Osterloh et al., 2000; Widegren, 1997). Indeed, longing to belong can be thought of as self-interest seeking through identity rather than self-interest seeking with guile. As explicated by social identity theorists, the process involves searching for self-esteem enhancement and uncertainty reduction by “trying on” self-defined prototypes until finding one that brings self-perception and behavior in line with salient group exemplars (Bartel, 2001; Hogg et al., 2000).

This matching of individual and social identity may well underlie the development of the strong social ties that grow so easily between homophilous actors (Lin, 2001). Once formed, strong ties provide well-worn, intimate paths between people through which information flows quickly, obligations are reinforced and security and support are delivered (Davidsson & Honig,

2003; Granovetter, 1973). Networks of strong ties facilitate the development and transmission of tacit knowledge, trust, emotional and practical support, community norms, joint problem-solving arrangements and a certain flexibility and openness in exchange not possible in contract-defined relationships (Hoang & Antoncic, 2003; Uzzi, 1996). There is, however, a dark side to strong ties. Among other dangers, strong ties increase the opportunistic payoff of betrayal, enable obligation-driven free-riding, constrain members' choices and encourage power plays between sub-factions (Granovetter, 1983; Portes & Sensenbrenner, 1993). As much as people may long to belong, people remain opportunistic as well, and strive to shape, or even take advantage of, the social structure in which they are embedded.

Organizationally, hierarchies augment individual incentives with collective incentives. Formal connections, informal interaction, shared experience and mutual commitment combine over time to promote close fit between self and group categories. This improved fit promotes solidarity – evident as warmth, intimacy, emotional support, psychological commitment, trust, shared norms and expectations for mutual assistance – and creates a powerful sense of bounded collective identity and belongingness (Harrison, Price, Gaving, & Florey, 2002; Ring & Van de Ven, 1994; Widegren, 1997). In turn, strengthened identity and solidarity lubricate the back-and-forth flow of resources (information, knowledge, money), learning, coordination among actors and the leveraging of social capital (Hardy, Lawrence, & Grant, 2005; Oh, Chung, & Labianca, 2004). Very pragmatically, such group identification and sense of belonging leads to more job-related cooperation among organizational members (Aguilera, Rupp, Williams, & Ganapathi, 2007; De Cremer & Blader, 2006). Finally, by requiring people to work together, firms create common experiences and collective organizational narratives that support the development of

shared meaning, identity and social norms among organization members (Boje, 1991, 1995; Hardy et al., 2005).

### **From Hierarchy to Clan**

For situations in which tacit knowledge and goal sharing are at a premium, Ouchi (1980) proposes the clan as an organizational form that leverages social identity, belongingness and solidarity. Clan organization works through socialization with an emphasis on belonging, group goals, shared norms, equity among members, intrinsic motivation and tenure-related (not performance-related) status (Alvesson & Lindkvist, 1993; Das, 1989). That is, clan structure emphasizes the development of a common identity motivated by affinity and status, controlled through socialization and legitimized by tradition. In a clan structure, transactions are organized through discussion (horizontal coordination), but coordination is enforced and resources are allocated through socialized customs reinforced by a status hierarchy of elders that members recognize as legitimate authority (Aoki, 1990; Ouchi, 1980).

Building on the idea of a clan form of organization, Aoki (1986, 1990) explains the competitive advantage of some Japanese firms as the result of continual process improvements developed through exhaustive, daily and seemingly inefficient communication across job types. This communication is supported by an incentive system that rewards seniority and merit through increases in status, but defines merit in terms of company and team success rather than individual proficiency. And the solidarity with company and team is further reinforced by the shared narrative and identity developed during the constant communication.

More generally, the experience of social solidarity allows group-based learning to thrive outside of, and across, formal organizational boundaries – in networks, alliances and even more dispersed communities of practice (Brown et al., 1991; Brown & Duguid, 2001; Kodama, 2005;

Powell et al., 1996). By spanning boundaries, communities of practice such as scientific communities form and maintain identity through a long process of enculturation and debate that define what questions are important, what methods and techniques are appropriate, what concepts and mental models may be used and what language and symbols are acceptable (Kuhn, 1970; Thompson, 2005).

Because of such boundary-spanning communities, it is quite possible for loosely coupled actors to interact sporadically and yet be tightly socialized and coordinated (Hamilton & Kashlak, 1999; Orton & Weick, 1990; Weick, 1987). Further, would-be collaborators from different organizations can, through repetitive negotiation and renegotiation of relationships and interests, generate common, trans-organizational identities (Ring et al., 1994). In turn, these identities support joint storytelling and shared experience that enable effective learning and collaboration in the space between formal organizations (Hardy et al., 2005; Jones et al., 1997; Oh et al., 2004; Tsai & Ghoshal, 1998).

The existence of clans and communities of practice suggest a crucial step *away* from the assumption that people are motivated primarily by opportunism and *toward* the assumption that people are social beings motivated, in part, by the search for a collective identity (Nielsen, 2005; Osterloh, Frost, & Frey, 2002). Combined, the knowledge-based view of the firm, the embeddedness approach and the examples of clan structure suggest that no model of organizational forms can be complete without honoring the motivational tension between opportunism and the search for collective identity (Osterloh et al., 2000; Osterloh et al., 2002).

Accordingly, we suggest in Figure 2 an array of forms stretching along a social-structure continuum from autonomy to collectivity. Measures of the degree of collectivity would include measures of metering (the ability to gauge individual v. collective contributions to outputs); the

amount of horizontal coordination required; the degree of goal congruence among individuals and between individual and groups; the pattern of the flow of information through the social networks; the value placed on solidarity by participants; and the degree of collectivity assumed in the broader organizational and/or societal culture (Aoki, 1986; Burt, 2000, 2004; Hamilton et al., 1999; Nahapiet et al., 1998; Ouchi, 1979; Peredo & Chrisman, 2006; Uzzi, 1997; Williamson, 1981). Finally, as with the transaction-specification dimension, the social-structure dimension both shapes the optimum organizational form and can be affected by managerial action.

