ORDER WITHOUT LAW? THE ROLE OF CERTIFIED MANAGEMENT STANDARDS IN SHAPING SOCIALLY DESIRED FIRM BEHAVIORS

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Certified management standards (CMS), like norms, rely on decentralized enforcement processes to guide firm behaviors. I analyze how two elements of CMS codification and certification—enable this institution to shape firm behaviors in settings where norms are ineffective. I further theorize that these same two elements limit the effectiveness of CMS by weakening enforcement processes. I contribute to institutional theory by identifying possibilities and limitations for normlike institutions to function beyond established boundary conditions.

Norms, informal rules, and codes of behavior can create order without law by relying on a decentralized enforcement process where noncompliance is penalized with social and economic sanctions (Ellickson, 1991; Greif, 1993; North, 1990). Scholars suggest that these normlike institutions are particularly effective if firms share a consensus about expected behaviors, if behaviors are observable, and if decentralized enforcement processes are consistent (Bendor & Swistak, 2001; Ostrom, 2000; Weiss, 2000). Yet, absent such conditions, these institutions exert only a weak force on firm behaviors. Given the potentially powerful effect of normlike institutions on firm behaviors, possibilities to extend their functioning beyond established boundary conditions carry important implications for institutional theory and management practice. In this article I analyze the ability of one such normlike institution to extend its functioning beyond these conditions through the codification and certification of desired behaviors. I theorize that codification and certification enable this institution to shape firm activities when consensus about expected behaviors is incomplete and when behaviors are difficult to observe. I further theorize, however, that these same two elements limit the scope of normlike

I thank Larry (Chip) Hunter, Andrew King, Anne Miner, two anonymous reviewers, the participants from the UW Management and Human Resources Research Seminar, and in particular Gerry George for their help with this paper. This research was supported by EPA grant #R831733. institutions by encouraging patterns of compliance that introduce inconsistencies into decentralized enforcement processes.

I focus on certified management standards (CMS) to build my arguments. By doing so, my analysis addresses a gap in existing institutional theory for predicting factors that influence organizations in settings where firms lack both consensus about expected behaviors and information about compliance. CMS codify practices that are socially desirable (and potentially profitable) in areas as diverse as environmental management, labor management, and ecommerce security, and they grant certification to firms that adhere to these practices (Organization for Economic Cooperation and Development [OECD], 2001). Examples of CMS include the ISO 14001 environmental management standard and the SA 8000 labor management standard.

CMS constitute a normlike institution in that they are, like norms, classified as a privatedecentralized institution (Ingram & Clay, 2000; King, Lenox, & Terlaak, 2005). They are private because they are created by nonstate actors, and they are decentralized because they rely on diffuse social and economic interaction for enforcing compliance (Ingram & Clay, 2000). For policy makers, understanding the functioning of private-decentralized institutions has become particularly important as they attempt to ensure social welfare by supplementing state-made laws and regulations with nonmandatory initiatives, such as CMS, codes of conduct, and reporting frameworks (Delmas & Terlaak, 2001;

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Gunningham, Grabosky, & Sinclair, 1998; Khanna, 2001; Post, 2000). The use of nonmandatory social initiatives is also an important phenomenon for management practice. Some managers report that adoption of such initiatives has been essential for their firms' organizational and financial health (Grow, Hamm, & Lee, 2005).

Previous research on CMS has built on their similarities to norms and, consequently, has likened the functioning of CMS to the functioning of norms (Delmas, 2003; Guler, Guillen, & Macpherson, 2002; Mendel, 2002). While such a conceptualization seems intuitive and has generated important insights, I contribute to institutional theory by focusing on CMS's unique attributes: codification and certification. Highlighting this difference between CMS and norms enables me to shed light on the potential of private-decentralized institutions to create order without law in settings with incomplete consensus and information—settings where normlike institutions are expected to be ineffective (Greif, 1993; Ostrom, 2000; Weiss, 2000).

My study furthermore contributes to theory by considering how strategic firm responses affect the ability of private-decentralized institutions to guide firm behaviors. Modeling firm responses to such institutions as strategic is relatively common in New Institutional Economics (e.g., Ostrom, 2000) but much less so in the management literature (Ingram & Silverman, 2002; Scott, 2001). Yet conceptualizing firm responses as passively driven by isomorphic pressures unnecessarily restricts our understanding of the mechanisms through which private-decentralized institutions guide firms. This has prompted scholars to call for integrating strategic behavior into the analysis of private-decentralized institutions (Dacin, Goodstein, & Scott, 2002; Ingram & Silverman, 2002; Oliver, 1991). Taking this strategic perspective, I theorize how codification and certification may limit the effectiveness of private-decentralized institutions by soliciting patterns of firm compliance that undermine decentralized enforcement processes.

My analysis also contributes to the growing literature on corporate social responsibility (e.g., Frederick, 1994; McWilliams & Siegel, 2001). An important debate in this literature centers on the role of nonmandatory social initiatives in guiding desired firm behaviors (Jiang & Bansal, 2003; Khanna, 2001; King & Lenox; 2000; Post, 2000). My analysis contributes to this debate by offering insights into the functioning of one strong example of a nonmandatory social initiative. It furthermore contributes by providing potential contingent effects that can support the transition from corporate social responsiveness (i.e., socially responsible behaviors caused by external forces) to corporate social responsibility (i.e., socially responsible behaviors caused by intrinsic conviction; Frederick, 1994).

I follow the behavioral assumptions of the boundedly rational choice perspective, and I assume that firms are self-interested and seek to maximize profits (Ingram & Clay, 2000; Simon, 1957). These assumptions associate my analysis with a direction in the literature on corporate social behavior that focuses on institutional reforms given organizational values, rather than on the development of theories that provide the moral underpinnings for better firm behavior (Frederick, 1994). Examples of studies on corporate social behavior that have relied on these assumptions include Russo and Fouts' (1997), King and Lenox's (2001), and McWilliams and Siegel's (2001). However, my assumptions do not take into account that intrinsic and self-enlightened considerations may drive firm responses to institutions (Scott, 2001) and that some firms may pursue social initiatives even if they imply economic losses (Windsor, 2001). I return to this issue in the discussion of my analysis.

The article has four parts. First, I use Ingram and Clay's (2000) categorization of institutions to juxtapose CMS against other institutions that may shape socially desired firm behaviors. Doing so allows me to circumscribe my research context, and it clarifies differences between private-decentralized institutions such as CMS and public-centralized institutions such as laws. Second, I use a macro perspective to theorize about the enabling effects of codification and certification. Specifically, I hold constant firm attributes and analyze how codification and certification may enable CMS to command firm compliance in various settings where norms would normally fail. Third, I take a micro perspective and allow for firm differences in order to investigate how codification and certification may solicit a pattern of compliance that undermines the decentralized enforcement process and, thus, limits CMS's effectiveness to guide firm behaviors. Fourth, I discuss my analysis and outline implications for future research.

EMPIRICAL CONTEXT

Ingram and Clay (2000) classify institutions based on two dimensions: (1) public or private and (2) centralized or decentralized. Public or private refers to who makes the institution. States produce public institutions, whereas organizations and individuals create private institutions. The second dimension, centralized versus decentralized, refers to how the institution is enforced. Centralized institutions are enforced through designated central functionaries, whereas decentralized institutions rely on diffuse individuals to punish institutional violations (Ingram & Silverman, 2002).

Laws are a classic example of a publiccentralized institution (Ingram & Clay, 2000). They are public because they are created by the state, and they are centralized because they are enforced by a court system—that is, a designated functionary. Note that this classification considers both private law and public law as public-centralized institutions. Although private law gives standing to private and decentralized actors to bring a cause of action, it is a central designated functionary (the courts) that adjudicates violations and imposes penalties. Hierarchies and industry codes (e.g., the codes that govern members of the diamond and cotton industries) are examples of private-centralized institutions (Bernstein, 1992, 2001; Ingram & Silverman, 2002). They are private because they are created by organizations other than states, and they are centralized because they designate an authority that enforces compliance. Finally, norms are the archetype of a private-decentralized institution (Ingram & Silverman, 2002). They emerge from unorganized social interaction, and they are enforced through uncoordinated and decentralized interactions of individual actors.

