

6

Structure, Affect and Identity as Bases of Organizational Competition and Cooperation

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Abstract

Competing organizations are often defined by their niche overlap or structural equivalence in resource dependence, but the very structure that defines competitors can also identify cooperators. There is a fine line between competition and cooperation, but current theories give insufficient guidance as to which will take place and also contribute to the belief that cooperation between competitors is illegitimate. We show that the legitimacy of these practices, as well as the evaluation of their welfare implications, are context bound. Individuals and societies that have been influenced by different theories of competition could reasonably (and have) reach different conclusions as to the legitimacy of

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competitor cooperation. We then critique extant ideas as to when competitors will cooperate, which rely on industry structure, and suggest instead that perception and social identity are more important in tipping the cooperate–compete balance. We conclude by showing how our arguments inform an important current stream of management research, on the process of institutional change.

Introduction

A common definition of competitors is actors who share an interest in some of the same resources. In other words, competition derives from occupying similar positions in resource space. There is broad agreement on this structural model of competition, even between scholars who approach the issue from economic versus sociological traditions. There is also a concise set of approaches for identifying structural similarity, which can be ordered in terms of the precision in the representation of organizations' resource requirements. The coarsest approach is to identify competitors according to broad types, where the types are often called industries or populations. The second approach breaks down industries and populations into smaller, more similar groups on criteria such as location, strategy and organizational form. The third, most refined approach moves away from categorization and examines the pattern of resource reliance of organizations more directly. The first stage of this paper outlines these popular treatments of competition.

We next argue that the same structural conditions that seed competition also present opportunities for cooperation. As Barnett (2006, p. 1753) puts it, "rivals are also roommates". This admits a troubling indeterminacy in the relationship between the structural position of organizations and the level of competition between them. Similarity in resource space might lead organizations to harm or help each other. Put bluntly, the frameworks that economists and sociologists have built on the foundational idea that structural similarity equates with competition are shaky.

How is it, then, that various management theories have converged on structural similarity as the key antecedent of competition when that antecedent seems as likely to bring cooperation? We think this is at least partly due to the fact that various theories have attributed positive outcomes to competition as opposed to cooperation between similar organizations. The economic view of competition derives from the welfare-enhancing assumptions of the theory of perfect competition, where resources are used most efficiently when competition is greatest. A kindred sentiment is embedded in sociological theories that build on the ecological principle that competition increases the speed at which fit forms come to dominate those that are less fit. These currently influential theories provide normative backing for the idea that structurally similar organizations should be autonomous and hostile to each other. We show, however, that this is a context-specific rather than transcendent idea. Comparisons between economic systems across time and space

reveal that hostility between structurally similar organizations is not the natural order, and also suggest that cooperation between potential competitors may lead to fair and productive economic systems. Other analysis suggests that the evidence in favor of current models of competition is self-fulfilling, a function of the diffusion of those models, rather than a reflection of the real world.

If the sole focus on structural relationships cannot determine competition or cooperation, what does? We believe that perception and social categorization play this role, and that these are feasible targets of strategic manipulation by entrepreneurs who would benefit from cooperation (or competition) between structurally similar actors. The balance between competition and cooperation shifts on these cognitive processes rather than objective relations to resources. We conclude by applying these ideas to help understand inter-organizational relations in the context of an important research topic in management, institutional change.

Structural Approaches for Identifying Competition

Populations and Industries

Competition between organizations and other actors emerges because of a shared reliance on the same resources. Organizational ecologists identify the condition of “niche overlap” as the basis of competition (Hannan & Freeman, 1989), meaning simply that a set of organizations rely on some of the same resources for founding, growth and survival. The ecologists’ empirical strategy for identifying competition derives from population biology’s *Lotka-Volterra* equations, which assume that the carrying capacity of a focal population (its number of members in equilibrium) is a negative function of the density of a competing population (the count of its members). In terms of types of organizations, this is evidenced by a negative impact of the density of one type on the founding and growth, or a positive effect on the rate of failure, of another type. This type of cross-population analysis is not the norm in empirical work, but it is not uncommon: craft unions impinged on industrial unions (Hannan & Freeman, 1989); Israeli moshavim (collectives of smallholder farms) impinged on kibbutzim (communal farms) (Simons & Ingram, 2004); Danish organizations were less likely to be founded if they used the same types of workers as other industries (Sorensen, 2004).

A kindred and more common application of the ecological approach to identifying competition is the theory of density dependence, which examines the influence of a population’s density on its own founding, failure and growth rate. The argument is that competition within a population rises with density as more organizations pursue the same resources, and that competition reduces founding and growth and increases failure (Carroll & Hannan, 2000). There are literally dozens of empirical findings that support the competition element of the theory of density dependence (Baum, 1996).¹

The ecological procedure of looking for competition within organizations of a population is similar to the typical earlier practice in industrial economics, where competitors were seen as organizations in the same industry, or organizations that serve the same market (Scherer, 1980). These scholars conceive of industry structure as a central determinant of organizational performance. Porter's (1980) five forces model captures the insights of this field as they are typically employed by management scholars. In this model an industry is regarded as more competitive if it is closer to the theoretical idea of perfect competition—a large number of firms, relatively homogenous products, low market concentration, and low entry and exit barriers.

Sub-Population and Sub-Industry Groups

Researchers in both the industrial economics and ecological tradition at some point moved beyond the obvious simplification of categorizing all organizations in a population or industry as facing the same competitive pressure. A number of approaches consider heterogeneity in competitive intensity for different organizations that may still fit a given industry or population label. In other words, research has gone on to recognize that the broad categories of industry and population are made up of sub-groups. The basic premise, that organizations of the same type compete more intensely, has been applied to these sub-groups.

The most prominent differentiation of subgroups within organizational ecology is according to the theory of resource partitioning. This theory begins with what is an anomaly for theories of non-differentiated competition within an industry. In many contexts, as the concentration of an industry increases (that is, as more market share is accounted for by a small set of large organizations) the number of small organizations also increases. Concentration is an indicator of the advantage and dominance of very large organizations, and it strains the undifferentiated view that both larger and smaller organizations appear to thrive at the same time. The theory of resource partitioning responds to this apparent anomaly by recognizing the fundamental categories of generalists and specialists, and arguing that they have distinct patterns of resource utilization (Carroll, Dobrev, & Swaminathan, 2002).