*Insert Figure 2 about here*

Clan-style organizational structures show flexibility, horizontal communication and creativity advantages over hierarchical firms when environmental uncertainty and lack of clear operational guidelines (e.g., about what methods might be useful to approach a problem) or performance measures put a premium on adaptability and/or make command and control impractical (Alvesson et al., 1993; Aoki, 1986; Eisenhardt, 1985; Nickerson et al., 2004; Ouchi, 1980). That is, as a governance mechanism for cooperative action, clan-style organizations offer the advantages of clear focus, intrinsic motivation, horizontal coordination, and the ability to adapt and learn in continually changing, but not radically discontinuous, environments (Aoki, 1990). Clans are limited, however, by high socialization and coordination costs, the risk of excluding new ideas due to premature network closure and the tendency to resist change that might threaten the membership base (Burt, 2004; Sirmon & Hitt, 2003; Walker, Kogut, & Shan, 1997). This makes clans vulnerable to rapid or discontinuous change, especially compared to a firms led by charismatic executives or to constantly churning markets (Carson et al., 2006).

Located between the hierarchy and clan extremes are Toyota-style supply networks, informal research alliances and kinship-based business groups – all of which we label “relational hybrids” (to distinguish them from the contractual hybrids identified by Williamson). Relational hybrids combine hierarchical and clan processes for managing idiosyncratic transactions to leverage socially embedded tacit knowledge. They do so by mixing hierarchical and clannish controls, integrating vertical and horizontal coordination, prescribing rules, socializing norms, and relying on both rational-legal and status-based authority. That is, in such hybrids, control relies less on explicit contracts and more on social coordination, psychological contracts involving loyalty and emotional attachment, occupational socialization (eg., adherence to certain professional ethics and approaches to problems) and concerns about reputation (Foss, 2003; Jones et al., 1997; Powell, 1990; Terlaak, 2007). Thus, in the construction industry, general contractors and subcontractors form stable, relationship-based quasi-firms that rely on social interchange for coordination (Powell, 1990); in movie production, teams of independent contractors are coordinated through common goals, occupational norms and loose administrative structures (Miller & Shamsie, 1996); in research alliances, corporate researchers developing a new drug or guided more by common goals and professional standards than by hierarchical or market structures (Powell et al., 1996; Walker et al., 1997); and in health care, doctors work more cooperatively and effectively (despite few hierarchical controls) when they respect and identify with the health system in which they have admitting privileges (Dukerich, Golden, & Shortell, 2002).

More specifically, the iconic Toyota Production System manages a relatively small number of suppliers by mixing long-term relationships, collaborative problem solving, joint pricing, input and output controls, regular socializing and strong social controls with detailed

contracts, aggressive negotiation and exhaustive training (Dyer et al., 2000; Kogut, 2000). Similarly, at least in emerging economies, the most effective family business groups combine kin solidarity and “professional” hierarchical management to manage an internal capital pool and to nurture trustworthy management talent (Khanna & Palepu, 1999, 2000a; Peng, 2004). Finally, over time, some research alliances in particularly knowledge-intensive fields – perhaps especially those involved in non-routine research – may evolve into relational, hierarchy-clan hybrids. This shift occurs as the individuals involved work together daily, develop shared tacit knowledge, build trust, blend cultures and gain confidence that their partners’ motives are not purely opportunistic (Carson et al., 2006; Das & Teng, 1998; Ring et al., 1994).

### **MARKET, HIERARCHY, CLAN,...DEMOCRACY**

Combining the social-structure dimension with the transaction-specification dimension creates the transaction-specification/social-structure matrix illustrated in Figure 3. This matrix defines a taxonomy of four “pure” organizational forms – market, hierarchy, clan and democracy. Each represents a stylized extreme that helps define the forces that shape actual organizations.

#### ***Insert Figure 3 about here***

The *transaction specification dimension* is a continuum from well-defined to ill-defined transactions. At one extreme are entirely idiosyncratic transactions, unique to a context, completely embedded in practice, essentially invisible to outsiders and learned tacitly through direct contact with experienced colleagues. Handling such transactions requires close cooperation among workers, while the related coordination and control require some exercise of authority to set priorities, define measures and allocate resources. At the other extreme are

completely standardized transactions that are readily observed by all, can be exhaustively and clearly defined and can be codified and transmitted quickly, easily and without confusion. Because the information required for success is readily available and clear, such transactions are amenable to self-organizing coordination, control and resource allocation, so long as individual interests can be aligned.

The *social structure* dimension is a continuum from autonomous to collective approaches to work and organization that reflects an underlying motivational continuum from opportunism (self-interest seeking with guile) to longing-to-belong (self-interest seeking through collective identity). At the autonomous extreme, independent, individuals are motivated solely by personal gain, with only instrumental regard for the interests of others. At this extreme, individuals exhibit opportunistic behavior and their goals may well diverge, not only from those of others, but also from those of the organization. Such divergence generates variety, but makes it difficult to engage in concerted action. Thus, the challenge at this extreme is to align interests well enough to enable cooperative effort.

At the collective extreme, individuals identify with a larger collectivity; individual and group goals merge; and solidarity behaviors are prevalent. Such solidarity supports concerted action, but at the risk of groups becoming sclerotic, parochial and resistant to novel, externally generated change. Thus, the challenge at this extreme is to encourage the search for variety, to support receptivity to change and to ensure that collective solidarity does not diminish the group's focus on economic performance.

### **The Democracy Form of Governance**

We propose democracy as the organizational structure that best fits situations in which the most important transactions are standardized and the operative social structure is collective.

Ouchi's farmer cooperative recalls the colloquial understanding of democracy as a participatory, self-guiding system animated, in part, by common interests (Borgen, 2004; Ouchi, 1980). More formally, democracy rests on the notions that membership in a polity grants participation in governance and that those charged with governing are accountable to the membership (Clegg, Kornberger, & Carter, 2003; Kerr, 2004). Effective democratic organization requires more participation than mere voting, more power than mere suggestion, and more formality than mere norms. Truly democratic organization involves reinforcing political, economic, cultural and structural aspects that include open open information flows, participatory organizational structures and a culture of involvement (Kerr, 2004; Rousseau & Rivero, 2003). Thus, a successful democratic organization might include equity ownership for members, controls on outside investment, open book management, written policies, careful checks and balances, independent dispute resolution and active maintenance of a democratic culture (Cornforth, 2004; Hernandez, 2006).