Voluntary social initiatives may take the form of private-decentralized institutions or privatecentralized ones. Figure 1 illustrates the various positions.

Voluntary social initiatives resemble a private-centralized institution if they are centrally enforced. The chemical industry's Responsible Care Program and forestry's Sustainable Forestry Program, for example, are created and enforced through the respective industry associ-

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Centralized	Private-centralized institutions Examples: Industry programs/codes Responsible Care Program, Sustainable Forestry Initiative	Public-centralized institutions Examples: Laws Labor laws, environmental laws, etc.
Enforcement	Ethics codes	
Decentralized	Private-centralized institutions Examples: Certified management standards ISO 14001, SA 8000, BBBOnLine	
	Private	Public

FIGURE 1 Institutional Classification of Social Initiatives

(Voluntary: No legal backdrop)

Public (Mandated: Strong legal backdrop)

Creator

ations. These associations have central enforcement power because they arbitrate violations and can exclude noncompliant firms from the associations (King & Lenox, 2000).

As a private-decentralized institution, CMS lack a designated enforcement functionary. Instead, CMS derive their power from the uncoordinated social and economic interaction among firms and other transacting parties, such as industrial buyers, end consumers, and communities (Loya & Boli, 1999). Examples of CMS include the ISO 14001 environmental management standard, the SA 8000 labor management standard, and the BBBOnLine information management standard. Note that these standards are housed in specific (centralized) institutions: ISO 14001 is housed in the International Organization for Standardization, a private nongovernmental organization; SA 8000 is housed in Social Accountability International, a nonprofit organization; and BBBOnLine is housed in the Council of Better Business Bureaus, another private nonprofit organization. However, these institutions merely maintain the standards and are not responsible for their enforcement. By the end of 2003, approximately 66,000 firms were ISO 14001 certified (International Organization for Standardization, 2003), 18,000 firms had received BBBOnLine certification (Better Business Bureau, 2004), and 429 firms were certified with SA 8000 (Social Accountability International, 2004a).¹ Besides sharing the defining features of a private-decentralized institution, these standards also have in common that their creation involved representatives from various stakeholder groups (e.g., NGOs, industry, and consumers; European Commission, 2003; OECD, 2001). They furthermore resemble one another in that they all provide codified management practices and third-party certifications for compliant firms.

A distinction that coincides with the differentiation of public and private institutions is whether or not litigation can be used to enforce compliance. Because of the authority vested in states, noncompliance with public (i.e., statecreated) institutions can have legal consequences. For Figure 1, considering this additional distinction allows a more differentiated treatment of ethics codes. I position ethics codes as a hybrid between a private-decentralized institution and a public-centralized one. I use these codes to highlight the possibility that private institutions that are theoretically voluntary (i.e., not legally required) may not be voluntary in practice and that they consequently resemble a public-centralized institution that is enforced through a designated functionary. In the case of ethics codes, adoption has become practically mandatory and centrally enforced, because the Federal Sentencing Guidelines reduce sentences for firms that have compliance and ethic codes.2

Thus, as far as the absence of an ethics code can be interpreted to give private actors the right of action for breach of directors' fiduciary duty, ethics codes begin resembling a publiccentralized institution that is enforced through a designated functionary. The Sarbanes-Oxley Act further strengthens the legal backdrop of ethics codes by requiring firms to disclose their code or else explain why they do not have one. For my analysis, distinguishing between initiatives that are only theoretically voluntary versus those that are also practically voluntary is important. My analysis examines how a privatedecentralized institution may create order without law. Thus, my reasoning refers to the functioning of initiatives that operate against weak legal backgrounds, maintain that noncompliance is legal, and leave firms with a real choice to comply or not.

THEORY DEVELOPMENT

Institutional similarities between CMS and norms make it tempting to liken the functioning of CMS to that of norms. Yet, rather than uncovering parallels between these two institutions, I

¹ Differences in uptake partially reflect the standards' varying ages. The ISO 9000 quality management standard is another private-decentralized institution that fits this list of examples. Some scholars argue that ISO 9000, although focused on quality management, has a strong social component and, thus, serves to enhance social welfare (Raiborn & Payne, 1996). However, while the logic of my analysis does not preclude this standard, I do not include it so as to avoid a distracting discussion about its social relevance.

² Courts find that the absence of such codes can be a cause of action for managerial breach of fiduciary conduct. In the *Caremark* case, for instance, the Delaware court dismissed allegations of criminal violations on the grounds that the company's directors had performed their duties as evidenced by the existence of a compliance and ethics program (Transparency International, 2004).

use the literature on norms to theorize how codification and certification enable CMS to shape firm behaviors in settings where norms are expected to fail. For this analysis I initially employ a macro perspective that does not consider firm differences and implies that hypotheses are governed by ceteris paribus assumptions with regard to firm attributes. Subsequently, I adopt a micro perspective and allow for firm differences in order to analyze how codification and certification may result in compliance patterns that inhibit CMS's effectiveness in guiding firm behaviors.

CMS and Norms

How do CMS shape firm behaviors under conditions of incomplete consensus and information—settings that violate the boundary conditions for norms to function? I first review how norms shape firm behaviors before analyzing the enabling and impeding effects that codification and certification have on private-decentralized institutions.

Despite the lack of legal sanctions, norms can be a powerful influence on firm behaviors (Ellickson, 1991; North, 1990; Ostrom, 2000; Uzzi, 1996): "norms specify how things should be done; they define legitimate means to pursue valued ends" (Scott, 2001: 55). Intrinsic incentives are an important driver of firm compliance when norms are internalized (Scott, 2001). Concepts from New Institutional Economics emphasize how external incentives can cause interestseeking firms to adhere to norms, even if the norms are not internalized (Greif, 1993; Ingram & Clay, 2000; Ostrom, 2000). One such incentive is the threat of penalizing noncompliance with economic and social sanctions. Rejection of a norm may be punished through cessation of social relationships, ostracism from the group, and refusal of future economic exchange (Ellickson, 1991; Ingram & Silverman, 2002). Thus, while these social and economic penalties cannot be sought through litigation (as would be the case for noncompliance with laws), norms may be able to create order without law by using decentralized social and economic interaction to tie the potential for future gains to current compliance (Axelrod, 1986; Greif, 1993).

Research on norms suggests that a number of boundary conditions must exist for norms to command compliance (Axelrod, 1986; Greif, 1993; Ostrom, 2000). One condition is a consensus about the means and ends implied by the norm (Salbu, 1994; Weiss, 2000). Another condition is the risk of tarnishing one's reputation when rejecting the norm. This risk is perceived if there is agreement about the worth of compliance and if noncompliance can be detected (Bendor & Swistak, 2001; Greif, 1993; Weiss, 2000).³

Interestingly, while CMS share the defining institutional features of norms, they appear to guide firm behaviors in settings that do not meet the conditions for norms to function. Internet security management standards, for example, operate in a field that is young and still lacks consensus on best practices (Hunker, 2002). Other standards guide firm behaviors in settings that lack consensus about best practices because of firms' heterogeneous cultural backgrounds. Labor management standards, for example, coordinate the interaction of firms from various countries and continents. Furthermore, some CMS operate in settings where noncompliance with practices is difficult to detect. End consumers in the United States, for instance, cannot observe whether a garment manufacturer indeed complies with best labor management practices in remotely located textile mills. The question, then, is how CMS may guide firm behaviors when consensus about best practices is incomplete and when transacting parties have difficulties observing relevant firm practices.

Enabling Effects of Codification and Certification

CMS and norms share their defining institutional features, but CMS differ from norms in that they capture in a written and codified form how things should be done. Furthermore, unlike norms, CMS entail a certification element that makes visible whether a firm indeed does things in the way they should be done. I theorize that these two features allow CMS to engage firms in settings where norms would fail to do so.

Codification of practices. Norms are typically unwritten and, as a result, agents must share a

³ Other factors that shape a norm's effectiveness in guiding firms include participation rules, relationship duration, access to a mechanism to resolve disputes, and a shared desire to maximize welfare (Ostrom, 2000; Weiss, 2000).

common understanding of the legitimate means to pursue valued ends regarding them (Bendor & Swistak, 2001; Bilder, 2000; Scott, 2001). If agents lack consensus on the interpretation of means and ends, sanctioning will become unsystematic because different behaviors constitute compliance or defection, and the norm will consequently lose its effectiveness in guiding firm behaviors (Weiss, 2000). For example, with respect to the informal laws that coordinated the activities of the Maghribi traders, Greif argued that "for punishment to be effective there must be a consensus about which actions constitute 'cheating'" (1993: 531). Building on insights from the literature on collaboration and knowledge codification, I argue that codification of how things should be done may enable CMS to shape the behavior of firms even in settings where consensus on how things should be done is incomplete.