Generalists, according to the theory, occupy the “center” of the resource distribution, where there is the greatest concentration of consumer preferences. These organizations take advantage of economies of scale and offer a product that appeals to the modal consumer. The archetypal example in the literature is the mass-market producer of beer (Carroll & Swaminathan, 2000). Specialists occupy less-central places in the resource distribution, away from the center, and where the products offered by the generalists are less appealing. Resources are indeed scarce in this periphery, but they may be sufficient to support small organizations that have high appeal to some consumers. The archetypal example is the microbrewery, which produces an

unusual beer on a small scale. The process of concentration, where generalists increase their dominance over the center of the resource distribution, actually frees up resource space on the periphery for specialists. Evidence for these ideas has been found in a number of industries, including newspapers, breweries, wineries and automobile producers (Carroll, 1985; Carroll & Swaminathan, 2000; Dobrev, Kim, & Carroll, 2002; Swaminathan, 1995).

Other within-industry or population distinctions have also been used to identify more intense pools of competition. The most common of these distinctions is geography, where organizations within an industry or population that are in the same city or region are characterized as closer competitors. Often, co-location distinguishes organizations that may compete more intensely in input markets (e.g., for land or labor) while they face inter-regional or national markets for their outputs (Ingram & Lifschitz, 2006; Sorenson & Audia, 2000). Organizations in an industry or population may also compete more intensely with others of the same organizational form. For example, cooperatives in an industry may compete more intensely with other cooperatives rather than corporations in their industry, because there are some workers and consumers more willing to engage cooperatives than corporations (Simons & Ingram, 2004). And chain organizations may compete more intensely with other chains compared to independent organizations, because chains' offerings to the market have more commonalities (Ingram & Baum, 1997). Still other studies identify competitive sub-categories within a population according to political ideologies (Barnett & Woywode, 2004; Simons & Ingram, 2004).

In the management literature derived from economics, the approach to representing competitors by sub-industry groups is well represented by the strategic group literature. Researchers here assume that organizations are constrained by mobility barriers and those in the same industry that adopt the same or similar strategies form strategic groups (Hoskisson, Hitt, Wan, & Yiu, 1999; Peteraf & Shanley, 1997). In this way, industry is no longer viewed as a homogeneous unit, but an agglomeration of diverse strategic groups. In some ways this approach to competition has been most explicit about the concern we raise in this paper—that structural similarity may seed either competition or cooperation (Smith, Grimm, & Wally, 1997). This literature has also pointed as we do to perception as key to tipping the balance between competition and cooperation. As Hoskisson et al. (1999) argued, “the fundamental question is whether firms are actually *aware* of their mutual dependence within their particular groups” (p. 427; our emphasis).

Resource-Space Overlap and Structural Equivalence

While the own- and cross-density effects at the population are consistent with the niche overlap arguments of competition, more direct evidence comes from McPherson (1983). McPherson operationalizes niche overlap between

voluntary associations by the degree of demographic overlap among the members they aimed to attract. Thus, niche overlap, at least in terms of participants, was measured directly rather than simply inferred from a density coefficient. This niche overlap measure was correlated with the negative influence of organizations on each other's growth. Baum and Singh (1994) pursue a very similar approach in estimating competition between Toronto daycare centers as a function of the overlap in the ages of children that they accepted. A larger set of papers used the logic that more similar organizations are likely to rely on similar resources, what has come to be called localized competition. For example, Baum and Mezas (1992) show that Manhattan hotels experienced more competition from other hotels that were similar in location, size, and price.

Network analysis offers yet another approach for identifying structural similarity as a basis for competition with the concept of structural equivalence. Structurally equivalent actors are those that are the same or similar in terms of relations to others. Two actors that occupy the same network positions have access to the same resources from the network, and may therefore be closer competitors. This idea is the foundation of network theories of competitive advantage, which emphasize that unique structural positions are privileged and sheltered from competition (Burt, 1992). Podolny, Stuart and Hannan (1996) explicitly link the structural-equivalence concept to niche overlap by using the overlap of patent citations by semiconductor firms as a measure of competitive crowding. Ingram, Robinson and Busch (2005) use structural equivalence in interstate networks as an indicator of competition in global trade. Bothner (2003) operationalizes competition in the computer industry using structural equivalence of firms through sales channels. And work from industrial economics employs the structural-equivalence concept to measure competition in network industries such as airlines (Borenstein, 1992).

In summary, a number of influential accounts hold that competition derives from shared dependence on the same resources. Most macro evidence for this position shows that organizations that seem to occupy the same niche because they are of the same broad type exert negative influences on each others' performance. Others have refined this argument by applying it to smaller groupings, showing that competition is greater between organizations that are more similar, and which can be expected to use more of the same resources. Subsequent studies have been able to explicitly measure niche overlap in terms of the demographics of target participants of organizations. Yet another approach for identifying resource overlap is through overlap in network position, what is called structural equivalence. Figure 6.1 shows the basis of competition between two organizations as the overlap in the resources they require, where resources can be broadly defined in terms of customers, employees, endorsements, physical space, knowledge inputs, or anything else necessary for their founding, growth, or survival.

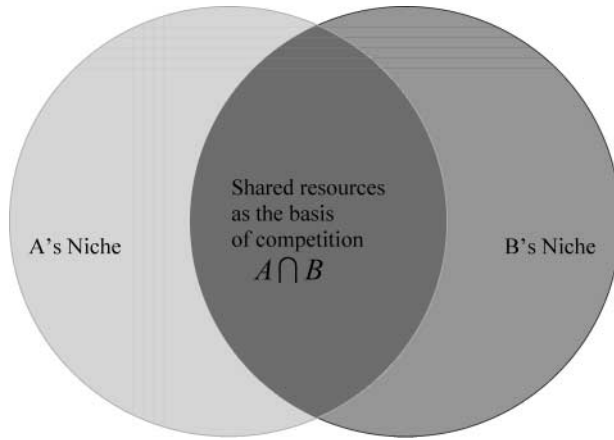
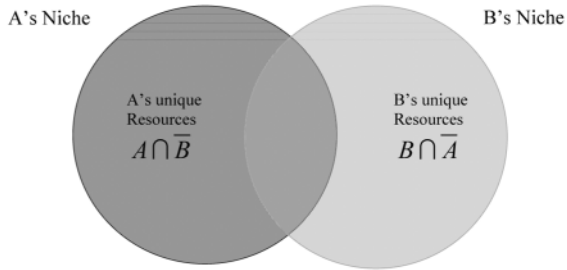


Figure 6.1 Niche Overlap Theory of Competition.