The Dutch Breman system of interlocking hierarchical firms and the Mondragon system of democratic cooperatives illustrate these principles well. The Dutch Breman Group is a 25-firm, 1200-employee, \$140 million family- and worker-owned group of manufacturing firms governed by a complex, interactive and participatory combination of management teams, democratic worker councils (that appoint management) and policy-setting bodies (De Jong & van Witteloostuijn, 2004). The worker-owned Mondragon Corporacion Cooperativa (MCC) is a fifty-year-old, multinational, €9-billion group of manufacturing, distribution, retail and banking cooperatives designed, managed and governed at both firm and system levels by participatory and representative elected bodies (Forcadell, 2005). Both systems combine elaborate democratic structures with exhaustive checks and balances, well-defined consultation and decision-making

processes, widespread equity ownership, participatory cultures, inclusive dispute-resolution procedures and ongoing training in participatory processes for all workers (De Jong et al., 2004; Morrison, 1991; Whyte, 1999). Importantly, both systems have been extraordinarily responsive to their worker-owner polities. Rather than lay off members, they have reinvented existing firms, launched new firms and retrained and relocated members throughout the systems. Further, they have continually redesigned governance processes, procedures and structures to suit changing environments. They have also struggled to maintain democratic values and structures in the face of pressures to develop more traditional governance models and less participatory cultures. Finally, both have developed consulting groups designed to translate tacit team-level knowledge into codified knowledge that can be disseminated across the system to support, reinvent or start firms.

Even more suggestive in light of the trends towards knowledge-intensive systems are the vital, creative, contentious and more or less democratic open-source communities such as Linux (von Grogh et al., 2006). In open-source communities, participants co-design and co-create complex technologies more quickly and reliably than do their hierarchically organized competitors. Further, they do so without obvious individual economic incentives. While there are certainly some mild individual economic incentives such as the chance to demonstrate skill to employers or potential clients, much more powerful seem to be intrinsic, social-identity-driven rewards like belonging, recognition from valued peers and the pleasure of solving problems (Sawhney et al., 2000). Open-source systems are possible in large part because control and coordination costs are minimized by the modularity of the designs, the extraordinary explicitness of the information involved (software code) and the efficiency and transparency of the communications process. Thus, monitoring costs are reduced through the automated

documentation of all work and through the conflation of roles such that all participants are both users and innovators; administrative costs are reduced through the use of standards, such as agreed-to programming languages and processes; and coordination costs are reduced through volunteer facilitation and versioning software.<sup>3</sup>

More theoretically, open-source communities can be conceived of as roughly democratic commons – not unlike the old village commons or communal fisheries – in which the allocation of private use of a public resource is the prerogative and responsibility of membership group (whether villagers or programmers). Effective commons regimes prevent opportunistic use and destruction of common-pool resources by developing and enforcing endogenous rules, norms, processes and structures that recognize and reinforce mutual dependence (Neelson, 1993). Despite the difficulty of excluding any member-user, commons can be well-managed if and when socially bounded groups of users actively develop and enforce their own rules of use and governance (Ostrom, 1999, 2006). Thus, to use the open-source commons, one must join the social group and abide by its rules. Selection is carefully managed through strict requirements concerning commitment to the project and technical skill as certified by recommendations from existing members. Once admitted to the community, members are subject to rigorous scrutiny and an open process of criticism and discussion, backed by social pressures to act within norms of behavior, performance and etiquette (Lee et al., 2003; O'Mahony, 2003).

Critically, the norms that are enforced are rules of participation; indeed, one of the norms is the celebration of vigorous discussion in support of creative, open and inclusive problem solving (O'Mahony & Ferraro, 2007; von Grogh et al., 2006). While participants can and do take

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<sup>3</sup> As one perceptive reviewer pointed out, open-source systems have not yet solved the critical challenges of appropriating and apportioning the value created in ways that ensure ongoing investment. One solution is to start firms – like Red Hat – that appropriate value by customizing the use of open-source products (for a fee); another approach, pioneered by Sun Microsystems, is to try to contain an open-source community within firm boundaries. In all cases, it seems to us important to remember that much of the value being generated is social and intrinsic – and that this sort of value is being appropriated just fine.

sides in arguments, the development of factions is secondary to the commitment to preserve the system. Indeed, both the role structures and product are modular in design precisely so that components can survive or die without affecting the whole. Finally, the entire system – the products, the community and the organizational structure – co-evolves. Through ongoing conversation and interaction, democracies and commons continuously define and re-define their formal and informal constitutional contexts.

In summary, democratic organizations exhibit market-like advantages of variety generation and selection in that they draw on multiple perspectives to generate innovative ideas and are able to discard, through negotiation, modules that do not meet self-defined standards of usefulness. Democracies also exhibit clan-like advantages of horizontal, process-and-procedure-oriented control that support adaptation and implementation in the face of moderate environmental change (Lotti et al., 2006). At the same time, because of their process-orientation, democracies, like clans, suffer from high costs of creating and maintaining participatory systems, structures and cultures – costs that tend to grow rapidly with scale and/or social or cultural distance. These costs are evident in the kind of ponderous, legislative decision-making that democracies may exhibit when factions contest every decision. Tellingly, these limitations seem to be largely overcome in the special case of open-source software communities, with their extraordinarily low communication costs and unusually standardized and codified information base. Finally, as with markets, democracies' reliance on unambiguous information and measures limits their usefulness in situations in which ambiguity reigns. When essential knowledge is largely tacit, when interpersonal communications must be translated across cultural and linguistic boundaries or when prices and procedures cannot be well-specified, both democracies and markets become unwieldy.