Collaborating firms need to agree on ways to interact and manage the transfer of knowledge, products, and services. Codification of organizational rules and knowledge can facilitate such consensus in two ways. First, codification can increase consensus by requiring agents (organizations) to make their rules explicit (Benezech, Lambert, Lanoux, Lerch, & Loos-Barain, 2001). Research on the Delphi method suggests that by forcing agents to spell out their own rules, codification can enable iterative rounds of benchmarking that foster consensus on various issues (Munier & Ronde, 2001). Second, codification may reduce the problems of incomplete consensus by creating reference points that limit room for divergent interpretations (Avadikyan, Llerena, Matt, Rozan, & Wolff, 2001). Codified contents may become an authority to which agents can turn when uncertain about appropriate behaviors (Cowan, David, & Foray, 2000). Thus, codification allows the reconstitution of knowledge and rules for different periods, geographical locations, and agents (Cohendet & Meyer-Krahmer, 2001; Cowan et al., 2000).

For CMS, these findings suggest that, through codifying best practices, CMS may both foster consensus and reduce the problems of incomplete consensus. They foster consensus by encouraging conversations about how things should be done (Salbu, 1994), and they ameliorate the negative consequences of incomplete consensus by creating explicit reference points firms can refer to in order to assess behavior. However, this is not to suggest that codification can overcome deep divisions in organizational interpretations of values and ideas (Salbu, 1994). Just as firms need to agree on basic aspects in firm collaborations, they also need to agree on, for example, the desirability of worker safety. Once a basic agreement is in place, codification may help reconcile different notions of managing worker safety.

As far as codification fosters consensus or counteracts the negative consequences of incomplete consensus, it should facilitate the decentralized process that enforces compliance with private-decentralized institutions. Consequently, I expect that CMS are more effective than (unwritten) norms in guiding firm behaviors in settings where there is incomplete consensus on how things should be done. I posit the following.

> Proposition 1: CMS will be more effective than norms in guiding firm practices in settings where consensus about these practices is incomplete.

Proposition 1 assumes that it is possible to codify relevant practices. Yet in some contexts codification may not be possible because of the contexts' complexity and variability. For example, practices may be particularly difficult to codify if they need to capture tacit knowledge possessed by individuals (Fernie, Green, Weller, & Newcombe, 2003; Subramaniam & Venkatraman, 2001). This conclusion restricts the superiority of CMS as suggested by Proposition 1 to contexts in which codification of practices is feasible.

Proposition 1 can be made more applicable by specifying contexts in which consensus about best practices is likely to be incomplete. One such situation is an emerging management field. Just as emerging industries lack consensus on dominant business models (Aldrich & Fiol, 1994; Sanders & Boivie, 2004), recently emerged management fields frequently lack consensus on how to do things. For instance, Eisenhardt and Martin (2000) cite examples of internet firms' adoption of simple rules to guide strategic decisions as a response to a lack of dominant solutions in rapidly evolving industry conditions. It takes time for firms to form a consensus in such emerging fields because learning is slow, situations are complex, information is sparse and contradictory, and mind frames

are resistant to change (Cole, 1998). As a result, different notions still exist, for example, for how best to manage the security and reliability of the internet and other distributed information technology systems (Hunker, 2002). Yet despite incomplete consensus, CMS that address internet and information security (such as BBBOnLine) have started guiding firm behaviors in this area. To the extent that codification of practices helps reconcile and reduce the effects of incomplete consensus about best practices, I expect the following.

> Hypothesis la: CMS will be more effective than norms in guiding firm practices in recently emerged management areas.

Consensus may also be incomplete when transactions involve parties with heterogeneous cultural backgrounds (Adler, 1986; Graham, Mintu, & Rodgers, 1994; Hofstede, 1980). Stephens and Greer (1995) note that cross-national firm alliances are frequently doomed to fail because of heterogeneous cultural assumptions that initiate or compound differences in organizational processes, technology, and practices. For instance, U.S. employees typically consider participatory management as part of best labor management practices, whereas Mexican employees feel more uncomfortable providing decision-making input or assuming decisionmaking responsibilities (Stephens & Greer, 1995).

Salbu (1994) notes that cultural differences are particularly stark in the context of international business ethics because culturally derived norms (rather than, for example, technology) define limits of acceptable behaviors. Yet despite distinct cultural differences and associated incomplete consensus, CMS now guide labor management practices in cross-border firm transactions (OECD, 2001). Cultural firm differences also exist, albeit to a lesser degree, in crossindustry transactions. In fact, cross-industry differences in cultures and beliefs may be sufficiently stark to hamper collaborative efforts (Albino, Garavelli, & Schiuma, 1999; Simonin, 1999). Yet various CMS-for example, environmental management standards-guide firm practices in cross-industry interactions. Thus, if differences in cultural backgrounds are associated with incomplete consensus on how things should be done, and if codification reduces such incomplete consensus, I anticipate the following.

Hypothesis 1b: CMS will be more effective than norms in guiding firm practices in cross-cultural transactions.

Certification of practices. The threat of sanctioning noncompliance by tarnishing the defector's reputation is an important driver of firm compliance to norms (Bendor & Swistak, 2001; Ingram & Clay, 2000). For this threat to be effective, however, relevant firm activities need to be visible to transacting partners so that defection can be detected and publicized (Greif, 1993; Weiss, 2000). For instance, letter exchanges between Maghribi traders who relied on a system of private-decentralized institutions to regulate the behavior of agents underline the degree to which information about behaviors is a critical element for the functioning of so-called lawless systems. In the case of the Maghribi traders, merchants had established a letter exchange system to verify trade-related information and to inform one another about past behaviors of agents (Greif, 1993).

Many firm activities are inherently difficult to observe for transacting partners. Environmental or labor management practices, for example, primarily relate to internal firm processes, which makes them difficult for external exchange partners to observe. I argue that certification may partially overcome this problem and allow CMS to guide firm behaviors in settings where incomplete information would, ceteris paribus, reduce the effectiveness of norms to shape firm behaviors. Consequently, CMS play an important role in guiding firm activities when norms are ineffective or absent. CMS offer thirdparty certification to firms that comply with the practices outlined in the standard. Firms need to recertify at regular time intervals (typically, every three years), as well as submit to annual surveillance audits in order to maintain certification (SAI, 2004b). Certified companies have permission to publicly display their certification. This certification makes transparent a firm's behavior in conditions where such behavior could not otherwise be inferred.

At a minimum, certification indicates to transacting parties that the firm has implemented the practices outlined in the CMS. As far as these practices result in superior performance, certifi-

cation may also be a proxy indicator for firm performance in the area targeted by the standard (e.g., superior environmental protection or information security; European Commission, 2003). Furthermore, if best practices are linked to general firm competencies (Wenmoth & Dobbin, 1994), certification can also be an indicator of underlying firm capabilities. However, certification cannot indicate what a firm does poorly or does not do at all. This is because certification is voluntary, and a lack of certification, hence, does not allow inference about the practices and attributes of noncertified firms.⁴ As a result, certification can merely identify firms that do good, but it cannot necessarily identify those that do bad.

Despite revealing only compliance (and not defection), certification may nonetheless be able to shape firm behaviors by enabling transacting parties to reward compliance (rather than sanction defection). Of course, transacting parties will reward certification only if they attach a worth to firm compliance with the practices outlined in the CMS. In the context of environmental management standards, for example, transacting partners may reward certification because they believe that best environmental practices are evidence of superior operational performance that translates into higher-quality products (Russo & Fouts, 1997). Industrial buyers may furthermore attach a worth to supplier compliance because best environmental practices may reduce the risk of accidents that cause shortages of important input materials and damage the reputation of supply chain partners (Reinhardt, 1999; Slawsky, 2004). End consumers may be willing to reward certification because supporting environmentally conscious firms may confer prestige within a community, induce others to purchase from these firms, or simply fulfill an enlightened self-interest (Reinhardt, 1998).

