

- Partnoy, F. (2006). *How and why credit rating agencies are not like other gatekeepers*. University of San Diego Law School Research Paper 07-46. University of San Diego Law School, San Diego, CA.
- Philippon, T., & Reshef, A. (2009). *Wages and human capital in the U.S. financial industry: 1909–2006*. NBER Working Paper no. 14644. National Bureau of Economic Research, Cambridge, MA.
- Rao, H., Greve, H. R., & Davis, G. F. (2001). Fool's gold: Social proof in the initiation and abandonment of coverage by Wall Street analysts. *Administrative Science Quarterly*, 46(3), 502–526.
- Rom, M. C. (2009). The credit rating agencies and the subprime mess: Greedy, ignorant, and stressed? *Public Administration Review*, 69(4), 640–650.
- Securities and Exchange Commission (SEC). (2008a). *Summary report of issues identified in the commission staff's examinations of select credit rating agencies*. Washington, DC: Securities and Exchange Commission.
- Securities and Exchange Commission. (2008b). *Report and recommendations pursuant to section 133 of the emergency economic stabilization act of 2008: Study on mark-to-market accounting*. Washington, DC: Securities and Exchange Commission.
- Sherlund, S. M. (2008). *The past, present, and future of subprime mortgages*. Finance and Economics Discussion Series Working Paper no. 63. Federal Reserve Board, Washington, DC.
- Snowden, K. (1995). Mortgage securitization in the United States: Twentieth century developments in historical perspective. In: M. Bordo & R. Sylla (Eds), *Anglo-American financial systems* (pp. 261–298). New York: Irwin Publishing.
- Stiglitz, J. E. (2000). The contributions of the economics of information to twentieth century economics. *Quarterly Journal of Economics*, 115(4), 1441–1478.
- Stuart, G. (2003). *Discriminating risk: The U.S. mortgage lending industry in the twentieth century*. Ithaca, USA: Cornell University Press.
- Tett, G. (2009). *Fool's gold: How the bold dream of a small tribe at J.P. Morgan was corrupted by Wall Street greed and unleashed a catastrophe*. New York: Free Press.
- Uzzi, B. (1999). Embeddedness in the making of financial capital: How social relations and networks benefit firms seeking financing. *American Sociological Review*, 64, 481–505.
- Uzzi, B., & Lancaster, R. (2003). Relational embeddedness and learning: The case of bank loan managers and their clients. *Management Science*, 49(4), 383–399.
- Zuckerman, E. (1999). The categorical imperative: Securities analysts and the illegitimacy discount. *American Journal of Sociology*, 104(5), 1398–1438.

TERMINAL ISOMORPHISM AND THE SELF-DESTRUCTIVE POTENTIAL OF SUCCESS: LESSONS FROM SUBPRIME MORTGAGE ORIGINATION AND SECURITIZATION

Jo-Ellen Pozner, Mary Kate Stimmler and
Paul M. Hirsch

ABSTRACT

One of the lessons learned from the recent financial-sector crisis is that institutions may sometimes sow the seeds of their own destruction. We offer a two-tiered analysis of how the diffusion of innovative practices – in this case, issuing and securitizing subprime mortgages – can lead to an unanticipated breakdown of established institutions. At the institutional level, we demonstrate that the lack of effective external regulatory presence, the emergence of new norms through the introduction of a new institutional logic, and intense mimetic and competitive pressures may lead organizational actors to exploit a suboptimal innovation. At the organizational level, we argue that over-embeddedness of central actors

Markets on Trial: The Economic Sociology of the U.S. Financial Crisis: Part A
Research in the Sociology of Organizations, Volume 30A, 183–216
Copyright © 2010 by Emerald Group Publishing Limited
All rights of reproduction in any form reserved
ISSN: 0733-558X/doi:10.1108/S0733-558X(2010)000030A010

within relatively closed networks and superstitious learning processes can exacerbate the biases to which decision makers are susceptible, leading to the institutionalization of a suboptimal organizational practice. These two parallel sets of processes led to severe consequences at the institutional level, which we label "terminal isomorphism." We end by discussing consequences for institutional theory, future research directions, and recommendations for policy makers.

One of the central themes of organization theory is the diffusion and institutionalization of innovations. Scholars have identified several mechanisms – including social movements, network connections, institutional entrepreneurship, and symbolic management – through which new practices spread among organizational populations. The diffusion literature has been criticized, however, for failing to examine what happens once the practice is institutionalized, whether its adoption is legitimate or illegitimate, whether the practice is functional or dysfunctional in the adopting organization, whether it is actually implemented or merely a symbolic gesture, and whether its impact on organizational performance is positive or negative. We posit that an additional aspect of the diffusion process has been overlooked: the impact on the institution itself.

In this chapter, we argue that organizations may engage in a practice that appears legitimate and beneficial at the organizational level, but which leads to dysfunctional change at the institutional level, with potentially dire consequences. Using the example of the recent collapse in the viability of home mortgage and credit markets in the United States, we build theory about how the diffusion of new practices may contribute to the unanticipated breakdown and deinstitutionalization of established arrangements. Tracing the spread of innovative loan origination and securitization practices in tightly embedded networks, we explore the micro- and macro-institutional mechanisms that led to the destabilization and effective overthrow of a longstanding set of organizational arrangements, which had governed the transfer of homeownership and refinancing contracts for the previous half century.

We also identify a gap in our understanding of how changes in institutional logics may be effected. Existing accounts in institutional theory point to institutional entrepreneurship, changes in the regulatory environment, and mimetic isomorphism as the primary drivers of institutional change. In contrast, we argue that the diffusion of innovations can alter institutions in a way that facilitates institutional erosion and that

organizations can play an agentic role in reconfiguring their environments to accelerate the process.

The story of the mortgage crisis lends itself well to institutional analysis; it is a story about what was taken for granted and the interplay between organizations and their external constraints. It also points to a potential weakness in some assumptions underlying institutional theory. We argue that financial organizations restructured their own environment, which in turn created the competitive conditions that forced organizational change, and ultimately crisis. Guided by a market logic actively promoted by financial market participants themselves, regulators allowed the process of innovation to spin out of control. The lack of effective regulatory presence, the emergence of new norms through the introduction of "Wall Street logic," and intense competitive and mimetic pressures led the financial services industry to exploit a suboptimal practice that ultimately resulted in the demise of several key players and the restructuring of an entire industry. We call this process "terminal isomorphism."

In this case, the process of innovation was based on unreasonable assumptions and resulted in adverse selection that ultimately led to crisis. Nevertheless, the innovation being diffused seemed legitimate, rationally beneficial, and competitively imperative to the adopting organizations, and only proved harmful when aggregated to the institutional level. The firms involved sought not to overthrow the existing order, as is assumed of most institutional entrepreneurs, but rather merely to imitate and out-compete their successful peers. Their decisions were clouded, we argue, by a miasma of irrationality created by decision-making biases, which were exacerbated by the very structure of the industry itself.