## The Contingency of Organizational Forms

Table 2 summarizes the conditions under which each organizational form thrives, the motivations each leverages, the coordinating and control mechanisms each employs and the authority under which each operates.<sup>4</sup>

*Insert Table 2 about here*

**Market.** Markets are most efficient for governing standardized, codifiable transactions among autonomous entities cooperating on work that can be done effectively at arms length. Energized by opportunism, markets are coordinated automatically through the mechanism of price clearing (the invisible hand), reinforced by competition (Smith, 1789). As a governance mechanism for cooperative action among opportunistic participants, markets offer the advantages of powerful incentives, active selection of winners and losers and rapid adaptability. Markets suffer, however, from powerful centrifugal forces and an emphasis on immediacy. When conditions are optimum, markets generate variety, select efficient alternatives and foster systemic, creative and efficient responses to changing conditions, albeit at the cost of the demise of less fit entities.

**Hierarchy.** Hierarchical firms are most efficient for governing idiosyncratic, hard-to-codify transactions involving autonomous entities cooperating on work that must be tightly coordinated. Energized by opportunism, hierarchical firms are coordinated deliberately (the visible hand) through the mechanism of policies and procedures, reinforced by a rational-legal authority structure (Chandler, 1977; Weber, 1978). As a governance mechanism for cooperative

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<sup>4</sup> Williamson might suggest an additional column specifying the type of contract that governs each organizational form. (Williamson, O. E. 2002. The Theory of the Firm as Governance Structure: From Choice to Contract. *Journal of Economic Perspectives*, 16(3): 171-195.) Building on his work that suggests neoclassical contract law for market and forbearance law for hierarchy, we would suggest common law for clan and constitutional law for democracy.

action among opportunistic participants, hierarchical firms exhibit a performance advantage when deliberate, long-term coordination through planning, command and control is at a premium (Simester & Knez, 2002). Hierarchical firms are limited, however, by weak and confused connections between effort and reward, high administrative costs – both for coordination and to monitor behavior – and a certain stubborn persistence and rigidity. When conditions are optimum, hierarchal forms support the generation, consolidation and replication of knowledge, leading to learning-based productivity increases.

**Clan.** Clans are most efficient for governing idiosyncratic, hard-to-codify transactions involving embedded entities cooperating on work that requires extensive horizontal coordination. Energized by the longing to belong, clans are coordinated through consensus building as reinforced through socialization, tradition and culture maintained by a traditional authority structure. As a governance mechanism for cooperative action among participants identified with a collective, clans exhibit a performance advantage when tacit knowledge, continuous learning and incremental adaptation to complex, changing circumstances are at a premium (Aoki, 1990). Especially in the face of discontinuous change, clans can falter, however, under the costs of consensus seeking, the strictures of tradition and closure to new ideas. When conditions are optimum, clans support the integration of knowledge across functions and increase operational effectiveness by generating process innovation. *Thus,*

*Proposition 1: When the most critical transactions are idiosyncratic and when the social structure features collectivity and longing to belong, clan organizational form will be favored.*

**Democracy.** Democracies are most efficient for governing standardized, codifiable transactions involving embedded entities cooperating on work that can be done effectively at arms length. Energized by the longing to belong, democracies are coordinated through

negotiation as reinforced by the political power of vying factions and regulated by structural and procedural checks and balances (Morrison, 1991; von Grogh et al., 2006). As a governance mechanism for cooperative action among individuals identified with a polity, democracies exhibit performance advantages when issues and options are reasonably discrete, experimentation in both leadership and initiatives is useful and continuous adjustment to changing circumstances is at a premium. Democracy falters when infighting and polarization overwhelm its adaptability or when uncertainty and complexity undermine the ability of the polity to engage in discussion and negotiation. When conditions are optimum, democracies generate a dialectical process of variety-generation and consolidation, leading to layers of adaptation and reinvention as factions negotiate creative responses to changing situations, without jeopardizing the underlying framework of agreement. *Thus,*

*Proposition 2: When the most critical transactions are standardized and when the social structure features collectivity and longing to belong, democratic organizational form will be favored.*

### **Intermediate Organizational Forms**

These stylized forms and propositions are deceptively clear-cut. In reality, people are at once autonomous and embedded; every transaction contains a mixture of standardized and idiosyncratic elements; motivations are always mixed; and actual organizations combine elements of each of the pure forms (Ouchi, 1979).

For example, an unambiguous, opportunistic, arms-length market exchange may well include an ambiguous, relational component, such as when commercial bankers rely on tacit judgments formed through relationships to adjust covenants and interest rates on loans granted through an otherwise transparent and explicit credit scoring process (Uzzi, 1999). Similarly,

inter-bank currency traders combine pre- and post-trade social interactions, informal rules of conduct and social sanctions (such as email flames and the refusal to trade) to self govern their seemingly impersonal and entirely virtual market – as well as to train new traders in the fine art of maintaining the liquidity of both market and social relations (Cetina & Bruegger, 2002).

More generally, researchers have found that contracts and relational norms of fairness often complement each other, especially in situations in which exchange partners work together repeatedly, in which information about reputation spreads quickly and in which repeated exchange encourage friendship and shared identity (Barden & Mitchell, 2007; Luo, 2005; Poppo & Zenger, 2002). Once relationship-specific routines and cultures become institutionalized between two parties, it is unlikely that the firms will replace their partners based solely on economic motivations (Kim, Oh, & Swaminathan, 2006). On the relational side, long-term, relationship-based interactions like those among suppliers in the Toyota Production System are augmented by very formal contracts designed expressly to encourage codification of the results of the essentially tacit, horizontal coordination interactions (Carson et al., 2006; Kogut, 2000). Similarly, the clan-like norms of behavior that unite open-source communities and cooperative systems seem to evolve into increasingly explicit rules, roles, policies, procedures, contracts and so on (O'Mahony, 2003).