A similar logic may influence the willingness of transacting parties to reward compliance with best labor management practices. Therefore, as far as certification of compliance with CMS practices is associated with a reward, certification may be a substitute for the incentive effect that results from sanctioning noncompliance in settings with full information. As a result, CMS may be more effective than norms in guiding firm behaviors in settings where relevant firm activities are difficult to observe.

> Proposition 2: CMS will be more effective than norms in guiding firm practices in settings where these practices are difficult to observe.

Next, two hypotheses increase the applicability of Proposition 2 by stipulating conditions that make it difficult for transacting partners to observe firm activities. First, physical distance may prohibit interested parties from observing firm practices (Katz & Tushman, 1979). This is because physical distance makes it more difficult for parties to visit relevant firm sites and to collect information. Furthermore, any information that does spill out from the firm is likely to be localized and slow to travel, the more so the greater the distance (Adams, 2002). As a result, certification may enable CMS to be more effective than norms in guiding firm practices when geographical distance inhibits transacting parties from fully observing relevant practices. Cases in point are CMS that guide labor management practices in overseas garment manufacturing plants. Therefore, I expect the following.

> Hypothesis 2a: CMS will be more effective than norms in guiding firm practices that are physically removed from transacting parties.

Some products and services allow transacting parties to draw inferences about specific firm activities. For example, poor customer service allows customers some inference about the firm's employee training programs (Guy, 1997; Reidenbach & Minton, 1991). Similarly, poor quality control practices may manifest in defective products. To the extent that firm behaviors translate into output attributes and to the extent that these attributes are observable, the need to make firm behavior observable through certification decreases. Yet product (or service) quality may not always be assessable, and, furthermore, not all firm practices translate into noticeable product attributes.

The quality of goods and services may not be assessable at all—even after consumption—in

⁴ For example, survey results suggest that firms sometimes comply with best practice yet forgo certification to avoid certification costs, further adjustments to systems, or inspection by outside agents (Naveh, Marcus, Allen, & Koo Moon, 1999).

the case of credence goods (Nelson, 1974). For example, assessing the services of medical doctors is problematic. Even after receiving treatment, patients often cannot assess whether the specific treatment was required and whether their subsequent well-being (or discomfort) is linked to the treatment (Emons, 1997). Whereas credence qualities make it particularly difficult to assess product attributes and, thus, prohibit inference about any underlying firm practices, other goods may reveal their quality prior to or after consumption and yet still may not allow inference about particular firm activities. For example, although a defective garment may allow inference about the manufacturer's quality control practices, it does not allow inference about the firm's environmental management practices, nor does it inform the buyer about whether the firm treats its workers fairly. This is because environmental management practices and most labor management practices primarily manifest at the firm's site—for example, through decreased emissions or greater worker healthrather than in end products. For cases in which product and service attributes do not allow transacting parties to draw inferences about a firm's practices of interest (such as environmental practices or information security practices), I expect that certification of these practices enables CMS to be more effective than norms in guiding firm behavior in the respective management areas.

> Hypothesis 2b: CMS will be more effective than norms in guiding firm practices that are not manifested in product and service attributes.

Thus far, I have held firm attributes constant and have theorized how codification and certification of practices may enable CMS to be more effective than norms in establishing order without law. Next, I hold environmental conditions constant while allowing for firm differences in order to theorize how codification and certification may reduce the effectiveness of CMS.

Impeding Effects of Codification and Certification

Following the assumptions of a boundedly rational approach to firm behavior, firm responses to CMS are driven by explicit, firm-individual, cost-benefit considerations, and a firm will comply only if it deemes it profitable to do so. Because firms diverge in resources and performance, compliance costs and benefits will differ across firms, and firm responses to CMS therefore will vary. I explain these differential firm responses and theorize how resulting patterns of compliance may result in inconsistent enforcement processes that reduce the effectiveness of CMS to guide firm behaviors.

Codification of practices. Research in corporate social responsibility suggests that firm inefficiencies can create room for win-win situations-that is, situations in which an improvement in firm practices increases firm efficiencies as well as social welfare (Graedel & Allenby, 1995; Porter & van der Linde, 1995; Reinhardt, 1999). Boyd, Tolley, and Pang (2002), for example, found that technical improvements allowed producers of glass containers to reduce nitrogen oxide emissions while improving their productivity. The magnitude of such win-win situations is debated (Palmer, Oates, & Portney, 1995), but agreement exists that firm inefficiencies are guite common and difficult to ameliorate (Frantz, 1988; Leibenstein, 1966). One reason for the persistence of substandard practices is the cost of identifying better ones (Arrow, 1974). Through compilation and codification of available best practices in their respective management areas, CMS may reduce this cost. Research suggests that compilation and codification are increasingly important since operational choices have become more numerous and complex (O'Dell & Grayson, 1998; Ruggles, 1998). Thus, assuming a potential for win-win situations, codification of best practices may enable CMS to improve social welfare as well as firm efficiency in the standards' respective management areas.

Levels of firm inefficiencies vary across firms (Frantz, 1988). These levels and the ability of codified practices to reduce inefficiencies may be related in two ways. From the perspective of theories of absorptive capacity (Cohen & Levinthal, 1990), high-performing, efficient firms may be better able to exploit codified practices. This is because firms require absorptive capacity to utilize external knowledge, and firms with larger absorptive capacity presumably have smaller inefficiencies because of their greater ability to update and adapt their resource bases (Cohen & Levinthal, 1990; Zahra & George, 2002).

Conversely, firms with higher inefficiencies that is, poor performers in the respective management areas-may benefit more from codified practices because their marginal costs for improving efficiency are smaller. Presumably, firms with substandard practices have more opportunities to exploit low-hanging fruit (Reinhardt, 1999). Furthermore, arguments of absorptive capacity have proven particularly relevant in the context of transferring and exploiting complex and tacit knowledge in alliances and technology ventures (Lane & Lubatkin, 1998; Mowery, Oxley, & Silverman, 1996). CMS, however, tend to offer a relatively simple set of codified good practices (Hemenway & Hale, 1996). As a result, the level of absorptive capacity required for exploiting these practices may be comparably small. Thus, I expect that codification of practices translates into comparably greater efficiency gains for firms with lower performance in the management area targeted by the CMS and that these firms thus comply with the CMS.

> Proposition 3a: CMS engage firms that have below-average performance in the respective management areas targeted by the standards.

Certification of practices. Incomplete information about a firm's performance may reduce social welfare by inhibiting transacting parties from identifying and encouraging better-performing firms (Akerlof, 1970). For example, transacting parties may be willing to reward firms that protect their private information. However, incomplete information about relevant firm performance inhibits transacting parties from differentiating between truthful claims of superior consumer privacy and false ones. As a result, they are unwilling to reward firms that claim to protect consumer privacy, and firms thus have little incentive to ensure the safety of private information. This may result in an underprovision of socially desired goods, such as consumer privacy in ecommerce, environmental protection, or protection of labor (Reinhardt, 1998). Certification of best practices may be one way to address this problem of asymmetric information (Akerlof, 1970).

Following the structure of a signaling game (and temporarily leaving aside the effect of codification) suggests that the net benefit of certification is larger for firms with superior performance in the management area targeted by a management standard (Spence, 1973). This is because the willingness of transacting parties to reward certification should be similar across certified firms (at least within an industry), but poor performers incur greater certification costs. As far as poor performance is symptomatic of a lack of underlying firm capabilities, poor performers will incur greater costs, because each unit of adjustment that is required for bringing practices up to par for certification requires greater effort. Firms with higher performance, in contrast, incur lower certification costs, because practices are already up to par and because better firm capabilities reduce the cost of any needed adjustments. Scholars find that, in the context of environmental management standards, compliance costs are indeed greater for firms with lower environmental performance (Darnall & Edwards, 2004; Ferrer, Gavronski, & de Laureano, 2003). Practitioners confirm a compliance cost function that slopes downward with firm performance in the context of quality management standards (Marquardt, 1992).

If the reward for certification is constant and if certification costs increase with a decrease in firm performance, then the net benefit of certification is larger for firms with better performance in the standards' respective management areas. Thus, I expect that certification of practices translates into comparably greater benefits for firms with higher performance and that such high performers will engage in CMS.