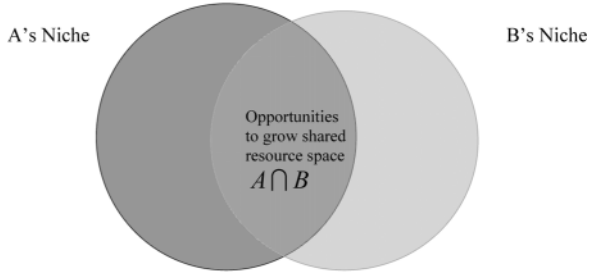
Structural Opportunities for Cooperation

Figure 6.2 presents variants of Figure 6.1 and illustrates our argument that cooperation as well as competition may derive from niche overlap. Case 1 presents the circumstance where organizations may find a basis for cooperation because they compete in some areas, but not in others. We label this symbiosis after Hawley (1950), because the basis of cooperation is the differences between organizations, particularly the differences in the resources they require. Symbiosis is a common form of inter-organizational cooperation, but it falls outside of our focus in this essay on cooperation that derives from the same basis of competition. Nevertheless, we mention it in the interest of documenting the full set of cooperative opportunities that derive from considering niche overlap. In this case, apparent competitors may cooperate because they are not really, or not completely, competitors. One influential niche-referent theory that predicts symbiosis is Carroll's (1985) resource partitioning model, which suggests that generalists and specialists within the same industry may co-exist and even stimulate each other. Other common examples are organizations that appear to operate in the same industry, but are really quite differentiated, such as biotechnology firms and pharmaceutical firms that cooperate to take advantage of the research and development capability of the former and the marketing resources of the latter (McKelvey, Alm, & Riccaboni, 2003). Also notable are peer industry networks (PINs) such as the one that Zuckerman and Sgourev (2006) document among remodelers. PINs include small businesses in the same industry and are motivated by the similarity of experience that organizations in the same industry share, but they are organized around companies that operate in different geographic markets and therefore are not direct competitors.

Case 1: Symbiosis



Case 2: Growth Commensalism



Case 3: Exclusion Commensalism

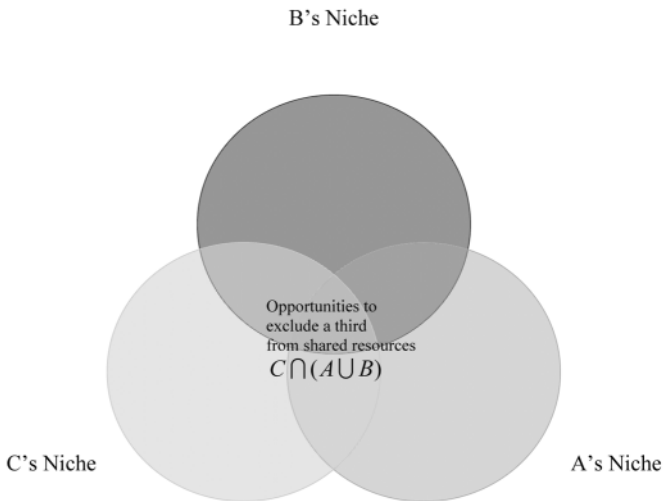


Figure 6.2 Niche Overlap and Opportunities for Cooperation between A and B.

Growth Commensalism

Cases 2 and 3 illustrate our main interests, the opportunities for cooperation between organizations that derive from niche overlap. If organizations compete because they rely on the same set of resources, they may cooperate to grow those resources or to exclude others from accessing them. Case 2 shows the growth case. One obvious opportunity for competitors to “increase the pie” is through collusion. In the next section we take up the cooperation between competitors historically, and show that collusive arrangements have often been more legitimate than they are currently in Western economies. However, there are still plenty of legitimate opportunities for cooperation between competitors, even in terms of maintaining prices. Ingram and Roberts (2000) showed that Sydney hoteliers employed a form of tacit price coordination that amounted to using social sanctions to penalize managers who would cut their prices and thereby create trouble for their competitor/friends at other hotels. This was not illegal, even though Australian anti-trust law explicitly foresaw and outlawed informal price-fixing agreements (including a “nod and wink” understanding that can take place anywhere—in the pub, on the golf course, or at an association meeting or social occasion” [ACCC, 1997, sec. 1]). The difference is that in tacit price coordination, there is no agreement to limit price competition. The mechanism through which cooperation emerges is simply a norm against doing something that harms the social group. Tacit collusion may also emerge without any communication or social relations between competitors, simply through the mutual recognition of self interest (Jacquemin, 1987).

Another well researched form of competitors cooperating to maintain prices is mutual forbearance between firms that meet as competitors in multiple markets (Baum & Greve, 2001; Bernheim & Whinston, 1990; Boeker, Goodstein, Stephan, & Murmann, 1997). This cooperation takes a form of log-rolling, where two organizations that have differential stakes in two markets (each market is key for one firm, secondary for the other) forego intense competition as secondary competitors to allow the other to exploit its key market. Log-rolling is also the route for some non-collusive forms of growth commensalism. For example, the Sydney hoteliers referred customers to their friends’ hotels when their own hotels were full. Given that friends reciprocated the practice, this created a type of inter-temporary exchange that allowed hotels to smooth their business and helped their customers at the same time.

Research and development (R&D) consortia are an emerging form of growth commensalism, where competitors collaborate to share the research outcome as well as the associated risk. The cost of R&D projects is often beyond a single company’s affordability. The joint research consortium encourages technology innovation by dispersing the cost of R&D across a number of firms. The most renowned consortium is probably SEMATECH,

the association of US semiconductor producers that formed in response to Japanese competition (Grindley, Mowery, & Silverman, 1994).