A critical aspect of our argument, therefore, is that micro-mechanisms at the organizational level contributed to the collective dysfunctional decision making that nearly toppled an institution. Superstitious learning processes (Levitt & March, 1988) led decision-makers to replicate what seemed to be a successful practice, and the paradox of success and executive hubris led to strategic persistence despite contraindications (Audia, Locke, & Smith, 2000). In addition, the over-embeddedness of institutional actors in dense networks led them to seek information only from each other, introducing further biases into the decision-making process. These mechanisms promoted the diffusion of practices that may have appeared rational at the organizational level, but which when replicated across an institution, led to a dramatic shift in logics that eventually resulted in crisis.

Our argument will proceed as follows. After describing the gap we perceive in the literature on changing institutional logics and the diffusion of

innovation, we lay out a brief history of subprime mortgage origination and securitization, which led to financial crisis in 2008–2009. Following an examination of the endogenous sources of change within the financial services industry and the weakening of regulatory forces, which we term the “privatization of legitimacy,” we describe the social psychological mechanisms that promoted the diffusion of these practices among U.S. financial institutions. A discussion of the institutional process we term “terminal isomorphism” follows, highlighting the role of changing institutional logics and the privatization of legitimacy. We conclude with a discussion of future research directions, with special attention to the dark side of the diffusion of innovations, and recommendations for policy makers.

CHANGING INSTITUTIONAL LOGICS AND THE DIFFUSION OF INNOVATION

How and why new practices are taken up by organizations is one of the central concerns of organizational theory. Neo-institutional theory holds that organizations imitate each other due not only to competitive pressures, but also to conform to a socially constructed environment (DiMaggio & Powell, 1983; Powell & DiMaggio, 1991). Along with competitive pressures, three institutional mechanisms – normative, coercive, and mimetic isomorphism – drive such imitation. Through these mechanisms, institutions create pressures that constrain action and perpetuate existing regimes (D’Aunno, Succi, & Alexander, 2000; Greenwood & Hinings, 1993, 1996; Greenwood & Suddaby, 2006), such that real change can only occur when dominant institutions are overturned and the status quo is upset (Greenwood & Hinings, 1996; Greenwood & Suddaby, 2006). Consequently, organizational practices are legitimate only to the extent that they adhere to dominant institutional conventions (Friedland & Alford, 1991; Thornton & Ocasio, 1999; Zajac & Westphal, 2004). As prevailing notions of legitimacy are updated, the taken-for-grantedness of certain organizational practices is also likely to change, as old practices are deinstitutionalized and new practices take root (Davis & Greve, 1997; Tolbert & Zucker, 1983). The study of institutional change and the adoption of new practices fall into two broad research traditions: the literature on institutional logics and the literature on the diffusion of innovation.

Traditionally, research into institutional change has addressed ways in which exogenous forces disrupt existing institutions, leading to a change in

the status quo and the emergence of a new set of structures, rules, values, and practices to govern the institutional regime (Fligstein, 1990; Leblebici, Salancik, Copay, & King, 1991; Ocasio, 1994; Powell, 1991). Technological change, for example, may force fundamental shifts in institutional dynamics that result in a restructuring of the institution itself (Leblebici et al., 1991; Munir, 2005), as well as the logics that govern it. Fligstein and colleagues (Fligstein & Brantley, 1992; Fligstein, 1990) demonstrate that the spread of the multidivisional organizational form was in part a consequence of the replacement of a manufacturing logic of corporate control to a finance logic. Similarly, Thornton’s studies of the higher education publishing industry (Thornton, 2001, 2002; Thornton & Ocasio, 1999) find that the replacement of a professional editorial logic with a market logic led to a change in executive succession practices, organizational structure, and market acquisition targets in that field.

Likewise, changes in the regulatory environment can significantly alter institutional logics. Institutions can be defined as sets of formal and informal constraints, rules and taken-for-granted scripts that guide organizational behavior, giving rise to socially determined normative schema (North, 1991; Powell & DiMaggio, 1991; Russo, 2001). Regulation, whether dominated by institutional insiders or institutional opponents (Ingram & Rao, 2004; Schneiberg & Bartley, 2001), therefore plays a significant role in determining which practices and behaviors are legitimate (DiMaggio & Powell, 1983), such that changes to regulatory schemes can have a significant impact on organizational outcomes (Russo, 1992).

In contrast, recent research demonstrates how institutional change may result from the purposive action of institutional entrepreneurs (Battilana, Leca, & Boxenbaum, 2009; DiMaggio, 1988; Jepperson, 1991; Lawrence & Suddaby, 2006) and the championing of innovation and change by internal agents (Sherer & Lee, 2002). This type of change is often – although not always (Greenwood & Suddaby, 2006) – driven by marginal or peripheral actors whose relatively low status incentivizes and licenses them to overthrow the dominant regime (Hirsch, 1986; Kraatz & Moore, 2002; Leblebici et al., 1991), resulting in the replacement of one set of institutional logics with another (Greenwood & Hinings, 1996; Greenwood & Suddaby, 2006). Kraatz and Moore (2002) show that changes in student preferences and resource competition evoked a change away from the logics dominating liberal arts colleges toward professionally-oriented educational programs. Marquis and Lounsbury (2007) extend this line of inquiry by demonstrating how an effort to introduce a national logic in the banking industry inspired institutional entrepreneurship in defense of a community logic of banking.

To these explanations of changes in institutional logics, we add a more explicit consideration of how new practices are disseminated. Whether through agentic entrepreneurship, changes to the regulatory environment, or simple competitive mimesis, the primary mechanism through which changes in logics occurs is that of diffusion. Generally, the diffusion literature explains the spread of practices that challenge incumbent institutions and that represent an important source of endogenous institutional change (Clemens & Cook, 1999; Greenwood & Hinings, 1996). Strang and Soule (1998) summarize the research on structure and diffusion, demonstrating that new practices may be spread through both exogenous sources, including mass media and change agents, and endogenous factors such as network ties, competition, spatial proximity, and status, thus echoing the mechanisms proposed by neo-institutional theorists. Organizations may adopt innovations introduced by others because of exposure and influence (Greve, 2005; Rogers, 1995; Strang & Soule, 1998) or experiential spillovers across organizations (Argote, Beckman, & Epple, 1990; Greve & Taylor, 2000), which over time may cause changes to institutional logics. Although institutional constraints may slow the adoption of new or illegitimate practices (D'Aunno et al., 2000; Haveman, 1993; Leblebici et al., 1991), there is ample evidence of new practices leading to changes across organizational fields (Ahmadjian & Lincoln, 2001; Burns & Wholey, 1993; Davis, 1991; Galaskiewicz & Wasserman, 1989).

Although the processes of diffusion are well-defined, there are limitations to this body of research (Jonsson, 2009). In particular, it has been criticized for succumbing to a pro-innovation bias (Rogers, 1995), whereby studies focus on successful diffusion processes and implicitly assume that innovations are beneficial. While there is some discussion of why organizations might fail to adopt diffusing practices, including the inability to absorb knowledge (Cohen & Levinthal, 1990; Lane & Lubatkin, 1998), difficulty in adopting technical changes (Tushman & Anderson, 1986), failure to adopt innovations because they lack legitimacy (Dougherty, 1992), or internal resistance (Rogers, 1995), the primary focus of this literature is on the successful adoption of beneficial practices across organizational populations. Similarly, the literature has been criticized for inattention to the content of diffusion, with over-attention to symbolic adoption (Fiss & Zajac, 2006; Westphal & Zajac, 1998; Zajac & Westphal, 1995) and a lack of concern for variation in implementation or customization (Westphal, Gulati, & Shortell, 1997).