> Proposition 3b: CMS engage firms that have above-average performance in the respective management areas targeted by the standards.

Combining the effects of codification and certification. Private-decentralized institutions derive their power from uncoordinated social and economic interaction (Ingram & Clay, 2000). I argue that codification can reduce the effectiveness of this decentralized interaction by causing failure in the sorting effect of certification. This failure results in compliance by both high and low performers and introduces inconsistencies into the enforcement process.

Certification of practices allows transacting parties to differentiate high performers from low performers if gaining certification is too costly or is impossible for the latter group (Spence, 1973). Recall that, in the context of CMS, certification does not attest to specific performance levels or outcomes; instead, it attests to the existence of (or compliance with) certain practices (European Commission, 2003). However, attesting to practices rather than outcomes does not automatically preclude certification from differentiating among performance levels. Differentiation is still possible if compliance to best practices either is indicative of superior levels of performance or induces superior performance. I argue that codification reduces the likelihood either scenario will occur.

Certification of CMS practices may be indicative of high firm performance if identification and implementation of these practices require capabilities that are more frequently possessed by firms that perform well in the management area targeted by the CMS. In fact, research suggests that, in general, better-performing firms tend to have a greater capability to execute thorough searches and identify best practices (George, 2005). However, CMS codify best practices and make them widely available, thereby reducing search and implementation costs and enabling poor performers to receive certification. A practitioner explains that in the case of ISO 14001, for example, the standard "outlines system elements, with advice on how to initiate, implement, improve, and sustain the system" (Jayathirtha, 2001: 248).

A simplified analogy describes this situation: one can think of certification of practices as an exam that tests how students solve problems (i.e., the process of problem solving).⁵ Presumably, only intelligent students are able to identify best processes. However, the provision of codified practices translates into the provision of a course reader that outlines best approaches to problem solving. Given this course reader, merely testing whether students can recite approaches to problem solving would no longer differentiate intelligence levels.

Certification of practices and simultaneous codification would not necessarily reduce the sorting effect of certification if compliance with codified practices resulted in comparably superior performance levels. Returning to the analogy, passing the exam could still be indicative of higher intelligence levels if studying the course reader allowed poorer-performing students to improve their intelligence. Yet the effect of complying with codified practices on firm performance is likely to vary according to firm capabilities and initial firm performance (Cohen & Levinthal, 1990). It is possible that codified practices remove the worst inefficiencies, but they may not turn laggards into leaders. Absent other firm capabilities that enable a firm to modify codified practices in order to meet individual needs, and absent capabilities that allow an ongoing learning process, improvements may be limited, and resulting performance levels may vary and continue to lag behind (Zahra & George, 2002). Research suggests that, in some cases, implementation of codified practices may even decrease performance (Westphal, Gulati, & Shortell, 1997).

If compliance with best practices does not allow one to draw inferences about superior firm performance and if compliance does not necessarily induce superior performance, certification can no longer differentiate high performers from poor performers. This situation threatens the decentralized enforcement process: as ongoing interaction between firms and transacting parties provides some information about the performance level of compliant (certified) firms, parties may cease rewarding certification as they realize that both high and low performers are certified. This is a major issue for the ISO 9000 quality management standard, which served as the role model for its younger ISO 14001 sibling. For ISO 9000, a practitioner remarked that "our worst supplier was ISO registered and our best is not" (Naveh et al., 1999: 278). Another practitioner remarked that "ISO continues to be perceived as no sign of quality" (Naveh et al., 1999: 273). As transacting parties cease rewarding compliance, however, firms will lack the incentive to comply with practices at socially desired $levels.^{6}$

Problems also arise if some parties use evidence of compliant high performers to interpret CMS certification as a signal of superior performance while others infer from compliant low

⁵ For this analogy to correspond, the exam needs to test whether students can perform certain processes (practices), rather than whether they arrive at a specific answer to a given problem (outcome).

⁶Note that as far as compliance allows firms to remove inefficiencies, we should continue to observe some compliance. However, underprovision will result as soon as socially desired levels of compliance are above levels required for firms' internal improvements.

performers that CMS serve as an improvement tool for laggards. For example, in the context of the ISO 14001 environmental management standard, some practitioners expect the CMS to "distinguish companies that are doing the bare minimum from those that are committed to environmental excellence" (Morella, 1996), whereas others expect the CMS to provide "a toolbox of good ideas" that removes inefficiencies in poorly performing firms (Collins, 1996; Fielding, 1998; Klaver & Jonker, 2000). Such different interpretations are problematic because they result in inconsistent patterns of enforcement. Specifically, parties that view CMS as improvement tools may sanction noncompliant firms that they believe to be poor performers or, conversely, reward compliant firms that they believe to be poor performers. Such a pattern of enforcement is inconsistent with that pursued by those who interpret CMS as signals of superior performance. As a result, firms are confronted with inconsistent and spotty enforcement patterns that ultimately reduce the effectiveness of CMS to guide firm behaviors.

Codification (and certification) may thus be a double-edged sword. On the one hand, I suggested earlier that codification may create consensus on how things should be done-for example, codification may spell out the reporting procedures that help protect consumer information. On the other hand, codification, in combination with certification, may create a pattern of compliant firms that causes confusion about the more general meaning of the CMS-for example, are these reporting procedures part of superior consumer protection systems on which leading firms rely, or are they basic tools that allow firms that lack comprehensive systems to minimally respond to consumer concerns? As far as this confusion results in inconsistent enforcement patterns, decentralized enforcement processes are impeded, and the effectiveness of CMS to guide firm behaviors will be reduced.

> Proposition 4: Engaging above- and below-average performers weakens decentralized enforcement processes and thereby reduces the effectiveness of CMS to guide firm practices.

DISCUSSION

I analyzed one example of a private-decentralized institution—CMS—to develop an understanding of the role that nonmandatory social initiatives may play in shaping socially desired firm behaviors. A macrolevel analysis in which I did not consider firm differences suggests that codification and certification may allow CMS to guide firm behaviors in settings where privatedecentralized institutions are thought to fail. However, an analysis that considers firm differences suggests that codification and certification may reduce CMS's effectiveness by encouraging patterns of compliance that introduce inconsistencies into decentralized enforcement processes. My findings have implications for institutional theory and the literature on corporate social behavior. They also have some important implications for practitioners.

Implications for Institutional Theory

As a private-decentralized institution, CMS differ from laws (the archetype of a publiccentralized institution) in that they are nonstatecreated institutions where compliance is voluntary (i.e., not legally required) and they are enforced through decentralized social and economic interaction (Ingram & Silverman, 2002). Yet CMS resemble laws in that they codify behaviors (Salbu, 1994). My analysis of the role of codification suggests that codification may enable CMS to guide firm practices in settings where private-decentralized institutions are thought to be ineffective. For institutional theory, this argument implies that current conceptualizations of the scope of private-decentralized institutions may be too narrow.

More important, however, my theoretical reasoning suggests that the mechanisms through which various institutional forms shape firm behaviors may be more complex than previously assumed. It may be possible that privatedecentralized institutions can substitute for public-centralized institutions not through emulating some of the latter's defining institutional features—legally mandatory compliance and centralized enforcement—but, instead, through emulating seemingly less important features—in this case, codification. Thus, future research may enhance our understanding of institutions by examining how various institutional features (e.g., codification and certification) may enable one institutional form to cross into the realm of another form without relying on the latter's mechanisms for shaping firm behaviors.

Scholars have repeatedly called for greater consideration of firm strategic behavior in the analysis of private-decentralized institutions (Dacin et al., 2002; Ingram & Silverman, 2002; Oliver, 1991). Modeling firm responses to CMS as strategic, rather than assuming that responses are myopic and isomorphic, I have argued that codification and certification can trigger compliance patterns that ultimately undermine the effectiveness of CMS. For institutional theory, this reasoning suggests that our understanding of the effect of private-decentralized institutions on firm behaviors can be aided by exploring the incentive structures through which they engage interest-seeking firms. Thus, rather than focusing on how differential institutional pressures affect the behaviors of strategizing firms (Kostova & Roth, 2002; Oliver, 1991), I suggest considering how an institution's inherent incentive structure solicits or suppresses responses of strategizing firms. Analysis of incentive structures and accompanying strategic responses has generated considerable insights into understanding the effectiveness of privatecentralized institutions (like hierarchies). Comparable insights may be gained in the context of private-decentralized institutions.