In short, the boundaries between forms are fluid and contingent on changing conditions. For example, within organizational boundaries, changes in reward systems can erode the intrinsic motivation underlying solidarity, and changes in communication norms and technologies can shift the balance between tacit and explicit knowledge. Thus, Osterloh & Frey (2000; 2002) describe how hierarchical firms can use extrinsic compensation inducements to coordinate the work of independent knowledge workers so long as the *results* of their tacit knowledge are

explicit and measurable. They describe, further, how firms can manage more-or-less outsourced profit centers and spin-offs through market-like transfer pricing, and how firms might manage tacit-knowledge-dependent design teams as cohesive, intrinsically motivated clans. Finally, Osterloh & Frey describe how firms might balance extrinsic and intrinsic rewards when trying to form and manage the voluntary, partially democratic work groups that convert tacit knowledge to explicit routines for firm-wide use.

At a system level, complex conditions support complex and even competing combinations of organizational forms. For example, the Mondragon system of industrial cooperatives relies on both hierarchical and clan-like organization to manage the firm-level work of manufacturing complex robotic systems, while using a layered democratic structure to coordinate and control the allocation of financial and human capital across its federation of cooperatives (Forcadell, 2005). In this way, tacit-knowledge-intensive transactions are contained within hierarchical and clan forms, while more explicit, functional, system-wide transactions are managed democratically across a broader, member-defined jurisdiction (Frey & Eichenberger, 1996).

Similarly, as knowledge generation becomes increasingly important, multi-national corporations have begun to exhibit a greater degree of organizational diversity, featuring, for example, competence-creating subsidiaries whose scientists, at least, are embedded in cross-boundary, clannish communities of practice (Cantwell & Mudambi, 2005). Further, to support greater knowledge exchange, cross-subsidiary, cross-functional, relationship-based integrating mechanisms, such as research alliances, are becoming more important for success (Dhanaraj et al., 2006; Kostova & Roth, 2003; Roth, Schweiger, & Morrison, 1991)

Given the messiness of reality, one test of the face validity of the proposed model is its ability to provide a coherent framework for some of the newer organizational forms, especially the relatively undifferentiated network and alliance forms (Grandori & Kogut, 2002; Inkpen & Tsang, 2005). Figure 4 suggests where contractual hybrid, relational hybrid, commons and network forms fit into the framework.

*Insert Figure 4 about here*

**Contractual Hybrids: Between hierarchy and market.** Between market and hierarchy are franchises, joint ventures and conventional supply chains. Such hybrids combine explicit contracting and pricing mechanisms with the monitoring, command and control of hierarchies to harness the effort of autonomous, opportunistic participants. They arise in situations in which the social structure is autonomous and in which performance depends on the effective management of standardized and idiosyncratic transactions, including the translation between explicit and tacit knowledge.

**Relational Hybrids: Between hierarchy and clan.** Combining characteristics of hierarchy and clan are certain supply chain organizations, research alliances and family business groups. Such hybrids employ a mixture of policies, procedures, consensus-seeking and socialization to coordinate activity while balancing the opportunistic and longing-to-belong motivations of participants. They emerge in situations in which the social structure combines autonomous and collective elements and in which the creation, development and coordination of tacit-knowledge-rich idiosyncratic transactions are central to performance.

**Commons: Between clan and democracy.** Situated between clans and democratic organizations are democratic firms, open source communities and various cooperative systems. Such commons organizations are animated by solidarity and coordinate activity through a rare

and powerful combination of intense socialization and elaborate, democratic governance systems. They develop in situations in which the social structure is collective and in which autonomous performance depends on the effective management of standardized and idiosyncratic transactions, including the translation between explicit and tacit knowledge.

For example, Alvesson & Lindkvist (1993) describe some particularly egalitarian technology firms as *social clans* in which members are conscious of their collective culture and even identify as quasi-family. At the same time, these firms incorporate some elements of democracy by actively involving all members in participatory management and governance. The result are firms that are particularly effective in developing, capturing and articulating new, technical knowledge.

Closer to the middle of the spectrum is the Seikatsu Club Seikyo, a \$150 million Japanese consumer-owned cooperative that provides a wide array of goods and services to its 47,000 household members (Maruyama, 1991; Oka, 2000). Started after World War II by housewives frustrated by the lack of fresh milk, the Seikatsu Club remains largely a women's organization that has built its distinctive culture around commitments to the community optimum, mutual aid and democratic participation. Organized around the 10-family *han* that serves as both a structural reinforcement for the culture and a practical vehicle for governance and distribution, Seikatsu has continually expanded its operations from buying clubs to distribution cooperatives, production cooperatives, service cooperatives such as nursing homes and even local political parties. In so doing, Seikatsu has leveraged its highly collective social structure to translate the informal, idiosyncratic transactions of the *han* into increasingly elaborate and routinized systems of democratically controlled economic exchange. *Thus,*

*Proposition 3: When the most critical transactions are both standardized and idiosyncratic and when the social structure features collectivity and the longing to belong, commons organizational forms will be favored.*

**Networks: Between markets and democratic organizations.** Located between markets and democratic organizations are industrial districts, standard setting organizations and certain networks of firms. Such networks make use of contracts, market incentives, social sanctions and quasi-democratic processes to coordinate activity while balancing the more or less standardized transactions (Manolis, Gassenheimer, & Winsor, 2004). They evolve in situations in which the social structure combines autonomous and collective elements and in which transactions are relatively standardized.

Networks thrive when flexible coordination between loosely affiliated participants confers performance advantages over either straightforward market competition or tighter hierarchical controls (Inkpen et al., 2005; Powell, 1990). Classic examples closer to the market end of the range are industrial districts such as Silicon Valley and the Emilia-Romagna region of Italy, as well as networks of alliances within the emerging biotechnology industry (Powell, 1990; Powell et al., 1996; Powell, White, Koput, & Owen-Smith, 2005).

Toward the middle of the spectrum are standard setting organizations and their associated communities of implementers and users (Krechmer, 2006). While the details vary by community, each defines membership, rules for meetings, consensus-seeking guidelines and due process procedures. Membership is critical to create a collective social structure to balance opportunism; open-meeting rules and consensus-seeking guidelines define the process of coordination and control; and due process creates a political form of competition to harness economic competition. The result is a highly “nuanced intersection between market behavior and the deliberations of standard-setting organizations” (Augereau, Greenstein, & Rysman,

2006: 906). Crucially, the most effective standard setting organizations seem to be those which succeed in codifying knowledge, creating transparency and blunting naked opportunism with strong collective identities (Terlaak, 2007).