We expand this discussion to investigate the impact of the diffusion process on the institution through which a given innovation is disseminated.

To date, the literature has looked at how changes in institutions have led to changes in the legitimacy of specific practices and the manner in which organizations adjust. Instead, we posit that organizations may actually alter their institutional environments through the adoption of an innovative practice, reversing the directionality of the change process. In the following sections, we describe the processes through which a seemingly rational innovation – mortgage origination and securitization – was diffused through the population of U.S. financial institutions. We begin with an examination of the way in which coercive pressures that might have suppressed the innovation were subverted through a process we term “the privatization of legitimacy,” leading to a greater level of diffusion than might have been predicted. We then describe the micro-mechanisms that encouraged the further widespread diffusion of this practice, despite its potentially deleterious effect on the financial services institution.

A BRIEF HISTORY OF SUBPRIME MORTGAGE ORIGINATION AND SECURITIZATION

To illustrate how the process of diffusion may lead to potentially maladaptive changes in institutional logics, we follow the case of mortgage origination and securitization within the U.S. financial services industry. Mortgage lending is a business that relies on carefully measuring risk and balancing it against potential rewards. Loans with relatively lower risks of default and prepayment are extended at lower interest rates than those with higher risks of default and prepayment. Those low- and high-risk loans are commonly referred to as prime and subprime loans, respectively. Today borrowers with low or unstable incomes, high amounts of debt, or histories of nonpayment qualify for subprime loans with higher interest rates. Before the passage of the Depository Institutions Deregulation and Monetary Control Act of 1980, however, banks were prohibited from charging high interest rates to high-risk borrowers and therefore few high-risk loans were ever made. Two years later, the Alternative Mortgage Transaction Parity Act allowed financial institutions to extend mortgages with variable interest rates and balloon payments. These two acts opened the door for subprime lending, but the practice really gained popularity when the Tax Reform Act of 1986 retained a tax deduction for mortgage interest on homes while prohibiting any deduction for consumer debt interest, particularly credit card debt. Refinancing homes for access to consumer credit consequently became a popular alternative to credit cards.

to the modern standards of the financial services industry, which further fueled diffusion. The flames of this fire were fanned by over-embedded relationships among financial services players, decision-making biases, hubris, and the absence of limitations on its spread through coercive pressures, leading to an untenable degree of risk within the financial services industry, and ultimately to crisis. Before examining the process of terminal isomorphism in detail, we first explore the peculiar and extreme lack of coercive pressures within this institution.

THE PRIVATIZATION OF LEGITIMACY

The fight for legal and regulatory reform is an important mechanism through which organizational actors can create institutional change (Dobbin, 1998; Edelman, 1992; Oliver, 1991). For example, Edelman (1990) finds that changes in the legal environment stemming from the civil rights movement forced organizations to adopt formal grievance procedures. Similarly, Dobbin and Sutton (1998) demonstrate that a shift in logics following the institutionalization of antidiscrimination, personnel, safety, and benefits departments that resulted from civil rights legislation led eventually to the spread of a human resources logic. Lounsbury (2002) finds that deregulation in the banking industry after World War II replaced a regulatory logic with a market logic. This shift transformed the financial industry from one built on lending to one based on capital creation, encouraged broader market participation, and led to the blending of previously segregated organizational forms. In this section, we argue that this shift was the result of an extreme form of regulatory capture (Stigler, 1971), which we term the privatization of legitimacy.

Building on Lounsbury's (2002) work, we must ask how it is that the logics dominating the financial services industry again migrated toward the end of the twentieth century? Although the regulatory and lending-oriented logics have not reemerged, the organizational forms and practices associated with even earlier banking logics began to dominate, leading to the financial crisis of 2008. In fact, it is the logic of deregulation that highlights an important blind spot in institutional theory: what if designations of legitimacy, which are often conferred by institutional actors such as the state or professional associations, were actually determined and conferred by central organizations, rather than multiple actors? Multiple institutional actors are generally involved in the regulatory process, including dominant incumbents, challengers, consumers, and government agencies, among other

actors (McAdam & Scott, 2005; Russo, 2001). Any and all of those stakeholders may involve themselves in the process of defining what constitutes normatively acceptable practice. It is clear that central, high-status actors can use their power and resources to influence that process and to define their interests and practices as acceptable, if not prescribed. This was the case in the example of incumbent commercial broadcasters, who lobbied the Federal Communications Commission in opposition to the creation of a micro-radio form of broadcasting (Greve, Pozner, & Rao, 2006; Pozner & Rao, 2006). In relatively complex and changing institutions, like that of financial services, there may not be broad agreement among stakeholders about what kinds of organizational practices and strategies are legitimate. Experienced organizations are therefore able to exploit definitional flexibility to blur the boundaries between legitimate and illegitimate organizational practice (Leblebici et al., 1991; Pozner & Rao, 2006; Rao, Monin, & Durand, 2003, 2005; Russo, 2001; Schneiberg & Bartley, 2001).

Not only do incumbents have a vested interest in defining legitimate practice to their advantage, they are also more likely to have the experience and networks to engage in successful lobbying (Hargadon & Douglas, 2001) and thus to benefit from innovation and institutional change (Russo, 2001). Entrenched interests are apt to work collectively and agentially (Francis, 1993; Getz, 1997; Oliver & Holzinger, 2008) or individually and symbolically (Edelman, Uggen, & Erlanger, 1999) to secure their own interests, even if that is done at the expense of other stakeholder groups. Except in industries where human life is saliently, visibly and directly affected by regulatory decisions (e.g., healthcare and aviation), other stakeholders are unlikely to have the capacity or motivation to join together in opposition to those entrenched, central interests. Consequently, we often see powerful industries effectively regulating themselves, despite the presence of nominally external regulatory agencies, turning externally regulated industries into effectively self-regulating institutions.

The idea that firms may push their own conceptions of legitimacy through regulation has been around a long time, but regulatory capture (Stigler, 1971) does not explain why banks were actually fighting to reduce regulation. Stigler (1971) argued that, because of the high cost of search within the policy-making process, the process privileges the strongly felt and vocalized preferences of the minority. In other words, inasmuch as individuals have low motivation to research and become involved in banking regulations, industry insiders' strong preferences will tend to win out. Financial market participants exploited this tendency, and took it one step further by claiming that their preferences would benefit not only their

businesses, but also many would-be home owners who could access cheaper capital. Rather than arguing for regulation to head off new entrants, as Stigler described, in this case market participants demanded deregulation to enable the proliferation of new products, services, and alternatives to the traditional financial industry. Because central organizations were able to influence the definition of legitimate practice, their own practices were validated, regardless of the interests of other market participants. Moreover, as such definitions were institutionalized through regulation, they were legitimated and reified (DiMaggio & Powell, 1983; Suchman, 1995), and effective came to define legitimate organizational practice (Espeland, 1994).