Implications for Research on Corporate Social Behavior

Following previous research on CMS, I have conceptualized CMS as a private-decentralized institution. Yet, unlike previous researchers, I have not focused on broader environmental conditions, such as regulatory environments and isomorphic pressures, to explain firm responses to CMS (Delmas, 2003; Guler et al., 2002; Mendel, 2002). Instead, I have examined how some of CMS's unique features (i.e., codification and certification) may affect this institution's ability to guide socially desired firm behaviors. I found that codification and certification have both enabling and impeding effects. Thus, my analysis implies that success and failure of CMS may be only partially explained through analysis of broader institutional conditions. Future research on CMS may benefit from further investigating this institution's inherent features. For example, some CMS (like BBBOnLine) require that firms submit to a clearinghouse system that keeps track of complaints against each firm. Such a system may enable CMS to command firm compliance in short-term transactions—a situation in which compliance to privatedecentralized is thought to be low because it lacks the incentive effect of the shadow of the future (Axelrod, 1984).

Conceptualizing CMS as a private-decentralized institution implies that compliance to CMS is voluntary rather than legally mandated. Empirically, such a conceptualization seems appropriate, since most CMS indeed currently operate against comparably weak legal backdrops (Brunsson & Jacobsson, 2000). Generally, legal backdrops are weaker in the context of institutions that span national borders and legislative terrains (Brunsson & Jacobsson, 2000). Yet institutional conditions may change such that some CMS begin operating against stronger legal backgrounds. For example, as firms seek to comply with the information security theme in the Sarbanes-Oxley Act (Messmer, 2003), compliance to information management standards such as ISO 1799 and BBBOnLine may eventually become practically (though not technically) legally required. Thus, future research may consider conceptualizing CMS as a hybrid that incorporates features of both a private-decentralized institution and a public-centralized institution.

For practitioners, this paper has a very clear message: the design of CMS matters. For policy makers, design elements like codification and certification matter in that they critically influence whether and how CMS guide desired firm behaviors. This, in turn, has implications for the degree to which CMS may complement or replace public-centralized institutions in the pursuit of social welfare. For managers, design matters because it affects enforcement patterns and facilitates (or impedes) coordination with transacting partners. This paper suggests that although codification and certification may broaden the applicability of CMS, they risk getting CMS stuck in the middle. Providing a tool for improvement and acting as a signal for superior performance may be exclusive endeavors that can be made compatible only under some very specific conditions.

This article also speaks to recent efforts to connect the literature on corporate social responsibility (CSR1) with that on corporate social responsiveness (CSR2; Frederick, 1994). "CSR2 shuns philosophy in favor of a managerial approach" and replaces "the abstract and often highly elusive principle of CSR1" with a "focus on the practical aspects of making organizations more socially responsible to tangible forces in the surrounding environment" (Frederick, 1994: 155). CSR2 explicitly acknowledges that corporate social responsiveness may face constraints imposed by capital markets, and it calls for exploration of institutional reforms that make social responsiveness a practical reality (Frederick, 1994).

My analysis moves in the realm of CSR2, and I model firm responses to CMS as driven by external sanctions and the quest for internal benefits. This conceptualization echoes recent survey results that suggest that firms continue to be designed as profit-making mechanisms with "no interest in the good of society" (Bartlett & Preston, 2000: 199), but it limits my analysis in that it does not address corporate social behavior that is driven by higher considerations (Windsor, 2001). Yet my analysis does not categorically exclude some of the more philosophical issues tied to corporate social responsibility. In fact, it is possible that CMS represent the middle stage that bridges corporate social behavior driven by laws and corporate social behavior driven by firms' intrinsic considerations of right and wrong. As management practices evolve, CMS may present a temporary state that is akin to "a provisional statement of the present status of the moral conversation" (Salbu, 1994: 359). As CMS practices become an integral part of transacting, firms may internalize them such that compliance is ultimately driven by firms' internal notions of how to do socially responsible business rather than by external sanctions and the potential for internal benefits. Future research should explore the role of CMS in providing α stepping-stone in this process.

Finally, note that the framework I developed in this study is not restricted to CMS; in fact, it applies to any social initiative that operates against weak legal backgrounds (and, thus, tends to be created by nonstate agents), that lacks a centralized enforcement authority, and that includes codification and certification. Therefore, it also informs us about the functioning of a variety of codes of behavior that meet these criteria. Narrowing my empirical focus for the purpose of this study facilitated the development of a tight theoretical framework, but this focus should not distract from this study's applicability to other social voluntary initiatives.

Limitations

The framework has some limitations that need consideration as the ideas presented get refined and tested in future research. Rather than assuming that firm responses to CMS are driven by isomorphic pressures, I have conceptualized firm responses as strategic, in the sense that firms actively respond to CMS and comply only if benefits outweigh costs. I have, however, not considered the possibility that firms, in an effort to look good without doing good, may act strategically in the sense that they decouple stated practices from actual behaviors. Research on the adoption of ethics codes suggests that such decoupling is especially likely when external pressures for social performance are high (Kimerling, 2001; Weaver, Treviño, & Cochran, 1999). Decoupling processes also have been documented in the context of quality management (Kostova & Roth, 2002) and the adoption of stock repurchase programs (Westphal & Zajac, 2001). In the context of CMS, decoupling may be less of a concern, because third-party certification limits the extent of such behaviors. However, while making decoupling less likely, recent accounting scandals suggest that certification systems can be faulty and may fail to prevent decoupling. Certification systems may break down as certifiers are caught in conflicts of interest due to consulting activities and fee collection (Naveh et al., 1999; OECD, 2001; O'Rourke, 2002). Thus, decoupling may remain a risk, and there is a need for future research to identify conditions when such risks become salient.

My analysis partially hinges on the willingness of transacting parties to assign a worth to firm compliance to best practices. For my analysis, I assumed that this willingness is given. Yet actual willingness to reward compliance will depend on the degree to which transacting parties can internalize the benefits that arise from firm compliance to best practices. I have argued that even in the case of a public good (such as environmental protection), willingness to reward compliance exists to the extent to which the public good can be bundled with private benefits. Yet as long as benefits remain that cannot be internalized, resulting levels of compliance will be below socially desired levels. Thus, the ability of CMS to entice firms into the production of public goods is limited.

When discussing CMS as a means to guide socially desired firm behaviors, it is important to acknowledge the difficulty of defining effectiveness. I have explored the ability of CMS to trigger immediate effects on firm behavior. However, besides assessing CMS with respect to their intended effect on firm behavior, one might assess CMS (and other voluntary social initiatives) with respect to their capacity to initiate a dialogue, increase awareness, and change mind frames (Massie, 2000; Salbu, 1994). The Sullivan Principles (a voluntary initiative on labor practices in South Africa), for example, may not have been particularly effective in changing employment practices, but they have successfully changed corporate investors' perceptions about apartheid (Massie, 2000). Last, it also is important to acknowledge a potentially much darker side of CMS. Through fostering compliance to codified practices, CMS may run the risk of reducing social welfare by erecting trade barriers that limit competition from firms that, for various reasons, may not be able to meet certification requirements.

CONCLUSION

Over the last decade, practitioners have increasingly relied on voluntary social initiatives as a means of closing the gap between enforceable mandatory laws and the social goals derived from universal principles and values (European Commission, 2003; Gunningham et al., 1998; Massie, 2000). Although nonmandatory institutions such as norms and informal rules can be a powerful driver of firm behavior, they risk failing when consensus about expected behaviors is incomplete (e.g., in cross-cultural settings and in emerging management fields) and when firm practices are difficult to observe.

In this article I have analyzed one example of a voluntary social initiative, CMS, to theorize how codification and certification may both broaden and restrict the scope of normlike institutions. I have reasoned that codification and certification enable these institutions to function in settings where nonmandatory initiatives are thought to fail but that they limit their scope by encouraging patterns of compliance that introduce inconsistencies into decentralized enforcement processes. My analysis contributes to institutional theory and the norms literature by theorizing about the ability and limitations of private-decentralized institutions to create order without law in settings that violate the boundary conditions for norms to function. This analysis contributes to the literature on corporate social behavior by shedding light on the functioning of voluntary social initiatives. For practitioners, my study provides guidance for the design of these initiatives. It suggests that inclusion of both codification and certification may broaden an initiative's scope but can risk triggering counteracting effects that reduce the initiative's effectiveness.