Closer to the democratic end of continuum is E. LeClerc, a French cooperative federation of independent, discount retail stores that combines market elements with a democratic cooperative structure (Lotti et al., 2006; Markides, 1998). LeClerc is organized with the usual cooperative voting procedures and with owners as member/investors. The federation encourages rough equity among members by limiting ownership to two stores, but encourages investment in the network by allowing members to take minority ownership positions in other stores. Further, new stores are invariably started, owned and operated by employees trained by owners, thus tapping market/ownership appeals to self-interest while further supporting the evolution of a strong network identity and culture. Finally, successful storeowners who have reached the agreed-to limits of investment are charged with identifying and spreading best practices – and, not incidentally, culture and a perception of fairness – throughout the system. The result is an inventive, adaptive, self-organizing and self-perpetuating network that is animated by both opportunism and the longing-to-belong. The LeClerc network is remarkably transparent and coordinates standardized transactions such as ownership, joint buying and shared policies by using both the arms-length market arrangements of the marketplace and the policy-and-process arrangements of democracy. *Thus,*

*Proposition 4: When the most critical transactions are standardized and when the social structure combines autonomy, opportunism, collectivity and the longing to belong, network organizational forms will be favored.*

## **The Evolution of Organizational Forms**

Another test of the face validity of our proposed framework is whether it is useful in suggesting explanations for the evolution of organizational forms. The ideas that people are at once autonomous and embedded, and that transactions always have both idiosyncratic and standard components, suggest underlying dynamics that might pull existing forms in particular directions given particular conditions.

For example, on the clan-democracy side of the matrix, case studies of community-based enterprises born of clan-based economic activity suggest that they evolve towards democratic structures as the activities are formalized (Peredo et al., 2006). Similarly, open source systems seem to evolve toward democracy as they expand beyond their charisma-dominated founding clans, although the risks of invasion by commercial interests and subsequent membership exit are always present (O'Mahony et al., 2007; Oh & Jeon, 2007).

Along the hierarchy-clan dimension, it is suggestive that large pharmaceutical firms such as Glaxo-Smithkline have begun to break their hierarchical research organizations into more clan-like, cross-subsidiary, cross-disciplinary “centers of excellence” that even reach beyond the firm to form open-architecture research alliances with scientists in academia and smaller firms (Garnier, 2008). That is, firms like GSK seem to be trying to leverage the collective identity of research scientists to encourage more effective coordination and collaboration of the tacit knowledge involved in drug discovery. Relatedly, when observing emerging economies, scholars have questioned the stability of family business groups, wondering whether they will remain suspended between clan and hierarchy, or whether institutional and cultural pressures will pull them towards the hierarchy or clan (or even market) extremes (Boisot & Child, 1996; Khanna & Palepu, 2000b; Peng, 2004).

Indeed, the undertow of the market seems fierce, as illustrated in Figure 5. Consider the evolution of the much-heralded Silicon Valley industrial district with its exquisite and extraordinarily productive tension between integration and disintegration, as firms spin off, key employees move between firms and firms compete for alliances with star firms (Saxenian, 1994; Stuart, 1998; Stuart, Hoang, & Hybels, 1999). As engineers migrated from firm to firm, sharing technical insights and know-how in a frenzy of exploration and innovation, Silicon Valley developed an identifiable, trans-firm combination of culture, norms and mechanisms of social control – thus becoming a clan of sorts. As the technologies matured and became more standardized, the informal clan evolved into a loose and egalitarian confederation of companies, connected and orchestrated through venture capital and legal firms as well as social ties – a network democracy of sorts (Castillo, Hwang, Granovetter, & Granovetter, 2000; Walker et al., 1997). More recently, as the technologies have matured further and Silicon Valley firms have grown and spread, the collective identity has perhaps begun to fray and the network to dissolve into the larger global market.

*Insert Figure 5 about here*

Although market incentives are strong, market organization is only effective when transactions are standardized and participants relatively autonomous. For example, Oticon, the Danish hearing-aid maker tried, with some initial success, to reorganize the firm as an internal marketplace of project teams (Foss, 2003). At the end of the 1980s, Oticon was a sclerotic bureaucracy, unable to innovate or adapt effectively. In a radical attempt to leverage both the high-powered incentives and the creative churn of the market, Oticon moved dramatically toward the market form by slashing its hierarchy to only two levels and reorganizing as a shifting mosaic of project teams. The teams were formed voluntarily (without management guidance)

around project proposals; individuals' pay was linked directly the success of their projects; and the entire system was supported by a state-of-the art information system designed to codify information exchange. Initially, product-development times dropped, languishing projects accelerated and performance improved. Despite the promising beginning, Oticon drifted back toward hierarchy, in part because management undercut opportunistic incentives by reserving (and using) veto and agenda-setting power and in part because the market-based reward system was unable to support the horizontal coordination and knowledge sharing critical to firm success. In fact, the Oticon market system seems to have eroded the intrinsic motivation and social identity that underlie the collective development and transmission of tacit knowledge. While Foss suggests that improved performance measurement might have salvaged the Oticon experiment, our framework would suggest that, to the extent tacit knowledge and horizontal coordination were critical, Oticon would have done better to reorganize along clannish lines by strengthening collective identity.

While managers are always constrained by the transactional and social conditions in which their organizations operate, they also strive to shape both organizational responses and the underlying conditions themselves. The path taken by Luxottica, the largest maker of eyeglass frames in the world, illustrates the pull and counter-pull of individual versus collective incentives and idiosyncratic versus standardized transaction contexts (Camuffo, 2003). Luxottica launched as a conventional hierarchy run by a charismatic entrepreneur. Drawing on the Northern Italian tradition of collectively organized clusters, Luxottica tried to emulate the success of the craft-oriented, frame-making industrial district in the neighboring Cadore Valley by spinning off firms to seed a clan-like cluster of small firms around Luxottica. This system performed well initially and led to increased levels of coordination and skill within the Luxottica system. But when

performance was threatened by the entrance of low-cost competitors from Asia, Luxottica reabsorbed many of its former spin-offs into a conventional hierarchy; standardized processes and routines; and then outsourced various functions to fewer, larger firms orchestrated as a typical contractual hybrid supply chain.