Privatization of Legitimacy and Subprime Mortgages

Although businesses in many industries lobby on their own behalf, the degree to which the financial industry was able to dictate policy was startling. This was so notable as to lead the *Wall Street Journal* to comment that “federal lawmakers didn’t pose much of a threat to the subprime industry in recent years” (Simpson, 2007). For example, Ronald Arnall, the CEO of subprime lender Ameriquest, his relatives and employees spent over \$20 million in political lobbying between 2002 and 2006. Ameriquest, among other subprime lenders and the investment banks that repackaged their loans, fought state and federal attempts to regulate the subprime industry, and Arnall became the ambassador to the Netherlands just as the subprime crisis began to unfold. Acting atomistically through lobbying and influence peddling, financial industry insiders were able to effect change that is often the result of purposive collective action and social movements.

In addition to buying influence through lobbying, top finance executives also co-opted the regulatory process by taking active roles as regulators, moving from industry directly into federal government roles. There, their ability to shape financial regulation actively and legitimately was marked. The tradition of Goldman Sachs CEOs jumping to top government posts is a striking example of this. Beginning with Henry Fowler, who left his post as Secretary of the Treasury to join Goldman Sachs in 1969, a stream of top economic and financial advisors has hopped between government and that investment bank, including former CEOs Henry Paulson, who landed the job of Treasury Secretary under George W. Bush; Jon Corzine, who became a U.S. Senator from New Jersey before becoming Governor of that state; former Chairmen Stephen Friedman, who has chaired both the National

Economic Council and the Federal Reserve Bank of New York; and Robert Rubin, who left Goldman Sachs to become chair of the National Economic Council and later the Treasury Secretary.

The ease and fluidity with which top bankers have been able to jump to regulatory positions leads to the inevitable conclusion that the “inmates are running the asylum,” or that the financial services industry has been effectively regulating itself. The government, as former Federal Reserve Board Chairman Alan Greenspan testified “in shocked disbelief” in October 2008, “looked to the self-interest of lending institutions to protect shareholder’s equity” (Greenspan, 2008). In other words, those at the highest levels of regulatory authority for financial services knowingly handed over responsibility for monitoring and controlling financial institutions’ behavior to those very institutions. We label this process, whereby industry actors are able to regulate themselves not through self-regulatory organizations, but by actively and ostensibly legitimately manipulating federal regulation, the privatization of legitimacy. This is an extreme form of Stigler’s (1971) regulatory capture, and is particularly insidious because it can stimulate toxic conformity, as we describe later.

Perhaps the most glaring example of self-legitimation in the financial services industry can be seen in the erosion of the Glass-Steagall Act, which separated the activities of commercial and investment banks. The repeal of the Glass-Steagall Act followed Citibank’s record-breaking merger with the Travelers Group, which at the time owned investment bank Salomon Smith Barney. The new behemoth organization created by this merger – with operating arms in disparate businesses from insurance underwriting to securities underwriting and commercial banking – overtly flaunted contemporary regulations, most notably the depression-era Glass-Steagall Act. Glass-Steagall and other regulations had been designed specifically to prevent single institutions from blurring the boundaries between various aspects of financial services. These policies sought to resolve the kinds of conflicts of interest that were believed to have led to the financial sector collapse of 1929 and the Great Depression that followed. Although the merger created an illegal business, which according to regulations at the time would have to spin-off major portions of its business to stay within the law, Travelers’ CEO noted that Citigroup had strong faith that the policy would change, saying “We have had enough discussions to believe this will not be a problem” (quoted in Martin, 1998).

Rather than prevent the Citibank-Travelers merger or force the company to cut back on either its investment or consumer offers, regulators called for the end of regulations and made good on those “discussions.”

In November 1999, Congress enacted the Gramm–Leach–Bliley Act, also known as the Financial Services Modernization Act, and repealed the sanctions against businesses conducting both consumer and investment banking. According to *The New York Times*, before its passage, bill author Senator Phil Gramm implored Citibank CEO Sandy Weill to call President Clinton in an effort to get the measure passed (Labaton, 1999). The fact that Congress did adopt legal changes 18 months after the merger, which created the institution now known as Citigroup, suggested that Congress was playing institutional catch-up with changes the industry itself had already enacted. This sequence of events illustrates a perplexing reversal of traditional regulatory mechanisms: not only was legitimacy conferred to an organizational arrangement long after it had been made, but also the main driver of that legitimacy was the very industry that sought it. The process of legitimation had effectively been privatized; not only had the financial services industry effectively captured the ability to regulate itself, it did so with the intent purpose of adopting and diffusing practices widely believed to be dangerous to other stakeholders.

The privatization of legitimacy was evident in many corners of the financial services industry, but perhaps nowhere so much as at the Office of Thrift Supervision (OTS). Created as an agency of the U.S. Department of the Treasury (like the Federal Reserve System and Federal Deposit Insurance Corporation) in 1989, OTS relies on regulatory fees paid by federal savings associations and financial holding companies banks to fund its operations. Like a retailer offering discounts to attract buyers, OTS promised financial market participants more lenient regulations, such as lower capital reserve requirements, than they could receive from other financial sector regulatory authorities. Moreover, it actively encouraged financial institutions to tweak their charters so that they could fall under OTS domain. According to OTS director James Gilleran, the agency's goal was "to allow thrifts to operate with a wide breadth of freedom from regulatory intrusion" (cited in Appelbaum & Nakashima, 2008.) During a press conference in 2003, Gilleran posed with a chainsaw in front of a four-foot stack of printed regulations literally covered in red tape, emphasizing the lax nature of OTS regulation. OTS came to oversee many of the major subprime lenders that failed during the credit crisis in 2008, including Countrywide, Washington Mutual, and IndyMac. Although these institutions still needed to meet regulatory guidelines, the market-based approach taken by the OTS allowed them to choose which regulatory regimes to follow. The result, again, was a privatization of legitimacy: organizations did what they wanted and agentially maneuvered to find the agencies that would give them the legitimacy they desired.

Not surprisingly, innovation was key to this maneuvering. At OTS, innovation and deregulation went hand-in-hand; by reducing the regulatory burden on financial institutions, OTS enabled those organizations to create mortgages with adjustable interest, teaser rates, and no down payments, which in turn enabled banks to lend money to growing hordes of borrowers. On the other side of the banking spectrum, far from the home owners who took out these mortgages, another kind of innovation was diffusing. Increasing varieties of derivatives – financial instruments valued according to changes in underlying assets, such as currencies, treasury bills, bonds, and stock market indices – began to be used by financial traders to hedge against many kinds of risk. Although agricultural futures had been around for centuries, the ability to trade futures on other kinds of investments, like stocks or bonds, had fallen into regulatory limbo. The Commodity Futures Modernization Act of 2000 reduced uncertainty by specifying that most derivatives, including the credit default swaps that greased the wheels of the mortgage-backed security market, were not only legal but *extra-legal*, beyond the domain of any financial regulatory agency. This development represented a further, extreme form of regulatory capture, involving not only state capitulation to the demands of industry (Edelman et al., 1999), but also the state forsaking its very role in creating regulation.