REFERENCES

- Adams, J. D. 2002. Comparative localization of academic and industrial spillovers. *Journal of Economic Geography*, 2: 253–278.
- Adler, N. 1986. International dimensions of organizational behavior. Boston: Kent.
- Akerlof, G. 1970. The markets for lemons: Quality uncertainty and the market mechanism. Quarterly Journal of Economics, 84: 488–500.
- Albino, V., Garavelli, A. C., & Schiuma, G. 1999. Knowledge transfer and inter-firm relationships in industrial districts: The role of the leader firm. *Technovation*, 19: 53– 63.
- Aldrich, H. E., & Fiol, C. M. 1994. Fools rush in? The institutional context of industry creation. Academy of Management Review, 19: 645–671.
- Arrow, K. J. 1974. The limits of organizations. New York: Norton.
- Avadikyan, A., Llerena, P., Matt, M., Rozan, A., & Wolff, S. 2001. Organizational rules, codification and knowledge creation in inter-organization cooperative agreements. *Research Policy*, 30: 1443–1458.
- Axelrod, R. 1984. *The evolution of cooperation*. New York: Basic Books.
- Axelrod, R. 1986. An evolutionary approach to norms. American Political Science Review, 80: 1095–1111.
- Bartlett, A., & Preston, D. 2000. Can ethical behaviour really exist in business? *Journal of Business Ethics*, 23: 199–209.
- Bendor, J., & Swistak, P. 2001. The evolution of norms. American Journal of Sociology, 106: 1493–1549.
- Benezech, D., Lambert, G., Lanoux, B., Lerch, C., & Loos-Barain, J. 2001. Completion of knowledge codification: An illustration through the ISO 9000 standards implementation process. *Research Policy*, 30: 1395–1407.
- Bernstein, L. 1992. Opting out of the legal system: Extra legal contractual relations in the diamond industry. *Journal of Legal Studies*, 21: 115–157.
- Bernstein, L. 2001. Private commercial law in the cotton industry: Creating cooperation through rules, norms, and institutions. *Michigan Law Review*, 99: 1724–1791.

- Better Business Bureau (BBB). 2004. BBBOnLine Update: December 2004, 4(11).
- Bilder, R. B. 2000. Beyond compliance: Helping nations cooperate. In D. Shelton (Ed.), *Commitment and compliance:* 65–75. New York: Oxford University Press.
- Boyd, G. A., Tolley, G., & Pang, J. 2002. Plant level productivity, efficiency, and environmental performance of the container glass industry. *Environmental and Resource Economics*, 23: 29–43.
- Brunsson, N., & Jacobsson, B. 2000. A world of standards. New York: Oxford University Press.
- Cohen, W. M., & Levinthal, D. A. 1990. Absorptive capacity: A new perspective on learning and innovation. Administrative Science Quarterly, 35: 128–163.
- Cohendet, P., & Meyer-Krahmer, F. 2001. The theoretical and policy implications of knowledge codification. *Research Policy*, 30: 1563–1591.
- Cole, R. E. 1998. Learning from the quality movement: What did and didn't happen and why? *California Management Review*, 41(1): 43–74.
- Collins, B. L. 1996. Prepared statement before the Technology Subcommittee of the House Science Committee. *Federal News Service*, June 4: In the News.
- Cowan, R., David, P. A., & Foray, D. 2000. The explicit economics of knowledge codification and tacitness. *Industrial and Corporate Change*, 9: 211–253.
- Dacin, M., Goodstein, J., & Scott, W. R. 2002. Institutional theory and institutional change: Introduction to the special research forum. *Academy of Management Journal*, 45: 45–57.
- Darnall, N., & Edwards, D. 2004. Predicting the cost of environmental management system adoption. Paper presented at the annual meeting of the Academy of Management, New Orleans.
- Delmas, M., & Terlaak, A. 2001. A framework for analyzing environmental voluntary agreements. *California Man*agement Review, 43(3): 44–66.
- Delmas, M. A. 2003. In search of ISO: An institutional perspective of the adoption of international management standards. Working paper No. 1784, Stanford Graduate School of Business, Stanford, CA.
- Eisenhardt, K. M., & Martin, J. A. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21: 1105–1121.
- Ellickson, R. C. 1991. Order without law. Cambridge, MA: Harvard University Press.
- Emons, W. 1997. Credence goods and fraudulent experts. *RAND Journal of Economics*, 28: 107–130.
- European Commission. 2003. *Mapping instruments for corporate social responsibility*. Luxembourg: Office for Official Publications of the European Communities.
- Fernie, S., Green, S. D., Weller, S. J., & Newcombe, R. 2003. Knowledge sharing: Context, confusion, and controversy. *International Journal of Project Management*, 21: 177–187.
- Ferrer, G., Gavronski, I., & de Laureano, P. 2003. ISO 14001

certification in Brazil: Motivation and benefits. Working paper, Kenan-Flagler Business School, University of North Carolina, Chapel Hill, NC.

- Fielding, S. 1998. ISO 14001 delivers effective environmental management and profits. *Professional Safety*, 43: 27–29.
- Frantz, R. 1988. X-efficiency: Theory, evidence, and applications. Norwell, MA: Kluwer.
- Frederick, W. C. 1994. From CSR1 to CSR2. Business and Society, 33: 150–164.
- George, G. 2005. Learning to be capable: Patenting and licensing at the Wisconsin Alumni Research Foundation, 1925–2002. Industrial and Corporate Change, 14: 119–151.
- Graedel, T. E., & Allenby, B. R. 1995. *Industrial ecology*. Englewood Cliffs, NJ: Prentice-Hall.
- Graham, J. L., Mintu, A. T., & Rodgers, W. 1994. Explorations of negotiation behaviors in ten foreign cultures using a model developed in the United States. *Management Sci*ence, 40: 72–96.
- Greif, A. 1993. Contract enforceability and economic institutions in early trade—the Maghribi traders coalition. *American Economic Review*, 83: 525–548.
- Grow, B., Hamm, S., & Lee, L. 2005. The debate over doing good. BusinessWeek, August 15: 76–78.
- Guler, I., Guillen, M. F., & Macpherson, J. M. 2002. Global competition, institutions and the diffusion of organizational practices: The international spread of ISO 9000 quality certificates. *Administrative Science Quarterly*, 47: 207–232.
- Gunningham, N., Grabosky, P., & Sinclair, D. 1998. Smart regulation: Designing environmental policy. New York: Oxford University Press.
- Guy, S. 1997. Where the jobs are. *Telephony*, January 6: 12–18.
- Hemenway, C. G., & Hale, G. J. 1996. The TQEM-ISO 14001 connection. Quality Progress, 29(6): 29–33.
- Hofstede, G. 1980. *Culture's consequences.* Beverly Hills, CA: Sage.
- Hunker, J. 2002. Policy challenges in building dependability in global infrastructures. Computers and Security, 21: 705–711.
- Ingram, P., & Clay, K. 2000. The choice-within-constraints new institutionalism and implications for sociology. Annual Review of Sociology, 26: 525–546.
- Ingram, P., & Silverman, B. S. 2002. The new institutionalism in strategic management. Advances in Strategic Management, 19: 1–32.
- International Organization for Standardization (ISO). 2003. The ISO survey of ISO 9000 and ISO 14001 certificates. Geneva: ISO.
- Jayathirtha, R. V. 2001. Combating environmental repercussions through "TQEM" and "ISO 14000." Business Strategy and the Environment, 10: 245–250.
- Jiang, R. J., & Bansal, P. 2003. Seeing the need for ISO 14001. Journal of Management Studies, 40: 1047–1067.
- Katz, R., & Tushman, M. 1979. Communication patterns, project performance, and task characteristics: An empir-

ical evaluation and integration in an R&D setting. **Or**ganizational Behavior and Human Performance, 23: 139– 162.