Together, these examples raise the intriguing possibility of researchers using transactional and social / motivational conditions to trace – or managers using these conditions to shape – predictable paths for the evolution of organizational forms. *Thus,*

*Proposition 5a: As the specification of critical transactions shifts from standardized to idiosyncratic, the hierarchy-relational-hybrid-clan continuum of organizational forms will gain an advantage over the market-network-democracy continuum of organizational forms.*

*Proposition 5b: As the specification of critical transactions shifts from idiosyncratic to standardized, the market-network-democracy continuum of organizational forms will gain an advantage over the hierarchy-relational-hybrid-clan continuum of organizational forms.*

*Proposition 5c: As the predominant social structure shifts from autonomous to collective, the clan-commons-democracy continuum of organizational forms will gain an advantage over the hierarchy-contractual-hybrid-market continuum of organizational forms.*

*Proposition 5d: As the predominant social structure shifts from collective to autonomous, the hierarchy-contractual-hybrid-market continuum of organizational forms will gain an advantage over the clan-commons-democracy continuum of organizational forms.*

## CONCLUDING REMARKS

This paper offers a contingency model to classify and begin to explain the amazing variety of new organizational forms including alliances, network organizations, open-source communities and cooperative systems. Our model involves revisiting and reinvigorating the transaction cost economics market, hierarchy, clan typology of organizational forms by

combining insights from economic sociology, social psychology and knowledge-based theories to add a social structure dimension to the transaction cost continuum. The result is a flexible, transaction-specification/social-structure matrix that posits democracy as a fourth pure organizational form, classifies extant organizational forms and highlights some of the dynamics that may underpin the evolution of organizational forms.

This paper is built around the observation that humans are at once autonomous and embedded in collectives, and the related intuition that the longing-to-belong may be as powerful a motivator as opportunism. The relaxation of the autonomy and opportunism assumptions broaden the TCE framework to include a more complete view of human experience that should, in turn, make TCE's comparative approach more useful for understanding a broader range of organizational situations. Our model should, for example, provide insight into the growing challenge of managing knowledge workers (Florida, 2005) by suggesting combinations of transaction specifications and social structures that could be used to align their interests, tap their social identities and organize their tasks.

The framework could also be used as a set of lenses to understand better the complex, nested structures of large multinational firms. For instance, the model could be used to guide the structuring of multinational enterprises by helping to prescribe the conditions under which a particular corporation might best be organized as a market of firms, a network of work groups, a democracy of clans or another combination that fits a given transactional and social structural context.

A third, even more daunting test of the usefulness of this model would be whether it could help meet Ouchi's challenge to understand and intervene in the organizational (il)logic of public schools (Ouchi, 1980, 2006).

These potential uses underscore one of the shortcomings of this paper – its reliance on stylized, pure types and simple hybrids. Clearly, most organizations mix multiple forms. Further, the forms that are most salient may well depend on the level of analysis (from small unit to systems), the formalization of the institutional context, and the sheer scale of the entities involved (Boisot, 1986; Boisot et al., 1996). Further, all organizational systems are in continual flux. While we believe this model provides some insight into the interplay between choice and selection pressure in the emergence and change in forms to fit changing combinations of transactional and social demands, we look forward to elaborating these dynamics in more detail, particularly in light of the nesting of forms within forms, for example in multinational firms, and in the light of economic history, particularly the evolution of institutions.

Our proposed addition of democracy to the market, hierarchy, clan taxonomy also calls attention to the understudied but pervasive examples of democratic organizations that combine the variety-generation of the market with the integration capability of the clan. As open-source communities and quasi-democratic network forms proliferate, it may be useful to mine the political science, legal and management information systems literatures for a deeper understanding of the essential components of democratic organizational structures. It would also be useful to augment such a theoretical exploration with detailed case studies of the full range of democratic organizations – from partnerships, to standard setting organizations, to open source communities, to cooperatives.

Finally, and more philosophically, while our observations are consistent with the theory and research concerning the interplay of extrinsic and intrinsic motivations, there is scope for further articulation of the types of motivations arrayed along the underlying continuum of embeddedness. A preliminary suggestion is that human motivation ranges from self-interest as

an extension of the drive for self-preservation, through enlightened self-interest, through the survival and pleasure utility of belonging to a social group, to collective identity as an expression of the drive for family-preservation.

The original goal of this paper was to organize the unruly, diverse constellation of established and emerging organizational forms into a unified, manageable framework. By adding a social structure dimension to the accepted transaction specification dimensions, and by introducing democracy as a pure organizational form, we believe we have accomplished this goal. An unexpected but pleasant outcome is new insight into the dynamics underlying the evolution of organizational form. But this paper will be truly successful if it establishes a conceptual connection between organization form and the continuum of fundamental human motivation that spans opportunism and the longing to belong.