With the diffusion of innovations in both mortgage-lending practices and investment instruments, the financial services industry relied less and less on legitimacy conferred through policy. Instead, legitimacy became endogenously endowed, as the industry began to regulate itself. Regulators and financial services industry participants rationalized the Wall Street logic that emerged from these changes, arguing that bankers knew what was best for banking. As Federal Reserve Chairman Alan Greenspan (2009) explained, he worked under the premise that "enlightened self-interest of owners and managers of financial institutions would lead them to maintain a sufficient buffer against insolvency by actively monitoring and managing their firms' capital and risk positions."

Privatization of Legitimacy and the Diffusion of Innovation

In our example, the privatization of legitimacy and the diffusion of a maladaptive practice were intimately tied together, reinforcing each other in a complex way. Three aspects of this relationship are particularly salient. First, innovation was used as the primary justification for ignoring economic fundamentals that had signaled trouble in the past. For example,

in 2004 Federal Reserve Chairman Alan Greenspan (2004) argued that record high household debt relative to income did not necessarily signal “economic danger;” instead, he suggested

the free lunch has still to be invented. We do, however, seem to be undergoing what is likely, in the end, to be a one-time shift in the degree of globalization and innovation that has temporality altered the specific calibration of those criteria [of economic imbalance and economic danger]. (Greenspan, 2004)

Innovation, it was posited, could substitute for regulation by finding new ways of addressing economic concerns.

Second, innovation shifted the boundaries of the regulatory domain. In the case of OTS, “innovative” companies could rewrite their charters to find more lenient regulation. With respect to financial derivatives, a power struggle between the Securities Exchange Commission and the Commodity Futures Trading Commission created enough ambiguity to enable the exemption of most kinds of derivatives from regulation. By innovating outside the boundaries of regulation, banks empowered themselves and precluded the building of a rationale for obtaining legitimacy from established, external authorities.

Finally, and perhaps most importantly, innovation reduced the expertise of regulators, who often lacked the necessary information and expertise to measure the risks innovative financial instruments presented to the financial services industry. For example, understanding a firm’s potential loss on an investment requires a substantial amount of proprietary data, including the counterparty’s risk portfolio, as well as sophisticated models and an enormous amount of computing power. Investment guru and self-appointed antiderivative spokesperson Warren Buffett explained the portfolio of just one company, the insurer General Re:

At year-end (after ten months of winding down its operation) I had 14,384 contracts outstanding, involving 626 counterparties around the world. Each contract has a plus or minus value derived from one or more reference items, including some of mind-boggling complexity. Valuing a portfolio like that, expert auditors could easily and honestly have widely varying opinions. (cited in Pratley, 2008)

If a single firm with a strong interest in understanding its own risk portfolio and the incentive to invest in the necessary expertise can get it wrong, one must wonder how a regulatory agency with far fewer resources, tasked with overseeing all such investments at all firms, could understand it better. As Timothy Geithner (2006), then Chairman of the Federal Reserve Bank of New York, explained in 2006, “the gap between the speed at which markets move to capture the benefits of new opportunities and the pace of

development in the supporting control and execution infrastructure is inevitable”. In fact, it might be the degree of the information asymmetry between regulators and the regulated – which is present in almost every industry, although most often to a far lesser extent than in the field of financial services – that enabled the extreme privatization of legitimacy seen here.

The use of ratings agencies also contributed to the privatization of legitimacy. Ratings agencies are recognized by the government as statistical ratings organizations (NRSRO), but are not required to disclose how their ratings are developed or the sources of their revenues. Although banks are beholden to agencies to rate their products, ratings agencies depend on financial market participants to pay their bills. Market actors unhappy with a particular rating can go to another NRSRO and try again, leading to competition and a race to the bottom, and compromising the integrity of ratings. By recognizing NRSROs, the government effectively authorized agencies to compete for bank’s business, exacerbating the problem.

In sum, the speed and sophistication of the innovative practices diffusing reinforced the tendency toward the privatization of legitimacy, which in turn both enabled and encouraged further innovation. This accounts for the rapid spread and growth of the business of subprime mortgage origination and securitization in the United States and the inattention to the potential dangers of adopting these practices at the institutional level. The shift toward greater risk adoption through the diffusion of these innovations represented a shift from a Main Street to a Wall Street logic dominating the mortgage-lending market; how this shift in logics in turn impacted the financial services institution itself is an equally important process, to which we now turn our attention.

TERMINAL ISOMORPHISM

In addition to the self-reinforcing cycles resulting from the privatization of legitimacy and the diffusion of innovation, which can elicit changes in institutional logics, we posit that characteristics of the institutions themselves may promote such changes despite their maladaptive nature. When we carry the study of diffusion through to its next logical step, we begin to understand the micro-institutional processes that promote changes in institutional logics. Understanding this logic requires a consideration of the consequences of the institutionalization of a newly diffused innovation.

Although the antecedents of institutional legitimacy and the diffusion of institutional practices have been thoroughly investigated, less attention has been paid to the consequences of institutionalization for the adopting organization. DiMaggio and Powell (1983) argue that as an innovation spreads, its adoption is likely to be driven more by legitimacy concerns than efficiency concerns (Abrahamson, 1991; Westphal et al., 1997). Moreover, legitimacy conferral is thought to be independent of technical evaluations of organizational performance (Meyer & Rowan, 1977). Yet surprisingly little research follows up on the adoption of innovation to investigate its consequences (Scott, 1995). Barreto and Baden-Fuller (2006) find that mimetic isomorphism can contribute negatively to firm profitability. Westphal et al. (1997) similarly find that mimesis can increase organizational legitimacy while compromising organizational efficiency. Beyond these analyses, scholars have explored the effects of practice diffusion and legitimation on the degree to which it is institutionalized (Johnson, Dowd, & Ridgeway, 2006; Tolbert & Zucker, 1983; Zbaracki, 1998), the adoption of inefficient or watered down strategies by later adopters (Westphal et al., 1997) (O'Neill, Poudier, & Buchholtz, 1998), and even the potentially beneficial effects of adopting supposedly illegitimate practices (Kraatz & Zajac, 1996), but not the impact of adoption directly. Questions surrounding the diffusion of innovation remain, including the degree to which organizational legitimacy obtained through mimetic or competitive isomorphism benefits adopting organizations, whether such legitimacy fades over time, and whether it fulfills all of the promises it holds. Isomorphism, DiMaggio and Powell (1983, p. 149) argue, does not insure efficiency but "can make it easier for organizations to transact with other organizations, to attract career-minded staff, to be acknowledged as legitimate and reputable, and to fit into administrative categories that define eligibility for public and private grants and contracts."