Many other important non-collusive instances of growth commensalism involve sharing knowledge. In fact, knowledge sharing is a particularly poignant illustration of our main thesis because it is organizations that are most similar to you—your closest competitors according to niche overlap theory—that are the best source of knowledge that is relevant to you. A number of learning curve studies have documented learning from the operational experience of competitors (Baum & Ingram, 1998; Darr, Argote, & Epple, 1995; Ingram & Simons, 2002). Ingram and Lifschitz (2006) show that collaboration in R&D among shipbuilders on the Clyde River helped that area to obtain the unofficial status of “shipbuilding capital of the world” in the late nineteenth century. In a contemporary context, Almeida and Kogut (1999) argue that Silicon Valley is advantaged among all locations of semiconductor research in the USA by the degree of knowledge sharing among firms in the industry, firms that would typically be characterized as competitors. Close competitors often share the common knowledge stock that enables them to better understand, evaluate, and internalize the know-how of each other. This is parallel to the organizational learning theorists’ argument that “absorptive capacity” is an important determinant of learning effectiveness (Cohen & Levinthal, 1990).

Other forms of growth commensalism can be captured by the label “building and protecting public goods”. In industries such as fishing, where there are obvious “tragedy of the commons” problems, cooperation between competitors is well documented. Holm (1995) writes about collective action in the Norwegian fishery, and Johnson and Libecap (1982) document cooperation to manage shared resources among Gulf of Mexico shrimpers. Medieval merchant guilds acted as institutions to maintain trading standards, and thus the collective reputation of a town’s sellers, just as professional associations do currently (Greif, Milgrom, & Weingast, 1994). In corporatist economies like Germany, employer associations represent competitors in an industry in collective bargaining with labor. Also, early hotel chains in the USA cooperated to establish the Cornell hotel school to provide the human resource that they relied on to manage their establishments (Ingram, 1998). Industry associations may help their members navigate the law, as when the Tobacco Institute protected cigarette manufacturers from lawsuits and hostile regulations (Miles, 1982).

Recently, corporate social responsibility is emerging as a prime stimulus for growth commensalism, because the public has been increasingly concerned about social problems like global warming, environmental protection, sustainable growth, and fair trade. If firms in an industry depend on collective perceptions of the industry, they all face sanctions when one violates expectations of social responsibility. Barnett and King (2006) termed this the “reputational commons”. They found that all firms in the chemical industry

shared sanctions from shareholders in response to an individual firm's accident. Evidencing the value of collective action in this circumstance, the industry's self-regulatory program, Responsible Care, was able to ameliorate the industry-wide harm.

Exclusion Commensalism

Case 3, exclusion commensalism, refers to the instance where two (or more) competitors may cooperate to protect the resources they jointly rely on from a third competitor. Some of the instances we have given of growth commensalism also have exclusionary elements. For example, in the absence of natural barriers to entry, collusive arrangements between competitors will be successful only if new entrants can be forestalled. And competitor cooperation to manage public goods may also be motivated partly on exclusion. Dennen (1976) shows how ranchers in the American west collaborated to run their cattle on Federal land and excluded newcomers from the roundup. Many examples of industry cooperation sharing knowledge and developing technology can be characterized as the basis of advantage for a local industry over some related industry elsewhere (Almeida & Kogut, 1999; Grindley et al., 1994; Ingram & Lifschitz, 2006).

Organizations have also adopted various types of political strategies to exclude competitors from their terrain. McWilliams, Fleet and Cory (2002) provide numerous cases of the cooperation among incumbent firms to lobby for enhanced market entry barriers or standards that they can meet more easily than potential entrants can. Marvel (1977) documents how the large, urban, steam-powered manufacturers promoted the passage of Lord Althorp's Factory Act of 1833 in Great Britain, which controls child labor use and prohibits the employment of children less than nine years old in the British textile industry. Through this legislation, the urban, capital-intensive manufacturers achieved the advantage over those small, rural, and water-powered manufacturers who used significant child labor.

The two commensalistic cases are not equivalent—there is no competitive exclusion at work in many efforts to build markets, protect the environment, or negotiate with workers—but it is nevertheless useful to be alert to the possibility that efforts to protect or grow the resources that competitors depend on simultaneously involve excluding some other competitors from those resources. The possibility of exclusion is also notable as it plays an important role in the identity processes which we argue below are important for tipping the orientations of resource-sharing organizations from competition to cooperation.

Deflating the Taboo against Cooperation between Competitors

Given the preceding listing of the ways that competitors may cooperate, the obvious question is “when will they do these things?”. Before we turn to that,

however, we give treatment to the question of “is cooperation between competitors legitimate?”. As we explained in the opening of this essay, this question confronts many empirical accounts of cooperation among competitors. Indeed, scholars such as Barnett (2006) draw a firm line between commensalism that aims to increase demand as opposed to restrict supply, and legitimize the former by focusing analysis on it. Without advocating or ignoring any public policy position, we aim in this section to show that the opportunity for cooperation between competitors should not be seen as dependent on weak or flawed anti-trust policies. It is true that many forms of such cooperation are currently inhibited by anti-trust law, but we nevertheless encourage a value-neutral view of both growth and exclusion commensalism.

Theories that emphasize competitor independence, particularly the economic theory of perfect competition, have been so influential that they have created a self-fulfilling dynamic to discourage commensalism. Inherent in the theory of perfect competition is a Darwinian notion that competition is a mechanism of efficiency, which is the basis of the privileged moral standing of that relationship in contemporary debates. But organizational theorists are well aware that the fittest do not always survive (Barnett, 1997), and in any case, fitness in the economic realm is a social concept which is not always applied to favor lower costs. In Manhattan, there is an active lobby against retail concentration based partly on the argument that the practice reduces competition and raises costs. Yet the same people who object to chain stores are also likely to object to proposals to build new apartments in their neighborhoods, an initiative which increases the supply of homes to the benefit of buyers but also increases competition for those that already own homes. Even among activists, then, attitudes regarding competition depend on whether you are a buyer or a seller.