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**FIGURE 1:  
Transaction Specification & Organizational Forms**

<b>Transaction Specification</b>	<b>Idiosyncratic</b>	<b>Hierarchy (Hierarchical Firm)</b>
		<b>Contractual Hybrid (Joint Venture, Franchise, Supply Chain)</b>
	<b>Standardized/ Codified</b>	<b>Market</b>

**FIGURE 2:  
Social Structure of Work & Organizational Forms**

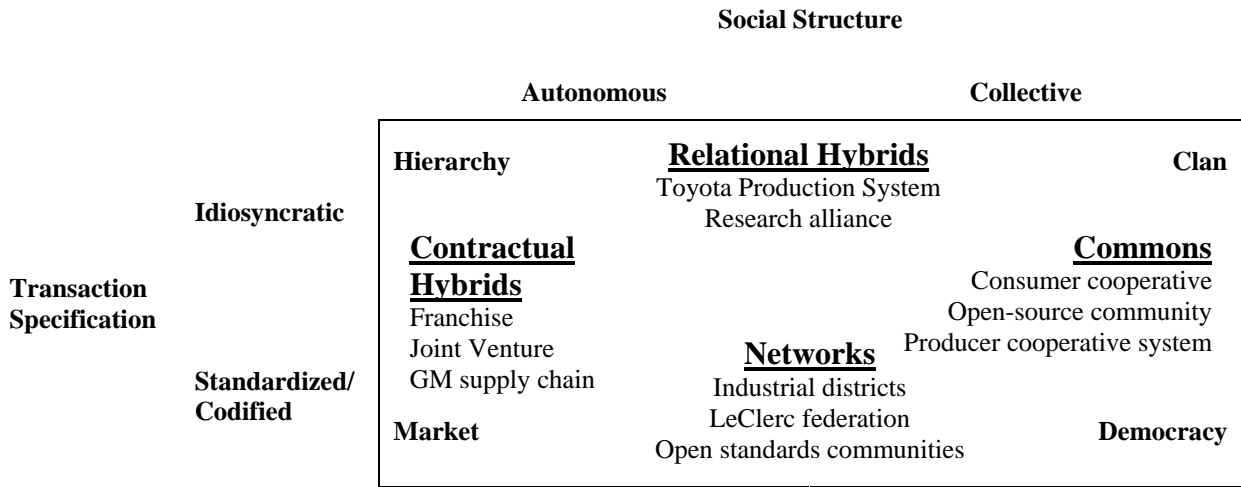
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<b>Social Structure</b>		
<b>Autonomous</b>		<b>Collective</b>
<b>Hierarchy</b>	<b>Relational Hybrid</b>	<b>Clan</b>

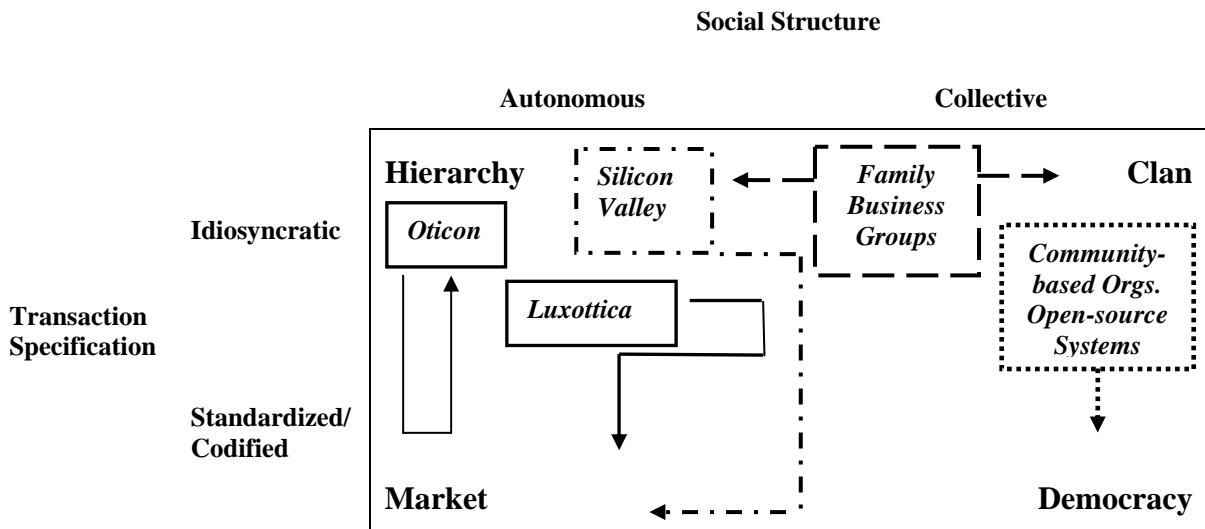
**FIGURE 3:  
Market, Hierarchy, Clan, Democracy Taxonomy**

		<b>Social Structure</b>	
		<b>Autonomous</b>	<b>Collective</b>
<b>Transaction Specification</b>	<b>Idiosyncratic</b>	<b>Hierarchy</b>	<b>Clan</b>
	<b>Standardized/ Codified</b>	<b>Market</b>	<b>Democracy</b>

**FIGURE 4:  
A Practical Guide to Common Organizational Forms**



**FIGURE 5:  
Examples of the Evolution of Organizational Forms**



**TABLE 1:  
Autonomy-Collectivity Continuum of Human Experience**

	<i>Classical Economics</i> (Smith, 1789)	<i>Transaction Cost Economics</i> (March et al., 1958; Williamson, 1981)	<i>Economic Sociology</i> (Granovetter, 1985)	<i>Normative Sociology</i> (Durkheim, 1938)
<b><i>Social Structure</i></b>	Autonomous Individuals	Individual-in-Organization	Individual-in-Network	Fully-Embedded, Individuals
<b><i>Cognition</i></b>	Rationality	Bounded Rationality	Structured Rationality	Groupthink
<b><i>Motivation</i></b>	Self Interest	Opportunism (self-interest seeking with guile)	Longing-to-belong: (self-interest seeking through identity)	Identity (between self -and group-interest)

**TABLE 2:  
Elements of Pure Organizational Forms**

<b>Structure</b>	<b>Optimum Conditions</b>	<b>Dominant Motivation</b>	<b>Coordinating Mechanism</b>	<b>Control Mechanism</b>	<b>Enforcement Mechanism</b>
<b>Market</b>	Standardized Transactions	Opportunism	Invisible Hand	Price	Economic Competition
<b>Hierarchy/ Firm</b>	Idiosyncratic Transactions	Opportunism	Visible Hand	Policies & Procedures	Rational-legal authority
<b>Clan</b>	Idiosyncratic Transactions	Longing-to-Belong	Consensus-seeking	Socialization	Traditional authority
<b>Democracy</b>	Standardized Transactions	Longing-to-Belong	Negotiation	Checks & Balances	Political Competition