The institutionalization of subprime mortgage origination and securitization demonstrates that the effects of obtaining legitimacy may also be maladaptive. Although institutional theorists have long recognized that innovations may be inefficient and their adoption irrational, they have generally assumed that the legitimacy conferred through adoption benefits the adopting organization (Abrahamson, 1991; Westphal et al., 1997); our example flips this assumption on its head. Decisions that seemed rational at the individual or organizational levels, such as buying a home or leveraging bank assets, became institutionalized through the processes described earlier. Consequently, competitive, normative, and mimetic isomorphic pressures generated additional diffusion and adoption of those decisions,

such that the rate of home purchase and financing grew tremendously and the financial services sector became ever-more highly leveraged. Between 1993 and 2004, homeownership in the United States increased from 63.9 to 69 percent, a larger jump in homeownership than the incremental increases from the previous 30 years combined (2000 Census). At the same time, the premiums paid in interest on subprime mortgages steadily declined from 2000 to 2006, suggesting that banks required less and less incentive to take up the risky loans. Total subprime originations grew from \$65 billion in 1995 to \$332 billion in 2003 (Inside Mortgage Finance, 2008). More and more banks, nonbanks and investors jumped on the subprime-lending bandwagon, leading to a less and less rational, and potentially less beneficial, process of adoption at the institutional level.

The Danger of Over-Embeddedness

These isomorphic trends generated increasing degrees of network embeddedness among institutional actors, resulting in a dense, clique-like network of co-located institutions. Similarity among financial market participant organizations led to increased career hopping. For example, Vikram Pandit, CEO of Citigroup, and Josef Ackerman, CEO of DeutscheBank, both previously worked at CreditSuisse; James Dimon, CEO of JPMorganChase, spent much of his career at Citigroup; and John Thain, former CEO of Merrill Lynch, began his career as an executive at Goldman Sachs. Although the intertwined career trajectories of banking executives may have been facilitated by the similarities between banks, they also demonstrate the tight network links between banks and point to the high level of embeddedness within the institution.

Although such a brief example may seem overly conspiratorial, it is important to remember that the same degree of embeddedness existed at almost all levels of the financial services industry. Moving among financial market organizations was common, facilitated by the agglomeration of mortgage originators in Orange County, California, of hedge funds in Greenwich, Connecticut, and of investment banks in New York and London. For example, 9 of the 10 market participants that made subprime mortgages to lenders in 2007 were headquartered within driving distance of each other in Southern California. At the same time, all of the major investment banks that collected and sold these mortgages as collateralized debt obligations (CDOs) and MBS had offices within walking distance of each other. As Stuart and Sorenson (2003, p. 230) note with respect to

venture capital firms, “[u]seful information regarding exchange opportunities travels across private networks, geographic and industrial spaces – areas within which interpersonal ties concentrate – represent spatial dimensions that contain the transmission of information about potential investments” (see also Sorenson & Audia, 2000). This suggests that the close quarters kept by subprime lenders and investment banks may have facilitated the flow of information about lending and securitization practices, accelerating both the diffusion of innovations and the isomorphic pressures associated with their increasing legitimacy. Moreover, we must not overlook the fact that complex debt instruments like MBS and CDOs are themselves complex networks of contracts in which actors across the institution – from home buyers to investment banks to hedge funds – were embedded. As more of these instruments were created, the denser and more complex the patterns of relationships among institutional actors became.

Investment banks were also explicitly tied together through the three ratings agencies, Moody’s, Standard & Poors, and Fitch, which played a central role in the industry. The ratings agencies assessed the level of risk associated with each set of repackaged mortgages sold by banks, and were often crucial in helping banks determine how to structure their instruments to achieve the highest possible ratings. These organizations were gatekeepers, applying their standards to all bonds and securities, and thus driving the industry’s standards. Because financial market participants all had structurally equivalent relationships with the rating agencies (Burt, 1987; Lorrain & White, 1971; Mizruchi, 1993; Strang & Soule, 1998), they served to tie the industry together. Furthermore, because they depend on the fees they charge banks to rate investment products, ratings agencies were constrained in the range of ratings they could assign; if a client disliked one agency’s ratings, it could easily move its business to a different agency. Moreover, because these agencies are nominally independent and objective, they facilitated the diffusion of new practices by adding to the sheen of their legitimacy.

Although this embeddedness came with benefits, it also dangerously constrained the organizational decision-making processes. The greater the similarity among the actors in the subprime crisis and the more they relied on taken-for-granted assumptions, the deeper they became marred in the broken financial system, an outcome not directly predicted by network studies. Dense networks have been touted as a panacea for numerous social ills, ranging from greater civic involvement (Putnam, 2000; Putnam, Leonardi, & Nanetti, 1993) to higher social economic status (Tolbert, Irwin, Lyson, & Nucci, 2002; Tolbert, Lyson, & Irwin, 1998) and greater trust

(Putnam & Gross, 2002). Research has shown that the dense and tight network ties created by geographic proximity leads to knowledge spillovers and the diffusion of innovation (Owen-Smith & Powell, 2004; Powell, White, Koput, & Owen-Smith, 2005). Thus, the greater the degree of embeddedness within the financial services network, the greater the likelihood of adoption of a particular innovation, and the greater the perceived legitimacy of the innovation itself, leading to greater isomorphic pressure.

The degree of relational embeddedness within the financial services industry, evidenced through the intertwined career trajectories of banks, co-location of bank headquarters, and the centrality of ratings agencies, suggests a clique-like network with many tightly connected and structurally equivalent actors. Financial market participants, sharing employees, locations, and external auditors, were subject to the same information, the same competitive pressures, and the same isomorphic pressures. Consequently, they adopted the same practices and neglected the same cues and assumptions that may have alerted them to the maladaptive nature of the innovation they adopted. As *The Economist* (2009, p. 14) explained, “the bubble was characterized by a game of copycat, in which banks strove to match the returns of their most profitable rivals by piling headlong into asset classes where they were lagging, irrespective of risks.”

In addition, network theorists have long warned that over-embeddedness in networks may lead to opportunistic behavior (e.g., Baker & Faulkner, 2004; Granovetter, 1973, 1985; Uzzi, 1996, 1999). To this we add a need to consider the risks of over-embeddedness to network members’ decision-making abilities. Agreement on the legitimacy and appropriateness of innovative practices in financial services led to increased cohesion among institutional actors, but at the cost of highly valuable divergent information. As market participants became more structurally similar and their networks increasingly cohesive, norms became consistent and informational diversity diminished. The degree of relational embeddedness of the financial services industry thus enabled the taken-for-grantedness of its core assumptions, including high liquidity, steadily increasing real estate prices, the ability to price risk correctly, and low interest rates. Actors scanning the environment to inform their decision-making processes looked only to each other, resulting in a virtual hall of mirrors. Detractors such as Robert Schiller (2005), who questioned the assumptions of the industry, were ignored and dismissed. Without the productive conflict created in less dense networks, disconfirming information and ideas were suppressed, and the legitimacy and beneficial nature of innovations that might have been questioned with more outside opinions became increasingly taken for granted.

Likewise, the limited number of structural holes within the financial services industry led to a relatively closed network, with few ties to external sectors, further constraining available information and impairing decision making. Although banks interact with virtually every sector of the economy, individuals within the financial services industry do not typically move between banking and other industries, and financial market participants rarely seek out the expertise of organizations outside of the field of finance. This suggests that financial markets encompassed a high degree of network redundancy, representing an internal constraint, and a low level of structural holes, or external constraints to organizations outside their own institution. Consistent with Burt (2001), this resulted in a dangerously myopic perspective, whereby high levels of cohesion are formed around ideas based on little outside evidence. Within the subprime mortgage origination and securitization field, the strong isomorphic pressures and highly embedded relationships that created cohesion also led to constrained decision-making capacity through three primary mechanisms: superstitious learning, strategic persistence, and the diffusion of responsibility. We refer to the effects of this deadly trinity as terminal isomorphism.