- Khanna, M. 2001. Non-mandatory approaches to environmental protection. *Journal of Economic Surveys*, 15: 291– 312.
- Kimerling, J. 2001. Corporate ethics in the era of globalization: The promise and peril of international environmental standards. *Journal of Agricultural and Environmental Ethics*, 14: 425–455.
- King, A., & Lenox, M. 2000. Industry self-regulation without sanctions: The chemical industries Responsible Care Program. Academy of Management Journal, 43: 698–716.
- King, A., & Lenox, M. 2001. Does it really pay to be green? Journal of Industrial Ecology, 5(1): 105–116.
- King, A., Lenox, M., & Terlaak, A. 2005. The strategic use of decentralized institutions: Exploring certification with the ISO 14001 management standard. Academy of Management Journal, 48: 1091–1106.
- Klaver, J., & Jonker, J. 2000. Changing corporate environmental management: Development of new management systems. *Eco-Management and Auditing*, 7: 91–97.
- Kostova, T., & Roth, K. 2002. Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. Academy of Management Journal, 45: 215–233.
- Lane, P. J., & Lubatkin, M. 1998. Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19: 461–477.
- Leibenstein, H. 1966. Allocative efficiency versus X-efficiency. American Economic Review, 56: 392–415.
- Loya, T. A., & Boli, J. 1999. Standardization in the world polity: Technical rationality over power. In J. Boli & G. M. Thomas (Eds.), *Constructing world culture:* 169–197. Stanford, CA: Stanford University Press.
- Marquardt, D. 1992. ISO 9000: A universal standard of quality. *Management Review*, 81: 50–52.
- Massie, R. K. 2000. Effective codes of conduct: Lessons from the Sullivan and CERES principles. In O. F. Williams (Ed.), *Global codes of conduct:* 280–294. South Bend, IN: University of Notre Dame Press.
- McWilliams, A., & Siegel, D. 2001. Corporate social responsibility: A theory of the firm perspective. Academy of Management Review: 26: 117–127.
- Mendel, P. 2002. International standardization and global governance: The spread of quality and environmental management standards. In A. Hoffman & M. Ventresca (Eds.), Organizations, policy, and the natural environment: 407–434. Stanford, CA: Stanford University Press.
- Messmer, E. 2003. Auditors' ascension. *Network World*, January 13: www.networkworld.com/careers/2003/0113man. html.
- Morella, C. 1996. International standards and U.S. industry. In S. Mazza (Ed.), *Hearing of the Technology Subcommittee of the House Science Committee*. Washington, DC: Federal News Service.

- Mowery, D. C., Oxley, J. E., & Silverman, B. S. 1996. Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal*, 17: 77–91.
- Munier, F., & Ronde, P. 2001. The role of knowledge codification in the emergence of consensus under uncertainty: Empirical analysis and policy implications. *Research Policy*, 30: 1537–1551.
- Naveh, E., Marcus, A., Allen, G., & Koo Moon, H. 1999. ISO 9000 survey '99: An analytical tool to assess the costs, benefits and savings of ISO 9000 registration. New York: McGraw-Hill.
- Nelson, P. 1974. Advertising as information. Journal of Political Economy, 82: 729–754.
- North, D. C. 1990. Institutions, institutional change and economic performance. New York: Cambridge University Press.
- O'Dell, C., & Grayson, C. J. 1998. If only I knew what I know: Identification and transfer of internal best practices. *California Management Review*, 40(3): 154–174.
- Oliver, C. 1991. Strategic responses to institutional processes. Academy of Management Review, 16: 145–179.
- Organization for Economic Cooperation and Development (OECD). 2001. Corporate responsibility: Private initiatives and public goals. Paris: OECD.
- O'Rourke, D. 2002. Monitoring the monitors: A critique of third party labor monitoring. In R. Jenkins, R. Pearsons, & G. Seyfang (Eds.), *Corporate responsibility and labour rights:* 196–208. London: Earthscan.
- Ostrom, E. 2000. Collective action and the evolution of social norms. *Journal of Economic Perspectives*, 14: 137–159.
- Palmer, K., Oates, W., & Portney, P. 1995. Tightening environmental standards: The benefit-cost or the no-cost paradigm? *Journal of Economic Perspectives*, 9: 119–133.
- Porter, M. E., & van der Linde, C. 1995. Green and competitive: Ending the stalemate. *Harvard Business Review*, 73(5): 120–134.
- Post, J. E. 2000. Global codes of conduct: Activists, lawyers and managers in search of a solution. In O. F. Williams (Ed.), *Global codes of conduct:* 103–116. South Bend, IN: University of Notre Dame Press.
- Raiborn, C., & Payne, D. 1996. TQM: Just what the ethicist ordered. Journal of Business Ethics, 15: 963–972.
- Reidenbach, R. E., & Minton, A. P. 1991. Customer service segments: Strategic implications for the commercial banking industry. *Journal of Professional Services Marketing*, 612: 129–143.
- Reinhardt, F. L. 1998. Environmental product differentiation: Implications for corporate strategy. *California Management Review*, 40(4): 43–74.
- Reinhardt, F. L. 1999. Bringing the environment down to earth. *Harvard Business Review*, 77(4): 149–157.
- Ruggles, R. 1998. The state of the notion: Knowledge management in practice. *California Management Review*, 40(3): 80–91.
- Russo, M. V., & Fouts, P. 1997. A resource-based perspective

on corporate environmental performance and profitability. Academy of Management Journal, 40: 534–560.

- Salbu, S. 1994. True codes versus voluntary codes of ethics in international markets: Towards the preservation of colloquy in emerging global communities. University of Pennsylvania Journal of International Business Law, 15: 327–371.
- Sanders, G., & Boivie, S. 2004. Sorting things out: Valuation of new firms in uncertain markets. *Strategic Management Journal*, 25: 167–186.
- Scott, W. R. 2001. *Institutions and organizations*. Thousand Oaks, CA: Sage.
- Simon, H. A. 1957. Models of man. New York: Wiley.
- Simonin, B. L. 1999. Ambiguity and the process of knowledge transfer in strategic alliances. Strategic Management Journal, 20: 595–623.
- Slawsky, R. 2004. High crude oil prices pinch drivers at pump. New Orleans City Business, April 12.
- Social Accountability International (SAI). 2004a. List of certified facilities. www.cepaa.org/Accreditation/Certified Facilities.htm. New York: SAI.
- Social Accountability International (SAI). 2004b. Guidance on pursuing SA8000 certification of facilities. http:// www.sa-intl.org/. New York: SAI.
- Spence, A. M. 1973. Job market signaling. Quarterly Journal of Economics, 87: 355–375.
- Stephens, G. K., & Greer, C. R. 1995. Doing business in Mexico: Understanding cultural differences. Organizational Dynamics, 24(1): 39–55.
- Subramaniam, M., & Venkatraman, N. 2001. Determinants of transnational new product development capability: Testing the influence of transferring and deploying tacit

overseas knowledge. *Strategic Management Journal*, 22: 359–378.

- Transparency International. 2004. Caremark case study. http://www.transparency-usa.org/Key/A/Caremark% 20International%20I%7Eyl.pdf, accessed December 3, 2004.
- Uzzi, B. 1996. The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, 61: 674–699.
- Weaver, G., Treviño, L., & Cochran, P. 1999. Integrated and decoupled corporate social performance: Management commitments, external pressures, and corporate ethics practices. Academy of Management Journal, 42: 539–553.
- Weiss, E. B. 2000. Conclusions: Understanding compliance with soft law. In D. Shelton (Ed.), *Commitment and compliance*: 535–553. New York: Oxford University Press.
- Wenmoth, B. A., & Dobbin, D. J. 1994. Experience with implementing ISO 9000. Asia Pacific Journal of Quality Management, 3(3): 9–28.
- Westphal, J. D., Gulati, R., & Shortell, S. M. 1997. Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption. Administrative Science Quarterly, 42: 366– 395.
- Westphal, J. D., & Zajac, E. J. 2001. Decoupling policy from practice: The case of stock repurchase programs. Administrative Science Quarterly, 46: 202–231.
- Windsor, D. 2001. Corporate social responsibility: A theory of the firm perspective. Academy of Management Review, 26: 502–503.
- Zahra, S., & George, G. 2002. Absorptive capacity: A review, reconceptualization, and extension. Academy of Management Review, 27: 185–203.

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