Again, we make no general claim regarding the welfare implications of cooperation among competitors, but we want to deflate the assumption that hostility between those that rely on the same resources represents some kind of natural order. It is useful for this purpose to go back in economic history and consider the circumstances before anti-trust laws took hold. Interestingly, it is not necessary to go back very far, even in the two Anglo-Saxon economies that are most associated with the influential theories of competition.

Consider Britain

Collusion had a murky legal status until the passage of the Restrictive Trade Practices Act in 1956; before that point the relationships between business organizations did not resemble pure competition. Cooperation took a variety of forms, ranging from gentlemen’s agreements to formal associations coordinated by specialized organizations. Firms organized cartels with other firms operating within the same line of business and established board interlocks with those connected by vertical exchange relationships. These cooperative

networks controlled price, mitigated competition, and maintained existing market structures. The cooperative network was not rare. As cited by Florence (1953), the interlock relationship alone linked firms that employed as many as one-third of workers in British midland metal and metal using industries in 1948. And while some economic historians attribute the industrial decline of Britain to this system of “gentlemanly capitalism” (e.g., Hannah, 1976), others see the seeds of Britain’s nineteenth-century dominance in the commensalism that system entailed. For example, Ingram and Lifschitz (2006) present empirical evidence that the decline of the once-great Clyde River shipbuilding industry was attributable at least in part to institutional reforms, including anti-trust law, that undermined the efficacy of positive relations between competing shipbuilders. These changes may have helped some British buyers of ships, but given that shipbuilding is a global industry, and the Clyde River industry was replaced by foreign competitors at a direct cost of more than 100,000 shipbuilding jobs in Glasgow, it is hard to argue that the British economy was helped by discouraging cooperation among competitors in this instance.

Consider the United States

In the early age of American industrial development voluntary cooperation between firms was widespread. As documented by Kolko (1965) in response to market competition in the 1870s, American companies organized numerous cooperative alliances to fix rates, maintain existing market share, and control internecine competition. One cooperative pool was initiated in 1870 by the existing railroad companies in the Iowa area in order to exclude new competitors from entering their market. This type of cooperation was widespread. In 1874, William H. Vanderbilt of the New York Central organized a pool of major lines in the East. In 1875, a number of southern railroads created two cooperative associations. In 1876, seven major lines formed the Southwestern Railway Association to maintain rates. Besides mitigating direct competition with each other, railroad companies had also managed to cooperate in labor management. In June and July 1877, these companies agreed to cut the wages of railroad workers by 10% in response to an economic depression. Besides railroads, cartels existed in a wide range of other industries, such as mining, metals, paint, paper, lumber, and footwear (Schneiberg & Hollingsworth, 1989). In fact, the free market competition ideal did not become prevalent in the USA till the end of the nineteenth century, when anti-trust law made cartels illegal (Dobbin, 1999). Even then, the zenith of unbridled competition in the USA lasted only a short time. By 1925, a number of Supreme Court decisions had enabled trade associations to share operational and price data. Carrott (1970) argued that judicial policy was driven by a shift in public and business sentiment: While “[t]he operator of the late nineteenth century was normally very independent and suspicious of his competitors” (p. 323),

business and government leaders had concluded by the early 1920s that the “vigorous insistence on maintaining competition would deny business the necessary knowledge to establish stability in an increasingly complex economy” (pp. 337–338).

These briefs indicate that successful industrial development is not purely based on competition. Neoclassical economists’ ideals of competition are based on a stylized reading of the British and American economic history (Dobbin, 1999). The reality is that during earlier eras, cartels were widely organized and perceived as legitimate (Dobbin & Dowd, 1997; Hartz, 1948; Kolko, 1965). To account for the discrepancies between economic theory and economic reality, Andrew Shonfield (1965) suggested “Classical economics, which was largely a British invention, converted the British experience—or rather what the British hoped would eventually emerge from the trend which they had detected in their own story—into something very like the Platonic idea of capitalism” (p. 71).

Analyses of contemporary markets also indicate that uninhibited competition is not a natural state. MacKenzie, Muniesa and Siu (2007) take up the idea of performativity in economics, which suggests that economics (like other sciences) may not just describe but also create what it studies. As Michel Callon (1998) puts it: “economics... performs, shapes and formats the economy, rather than observing how it functions” (p. 2). A paradigmatic example of how performativity may create competition is presented by Garcia-Parpet (2007), who examines the introduction of a computerized market for table strawberries in France and shows that the market was shaped by an influential advisor to reflect the economic ideal of a perfectly competitive market. In other words, the market was an artifact of the theory of economics, not a reflection of how markets “naturally” work. In an experimental setting, Frank, Gilovich and Regan (1993) found that students trained in economics are less likely to cooperate in prisoner’s dilemma games than are others. Similarly, Shapira and Madsen (1974) show that children educated according to a utopian socialist philosophy were more likely to cooperate in games than children raised in a modern capitalist education system. In the field of management, Ferraro, Pfeffer and Sutton (2005) suggest that the assumptions of economics become taken for granted and normatively valued through instruments such as business education and media reports, independent of their empirical validity.

None of this is meant to support a conclusion that cooperation between resource-sharers is preferable to competition. Rather, we suggest that the reverse conclusion, which is currently more prevalent, is unjustified. Even a brief reflection on economic history highlights the possibility that commensalistic relations between potential competitors are not a recipe for disaster. Analysis of contemporary economic behavior supports the idea that actors and markets may exhibit more competition than they would in the absence of

influential theories that trumpet the value of competition. Without certain theories, cooperation between competitors might be more common.

What Tips the Balance Between Cooperation and Competition?

Although it has gone under-exploited, the fact that competition and cooperation derive from the same relationships to resources has not been unrecognized in the literature. Indeed, there have been some impassioned announcements of the significance for research and practice of unpacking the simultaneous pressures on competition and cooperation (Astley & Fombrun, 1983; Pennings, 1981). The efforts so far to explain when competitors will cooperate have so far been mostly structural. For example, the strategic group theorists perceive organizational performance as a function of two sources—the structure of an industry and the position of an organization within the industry (McGahan & Porter, 1997). The structure of the industry (e.g., strength of the market, barriers to entry, favorable regulation) affects all members of the industry, and so represents an opportunity for them to cooperate. Position within the industry is the source of advantage of individual organizations, and is therefore what they compete over. Following this structural framework, Barnett (2006) proposes that when organizations *perceive* industry structure to be a more important input to their success, they are more likely to cooperate with competitors. We agree with this, with the emphasis we have added on the word *perceive*. But the small literature has mostly emphasized structure rather than the perception of structure. Extant accounts of competitor cooperation highlight the relative overlap of their resources and the interdependence between overlapping and non-overlapping activities (Katz, 1986; Khanna, Gulati, & Nohria, 1998), whether they have financial stakes in each other (Baum & Ingram, 1998; Darr et al., 1995), and the number and size of competitors (French, 1986; Jacquemin, 1987).