Superstitious Learning

Lack of divergent information and strategies within finance created a landscape rich in opportunities to misconstrue relationships between cause and effect. Levitt and March (1988, p. 325) call this problem superstitious learning, a process through which “the subjective experience of learning is compelling, but the connections between actions and outcomes are misspecified.” Similarly, selective perception, according to Dearborn and Simon (1958), is the result of a history of reinforcement that creates patterns of attention. Thus institutional actors without diverse sources of information are apt to draw inappropriate inferences and commit to maladaptive courses of action. If positive events have been noted concomitant with the introduction of the innovation, superstitious learning and selective perception may lead decision makers to infer a strong causal relationship between the innovation and those effects, even if no such causal relationship exists. When aggregated to the institutional level, these individual organizational decisions can create a dangerous trend, as we saw with subprime mortgage origination and securitization.

Before the crisis, professionals within the financial services industry learned to take advantage of opportunities within the real estate market and to respond to financial doubts with optimism. Housing prices had been stable for half a century and had risen sharply for over 15 years, and interest

rates had been slowly dropping since the 1980s. As Federal Reserve Chairman Alan Greenspan (2004) explained:

A number of analysts have conjectured that the extended period of low interest rates is spawning a bubble in housing prices in the United States that will, at some point, implode ... But a destabilizing contraction in nationwide house prices does not seem the most probable outcome. Indeed, nominal house prices in the aggregate have rarely fallen and certainly not by very much.

Because recent history taught financial services market participants that mortgages were solid investments, they suffered the collective illusion of a causal relationship between involvement in the mortgage industry and increased revenue.

Strategic Persistence

Although research in organizational behavior has explored how past success can lead to future failures (Audia et al., 2000; Hedberg, 1981; Miller, 1992), there are contradictory predictions about how past success affects risk taking. Prospect theory demonstrates that actors are risk averse in the domain of gains, suggesting that financial market participants should have become more wary of risky investments as they accumulated revenues (Kahneman & Tversky, 1979). Threat-rigidity research, in contrast, suggests that organizations become less rigid when facing success and financial market participants should have become more flexible and risk seeking in light of their success (Staw, Sandelands, & Dutton, 1981). As George, Chattopadhyay, Sitkin, and Barden (2006) explain, the predictions of prospect theory apply to tangible resources, whereas threat-rigidity responses tend to follow the relaxation of constrictions of control. The strategic persistence within the financial services industry was not akin to a deer frozen in the headlights, but rather to a child with her foot on the pedal reveling in the thrill of acceleration. Shifting institutional logics that accompanied financial deregulation gave financial market participants greater control over their own destinies at the same time they were amassing theretofore unseen levels of wealth. Strategic persistence in the case of banks was, therefore, not a result of gain-induced risk aversion (Amason & Mooney, 2008), but rather of an increased sense of control that was the product of past success, deregulation, and innovation.

Innovation played directly into strategic persistence by providing financial institution insiders with tools that enhanced their sense of control over the risks associated with mortgage-related investments. Innovative methods of securitizing mortgages enabled traders to combine several

mortgages into a single investment vehicle and then to divide a lump of debt into several smaller tranches, each with its own price and risk level, to fit the needs of diverse investors, making some portion of the debt palatable for the risk-adverse institutional investor and another portion for risk-seeking hedge funds. Although financial modeling enabled the creation of new financial products through securitization, computational power gave financial market participants the ability to calculate risk more quickly, and further innovation enabled market actors to sell mortgages to a massive secondary market. Within the financial services realm, the two forces worked together as banks clamored to implement the latest and greatest products and modeling techniques. As financial market actors added more and more instruments to their toolboxes, there seemed to be fewer problems that they could not fix. Consequently, their willingness to question assumptions diminished as their perceived ability to create successful financial products flourished.

The sense of control that underscored the industry's strategic persistence was likely exacerbated by the prestige of the financial services institution itself. Because institutional actors were compensated so highly and given so much deference by regulators and others, it is likely that they came to suffer from executive hubris, an overestimation of their own innate abilities and worth (Hayward & Hambrick, 1997; Hiller & Hambrick, 2005; Roll, 1986). Hubris, which is closely linked to constructs such as narcissism and overconfidence, can lead executives to overestimate their own abilities and has been shown to lead individuals to make riskier decisions (Camerer & Lovallo, 1999; March & Shapira, 1987). Executives are often overconfident in their own abilities and forecasts (Kahneman & Lovallo, 1993), and these feelings of control may be exacerbated by the feelings of self-worth and status that accompanied growing profits and soaring bonuses. Elite recruitment among central financial market participants would only serve to heighten these overly optimistic self-perceptions, increasing the tendency toward hubris and overconfidence. Consequently, the mechanism of strategic persistence would be reinforced by the overconfidence of the players involved.

Diffusion of Responsibility

As innovative practices become diffused, legitimated and institutionalized, responsibility for the consequences of those practices – be they positive or negative – became similarly diffuse. When the originator of an idea is depersonalized, and a practice becomes taken-for-granted, individual and organizational accountability for implementation of that practice becomes

irrelevant; the practice becomes simply a way of doing business. In the case of innovations that are spread through competitive, mimetic and normative isomorphic pressures, the desire to catch up with the rest of the institution, not to be left out of the game, and to prove one's legitimacy as an institutional actor may override any concerns about the consequences of adoption. Furthermore, as Diekmann, Samuels, Ross, and Bazerman (1997) demonstrate, actors are less cautious when approving others' proposals than when promoting their own proposals, as the lack of threat of accountability leads to more reckless adoption.

The foregoing suggests that the diffusion of responsibility may have resulted in limiting the caution of players in the subprime market, as well. Cohesion among market participants enabled diffusion of responsibility by creating fluid networks of information, resulting in source amnesia for the industry; few people knew exactly how or where ideas, assumptions, and innovations originated. As financial market participants succumbed to increasing isomorphic pressures and their structures, decisions, and products more and more similar, responsibility for their actions become increasingly diffuse. The financial structuring of ABS, their pricing and sale were not simply the responsibility of one bank; rather, securities were priced based on the larger market, which was constructed by multiple banks and investors. At the height of the crisis of 2008, attempts at finger-pointing were fruitless, as tracing the crisis to a single practice, bank, or executive was nearly impossible. The chain of responsibility went from the home buyer to the mortgage brokers to the ratings agencies to the thousands of banks and branches that bought these mortgages to the investment banks that repackaged them as securities to the investors who bought them to the federal and state governments who watched over the chain of exchange. So long as financial market participants conformed to popular practices, their legitimacy camouflaged them in a herd of banks doing identical things.