Three reasons cause us to emphasize perception over structure as determinative. First, strategic decision makers are cognitively constrained, which means that their identification of competitors depends on mental models of competition that imperfectly reflect the underlying industry structure (Porac & Thomas, 1990). When managers identify similar others as competitors (Baum & Lant, 2003; Porac, Thomas, Wilson, Paton, & Kanfer, 1995), they are systematically biased in a number of important ways. Their cognitive models identify a smaller set of others as competitors than would an objective analysis of niche overlap (Porac & Thomas, 1990). Further, they are likely to underestimate inter-population competition, and overestimate the importance of geographic co-location as a determinant of competition (Baum & Lant, 2003; Porac & Thomas, 1990). If managers can't reliably translate industry structure into understandings of competition, then industry structure must be an unreliable predictor of how they chose to behave towards their competitors.

Second and related, there are a number of empirical accounts that show variance in competitors' willingness to cooperate *within* a given industrial structure. Tjosvold (1997) examines the cooperative orientation of Vancouver dentists—a set of business people who operate within the same industry. Among these structural equivalent professionals, there was substantial variation in whether they were oriented towards cooperation or competition with other dentists. Some dentists had shared purpose, sympathy for, and saw interdependence with other dentists, and some did not. Those that did engaged other dentists more openly and were more successful in solving business problems through cooperation. Furthermore, in cases we will document later, the emergence of cooperation is not always coincident with a change in industry structure. There is no grand test that allows us to say whether more variance in cooperation between competitors is explained by within- as opposed to between-industry factors, but our read of the evidence indicates that the former is more important and is certainly more important than has been recognized by the structural emphasis of the literature to date.

Third, even when the structure of an industry creates an interest in cooperation between competitors, there remains a collective action problem which is not easily solved by structural factors (King, Lenox, & Barnett, 2002). Investments to create a favorable industry structure are a classic example of a free-rider problem, because all members of the industry will benefit regardless of their contributions. Often, structural conditions for resolving free-rider problems don't exist (Olson, 1965), and in these cases, an interest in cooperation would be insufficient to create cooperation among competitors. The empirical literature on collective action relies heavily on “extra-rational” incentives to cooperate, exactly the factors that we consider below.

If industry structure does not explain whether competitors will cooperate, what does? Deutsch (1973) argues that cooperation is more likely when actors perceive their goals as related. The trick, simply, is recognizing a shared interest. Niche overlap alone is insufficient to generate the perception of shared interest—indeed, the literature on competitive categorization shows that business people over-estimate the conflict of interest with the others that most obviously overlap with their niches (Baum & Lant, 2003). What is necessary is some other interest in common besides an interest in the same resources. This “something else in common” could be summarized under the label “shared identity”. We see two main mechanisms that encourage competitors to recognize shared identity: shared affective relationships and salient out-group comparisons.

Shared Affective Relationships

Positive affect towards a competitor provides an interest in the other's outcomes that can seed a cooperative orientation even in face of zero-sum resource concerns. In the language of collective action, affect may provide

rival incentives, a social reward to cooperators that may tip the balance between the resources available from cooperating or competing. In identity terms, the affective relationship may shift actors' categorization of each other from "competitors" to "friends" or "kin". As Montgomery (1998) shows in a prisoners' dilemma experiment, a simple change of the role of a player from business person to friend can induce cooperation. The influence of affect in the context of competitor friendships was described by Ingram and Roberts (2000) as inducing hotel managers to sometimes forego a competitive opportunity to help a friend. This was not pure altruism as it was coupled with an expectation that the friend would reciprocate the favor. Consistent with this, Furseth (2006) found that friendships were common among competing managers in Norwegian clothing retail stores, and that these friendships reduced price competition substantially.

Kinship may be an even stronger source of sympathy and empathy among competitors. Family relations between competitors were the foundation of long-standing commensalistic systems in British banking and industry (Lisle-Williams, 1984; Ingram & Lifschitz, 2006). The intergenerational spans of those arrangements facilitate an orientation towards long-run interests, one of the distinct advantages of kinship over other affective relationships. When competitors are oriented to the long run, opportunities for cooperation are more attractive (Axelrod, 1984).

We admit that some social relations can be endogenous results of structural relations. For example, in the study of Sydney hotels, Ingram and Roberts (2000) found that if a manager of a focal hotel identifies a target hotel as direct competitor, she is more likely to report friendship with managers of the target hotel. In his book, *Marriage Alliance in Late Medieval Florence*, Molho (1994) shows that marriage is channeled by social stratification: the ruling class married almost exclusively from within their own city and social level and thus created a tight weave of interconnections. But competitors are not always friends or relatives; the affective network is not identical to the structure of niche overlap. The point we highlight here is that the different degrees of shared affective relations tip the balance between competition and cooperation.

Another intriguing source of affect, broadly defined, between competitors is suggested by Podolny and Scott-Morton (1999) who add social identity to an economic cartel model. They show that new entrants with high social status were less likely to be preyed on by British shipping cartels. They conclude that the high status entrants were viewed as more trustworthy by incumbents in the industry, and seen as more likely to uphold the "moral community" of the cartel. A moral community is a concept introduced by Granovetter (1995) as important to cartel stability. According to Granovetter, moral communities imply trust, normative capacity and a willingness to forego opportunism. Just as kinship and friendship, prominence or membership in an elite social group can be the basis of a moral community.

Podolny and Scott-Morton (1999) also found that social status is more important in cartel incumbents' evaluation of the likelihood to cooperate of young firms than older firms. They interpret the finding from the information asymmetry perspective: older firms already have a long-enough history to demonstrate their cooperative inclination and thus status is relatively minor in reducing the uncertainty associated with older firms. Opportunism associated with information asymmetry is one of the biggest threats toward interorganizational cooperation. Friendship, kinship, and social status help to mitigate this problem by transferring tacit, nuanced, and trust-worthy information and helping organizations to better evaluate cooperators' attributes and motivation. Social bonds also reduce opportunism because they generate loyalty, trust, and commitment, which are key components of successful cooperation (Pesamaa & Hair, 2007).

Salient Outgroup

Sherif, Harvey, White, Hood, and Sherif's (1961) Robber's Cave experiment begins with two separate groups of boys at camp. Initially, the groups are unaware of each other. The boys in the groups act as boys at camp do—they have friends and enemies within their group, they think highly of some of their group mates and are unimpressed with others. In the second part of the experiment the groups are introduced to each other as rivals. The introduction of the rival groups shifts relations within the original groups, such that ingroup solidarity and cooperation increase. This experiment lays the foundation for a large literature that links the ingroup–outgroup effect to identity and cooperation. Subsequent experiments show that even small distinctions between groups strengthen identity within the groups: common features of the focal group may become more salient with the introduction of “others” with whom to draw contrasts (Brewer & Kramer, 1986; Hogg & Terry, 2000; Tajfel & Turner, 1985) and contributions to collective action of the ingroup increase (Bornstein, Erev, & Rosen, 1990; Erev, Bornstein, & Galili, 1993).

The ingroup–outgroup effect is a likely mechanism to promote exclusion commensalism. As the bottom panel in Figure 6.2 shows, that form of cooperation presents a natural candidate to serve as the outgroup. Ingram and McEvily (2007) illustrate just this process in an analysis of cooperation among food cooperatives (coops). Coops' identity and their recognition of their shared interests were triggered by the entrance to their niche of a new competitor, the natural foods chain Whole Foods. Whole Foods targeted some of the same customers as the coops, but it was obviously distinct from them, particularly as it was a for-profit corporation rather than a coop. Such stark distinctions of organizational form or ideology are likely bases to divide competitors into ingroups and outgroups because they allow the engineers of cooperation to make resonant claims that “*we* are alike but *they* are different from us”.

For the food coops, their cooperation took the form of Cooperative Grocers Associations, which were voluntary groups that aimed to improve the coops' collective position by joint purchasing to reap economies of scale, as well as joint learning via the sharing of data and advice. Demonstrating the galvanizing effect of Whole Foods, individual coops were more likely to join Cooperative Grocers Associations if they recognized that corporate Goliath as their primary competitor.

This result is also useful to illustrate our claim that commensalism hinges ultimately on identity processes and not the structure of industries. It is true that the entrance of Whole Foods represented a structural change for the coops, and created an incentive to engage in exclusion commensalism by offering a new competitor that could be excluded. But even though Whole Foods is the giant of natural foods retailing, it does not dominate the niche, and for the average coop the niche overlap provided by other corporate competitors was greater than that of Whole Foods. Yet, Ingram and McEvily (2007) found that niche overlap from corporate competitors (measured with or without Whole Foods) did not predict coop commensalism. It was not the structural conditions that formed the motivation for coops to band together, but the salience of a single organization that reminded them of what they have in common.

Weber (1978, p. 342) observes that industries may divide into ingroups and outgroups based on almost any characteristic of the competitors, but some distinctions are more resonant than others. As the economy is again on a trend of globalization, with markets and exchange more likely to be across national boundaries, firms are more likely to encounter competitors from other nations. Although scholars are still debating whether globalization is a homogenizing force and creates world-wide convergence (Guillen, 2001), their debate is anchored on the common ground that nationality has become more salient when the scope of competition goes beyond national boundary. Researchers find that the characteristics of nationality are particularly resonant for dividing competitors (Zaheer, 1995). Cross-border comparisons may facilitate competitor cohesion within countries, resulting in competition between national groups and cooperation within those groups.

The stimulus of global competition for competitor cooperation can also be seen clearly in American anti-trust policy. US anti-trust law does not apply to any activities of US companies that effect only foreign markets: "Nothing contained in the Sherman Act [15 USC. 1 et seq.] shall be construed as declaring to be illegal an association entered into for the sole purpose of engaging in export trade and actually engaged solely in such export trade, or an agreement made or act done in the course of export trade by such association" (15 USC. CHAPTER 2 Subchapter II § 62). The National Cooperative Research Act of 1984, the legislation that enabled the formation of research consortia, was stimulated by concerns over foreign competition. The statement of

implementation of the Act from the US Department of Justice observes that “[c]ooperative research and development efforts may... enable American business and industry to keep pace with foreign competitors...” (Barnett, Mischke, & Ocasio, 2000, p. 351). Informal collusive arrangements also reflect an own-nation preference, as evidenced by Podolny and Scott-Morton’s (1999) finding that British shipping cartels were less aggressive towards market entrants from Britain.

The case of hoteliers at Niagara Falls illustrates how national identity can be the basis of exclusion commensalism. Ingram and Inman (1996) describe the structure of resource relations: there were two populations of hotels divided by the Niagara River, one in Canada, the other in the USA. Consistent with hotel industries elsewhere, the evidence here was that the a key determinant of competitive intensity was geographic proximity—a Canadian hotel competed more intensely with another Canadian hotel next door than it did with a US hotel across the river. Nevertheless, cooperation between competitors was within the national communities. This cooperation involved a number of informal (and sometimes shady) projects, such as when US hoteliers paid cab drivers to kidnap tourists from the Canadian side of the River and drop them on the American side. The model that both populations seemed to work under was that the first goal was to get tourists on *their* side of the border, at which point they would compete with their countrymen to win the business. National identity, evoked by institutional entrepreneurs and enforced by artful cross border comparisons, was very important in producing the perception of shared interest amongst the hoteliers within each hotel population.

Institutional Change

So far we have explained the structural preconditions for cooperation between competitors, why such cooperation has been slighted as illegitimate, and the perception and identity process that distinguish competitors from cooperators. In this section we relate these arguments to a very compelling and current topic in management, that of institutional change. In doing so, we aim to show some of the likely opportunities for scholars to apply the ideas we have presented as they seek to explain important phenomena.

The most pressing challenge for all forms of institutional arguments that are prominent throughout the social sciences is to explain the origin and change of institutions, and management scholars have a significant role to play in this effort because organizations are important for institutional change. Institutional change presents an obvious opportunity for growth commensalism. All competitors for a given resource are affected by the societal rules that govern its production, distribution and consumption. Thus, the possibility of favorable institutional change is a textbook example of Barnett’s (2006) argument that opportunities to improve industry structure are opportunities for cooperation between competitors. It is also, however, a textbook

example of our critique of the industry structure explanation for competitor cooperation as being insufficient resolution of the free-rider problem. Because institutions affect all members of an industry or other category of competitors, it is hard to exclude any member from the benefits of institutional change. This non-excludability undermines contributions as each competitor may free-ride on the institution-change efforts of others.

The significance of this problem has led scholars of institutional change to draw on social movement research for explanations as to when individuals and organizations will mobilize despite opportunities to free-ride (Rao, Morill, & Zald, 2000). Repeatedly, these efforts have highlighted determinants of social identity as underlying cooperation to change institutions. A fundamental inhibition to institutional change is that institutions themselves are constitutive of the identities of actors and associated with incentives for compliance, making them self-reinforcing and durable. This suggests that competitors may not be alert to the opportunity to change the institutions that constrain them because they take those institutions for granted. New entrants to an industry or resource space are outside of this reified system, and often trigger efforts at institutional change (Davis, Diekmann, & Tinsley, 1994; Ingram, 1998; Rao, Monin, & Durand, 2003).

The social movement literature emphasizes the significance of affective ties as a source of rival incentive to promote cooperation (Dani & McAdam, 2003). Ingram and Rao (2004) show this effect in organizational efforts to change institutions in a study of the battle between independent and chain stores over the regulatory environment of retailing. They show that independents were more influential over tax laws when they were more homogenous and therefore more cohesive. Note that similarity between small businesses, according to most economic and sociological theories, would be the basis of intense competition due to niche overlap—in the case of independent retailers fighting chains, similarity was instead the basis of cohesion and successful collective action.

The social movement literature also highlights the role of institutional entrepreneurs in promoting mobilization (Rao, 2007). Often, these entrepreneurs apply rhetoric to convince competitors that they have common interests, or that their interests diverge from some outside group (Benford & Snow, 2000). In other words, they manipulate identities, and bring into being the conditions that lead to cooperation among competitors. These entrepreneurs illustrate our thesis that competition and cooperation may be socially constructed. Studies of social movement identity management have focused on efforts to forge allegiances between competing organizations by presenting their identities as compatible (Clemens, 1993; Ingram & Rao, 2004). However, institutional entrepreneurs may also facilitate the ingroup-outgroup effect when they strengthen identities by emphasizing differences between their organization and outsiders or rivals, a technique that Gamson (1992) labels

“adversarial framing”. For example, Barnett and Woywode (2004) document adversarial framing in the political cartoons of Viennese newspapers in the interwar years.

Conclusion

Competition is an important mechanism that governs the development of our society. Not only does competition stimulate self-improvement, but also the very same ground that brings up competition also nurtures cooperation, which may not necessarily jeopardize social efficiency. Understanding the co-existence of competition and cooperation is crucial to a better understanding of a variety of empirical phenomenon, ranging from technology innovation to institutional change. Deflating the taboo against the cooperation between competitors also contributes to the policy makers’ decision when designing policies that aim at developing a more viable business community.

For studies about competition, we suggest that cooperation is an often neglected aspect of relationships between competitors. Competition and cooperation are like the two pans on a balance scale. Structural architecture is indeterminate as to whether the scale will tip to the competition side or to the cooperation side. What matters is actually the weight that organizational executives put on each pan, which is a mixture of their personal judgment, perception, and identity. Additionally, when social institutions like anti-trust laws and theories of competition put a thumb on one side or the other, they too may tip the balance.

These ideas have three important implications for scholars. First, scholars should be clear that the structural relationship of niche overlap has indeterminate implications. This point is consistent with economic sociologists’ critique of the hard structuralism in which the architecture of network positions alone does not provide sufficient account of social outcomes because diverse, even divergent, interpretation can flow across the very same structure (Krippner, 2001; Krippner & Alvarez, 2007). But many managerial theorists still assume that niche overlap produces only competition. Even those that have approached competition from the perspective of perception and cognition share the same tendency to downplay the cooperative implications of structural similarity (e.g., Porac et al., 1995). In this paper we have shown that niche overlap begets both competition and cooperation. Researchers need to look beyond the resource structure to social structure to know whether to expect competition or cooperation.

Second, researchers should be cautious of the performativity of successful theories. For example, in their study of the development of financial economics, MacKenzie and Millo (2003) show that, when first introduced in 1973, the Black–Scholes–Merton option-pricing model achieved only a modest match with empirical data. But as more and more people applied the model into their option-pricing calculation, the markets gradually altered and converged

toward the model's assumptions. When the model was retested in the middle of 1980s, it had achieved an excellent fit. Thus, taking a longitudinal look to trace the theory–reality discrepancy over time helps researchers to realize the self-fulfilling circle of theories. In this paper, we employ the same method and show that the illegitimacy of the cooperation between competitors is a fairly recent social construction.

Third, and finally, researchers should use multiple methods to conduct richer and more localized analysis of inter-organizational relationships. Most of the research supporting the view that niche overlap creates competition has been conducted with archival methods. It is not surprising that archival approaches identify the relevance of the structure of resource dependence because that is typically the only dimension of inter-organizational relations that they can identify. Studies that compliment data on niche overlap between organizations with information on how the organizations see and think about each other often reach different conclusions. Most often, the data that expose the influences that may turn potential competitors into cooperators have come from surveys and interviews of managers, and from historical analyses of the rhetorical arguments that institutional entrepreneurs have used to convince organizations that they have shared interests, and to mobilize them to act on those interests.

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Endnote

1. There is some controversy over the theory of density dependence as a whole but it is mostly associated with the argument as to how legitimacy varies with density. The competition component of the theory is seen as well supported.

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