The result of these micro-mechanisms stemming from the over-embeddedness of financial market actors was a lack of perspective taking and an inattention to the overarching results of adoption of financial innovations. Empowered by a lack of countervailing coercive pressures, assured of their own rightness by their self-referencing relationships, and shielded from disconfirming information by biases and heuristics, individual financial market participants escalated their involvement in the subprime mortgage origination and securitization business beyond what was rational at either the organizational or institutional levels. Innovations were presumed to be good for one and all, and important checks on actors' behavior were removed, leading to terminal isomorphism: a pattern of

mortgages into a single investment vehicle and then to divide a lump of debt into several smaller tranches, each with its own price and risk level, to fit the needs of diverse investors, making some portion of the debt palatable for the risk-averse institutional investor and another portion for risk-seeking hedge funds. Although financial modeling enabled the creation of new financial products through securitization, computational power gave financial market participants the ability to calculate risk more quickly, and further innovation enabled market actors to sell mortgages to a massive secondary market. Within the financial services realm, the two forces worked together as banks clamored to implement the latest and greatest products and modeling techniques. As financial market actors added more and more instruments to their toolboxes, there seemed to be fewer problems that they could not fix. Consequently, their willingness to question assumptions diminished as their perceived ability to create successful financial products flourished.

The sense of control that underscored the industry's strategic persistence was likely exacerbated by the prestige of the financial services institution itself. Because institutional actors were compensated so highly and given so much deference by regulators and others, it is likely that they came to suffer from executive hubris, an overestimation of their own innate abilities and worth (Hayward & Hambrick, 1997; Hiller & Hambrick, 2005; Roll, 1986). Hubris, which is closely linked to constructs such as narcissism and overconfidence, can lead executives to overestimate their own abilities and has been shown to lead individuals to make riskier decisions (Camerer & Lovallo, 1999; March & Shapira, 1987). Executives are often overconfident in their own abilities and forecasts (Kahneman & Lovallo, 1993), and these feelings of control may be exacerbated by the feelings of self-worth and status that accompanied growing profits and soaring bonuses. Elite recruitment among central financial market participants would only serve to heighten these overly optimistic self-perceptions, increasing the tendency toward hubris and overconfidence. Consequently, the mechanism of strategic persistence would be reinforced by the overconfidence of the players involved.

Diffusion of Responsibility

As innovative practices become diffused, legitimated and institutionalized, responsibility for the consequences of those practices – be they positive or negative – became similarly diffuse. When the originator of an idea is depersonalized, and a practice becomes taken-for-granted, individual and organizational accountability for implementation of that practice becomes

irrelevant; the practice becomes simply a way of doing business. In the case of innovations that are spread through competitive, mimetic and normative isomorphic pressures, the desire to catch up with the rest of the institution, not to be left out of the game, and to prove one's legitimacy as an institutional actor may override any concerns about the consequences of adoption. Furthermore, as Diekmann, Samuels, Ross, and Bazeran (1997) demonstrate, actors are less cautious when approving others' proposals than when promoting their own proposals, as the lack of threat of accountability leads to more reckless adoption.

The foregoing suggests that the diffusion of responsibility may have resulted in limiting the caution of players in the subprime market, as well. Cohesion among market participants enabled diffusion of responsibility by creating fluid networks of information, resulting in source amnesia for the industry; few people knew exactly how or where ideas, assumptions, and innovations originated. As financial market participants succumbed to increasing isomorphic pressures and their structures, decisions, and products more and more similar, responsibility for their actions become increasingly diffuse. The financial structuring of ABS, their pricing and sale were not simply the responsibility of one bank; rather, securities were priced based on the larger market, which was constructed by multiple banks and investors. At the height of the crisis of 2008, attempts at finger-pointing were fruitless, as tracing the crisis to a single practice, bank, or executive was nearly impossible. The chain of responsibility went from the home buyer to the mortgage brokers to the ratings agencies to the thousands of banks and branches that bought these mortgages to the investment banks that repackaged them as securities to the investors who bought them to the federal and state governments who watched over the chain of exchange. So long as financial market participants conformed to popular practices, their legitimacy camouflaged them in a herd of banks doing identical things.

The result of these micro-mechanisms stemming from the over-embeddedness of financial market actors was a lack of perspective taking and an inattention to the overarching results of adoption of financial innovations. Empowered by a lack of countervailing coercive pressures, assured of their own rightness by their self-referencing relationships, and shielded from disconfirming information by biases and heuristics, individual financial market participants escalated their involvement in the subprime mortgage origination and securitization business beyond what was rational at either the organizational or institutional levels. Innovations were presumed to be good for one and all, and important checks on actors' behavior were removed, leading to terminal isomorphism: a pattern of

behavior through which market actors collectively drove off a cliff and took the world's financial markets for a ride.

CONCLUSION

In this chapter, we argue that organizations may engage in a practice that appears legitimate and beneficial at the organizational level, but which leads to dysfunctional change at the institutional level. Using the subprime crisis in the United States as a guide, we investigate two key assumptions of institutional theory. The first is that changes to institutional logics are driven either by external forces or by institutional entrepreneurs, often lower-status actors. In our example, the institutional entrepreneurship was unintended, the result of mimetic processes driven by success of central players and enabled by the lack of effective regulatory controls. This supports Greenwood and Suddaby's (2006) assertion that changes in institutional logics can originate with high-status incumbents, who take the reins from outside stakeholders and privatize the process of legitimation. We also argue that innovation is key to the privatization of legitimacy because it creates new practices that fall outside the domain of existing regulatory categories.

We also invite consideration of the assumption that the adoption of legitimated innovations either benefit the adopting organizations or bolster institutions. Instead, we demonstrate that isomorphic pressures may restructure organizational networks to create high internal network redundancy with few bridges across structural holes. This isolation can result in a terminal isomorphism, in which a dangerous cohesion forms around taken-for-granted assumptions.

Clearly, ours is a somewhat stylized example. The causes and ramifications of this financial crisis were global, yet our analysis focused exclusively on the U.S. financial institution. Had we included global players, our case would require far more complex analysis, although we are confident that our core conclusions would remain the same. We leave the analysis of the global dimensions of this crisis to future researchers.

We hope that our argument serves to inspire further inquiry into this crisis, as well as into the dynamics of the diffusion of innovations and institutional theory. Future research may test some of our arguments empirically, whereas exploring the boundary conditions for the privatization of legitimacy and terminal isomorphism. Similarly, students of innovation and diffusion may explore the mechanisms we propose with cross-industry data. Further exploration of the linkages between deinstitutionalization and

deregulation could add a missing chapter to the research on regulatory capture. Although prior research has given us valuable insights into the mechanisms behind industry-driven regulation, we know little about what drives industries toward deregulation. We suspect that when an industry becomes concentrated among a few, powerful players the industry's reliance on regulation to prevent competition is weakened. Perhaps, contrary to those pundits who argue that deregulation spurs productive competition, it is in fact a lack of competitive threats that reverses industry demand for regulation; empirical research is needed to resolve this question.

Our arguments also have direct implications for policy makers. First, we suggest that all new financial instruments might be subject to regulation before they allowed to be traded. The system currently allows financial market participants to structure and trade any new instrument not already covered by existing regulation, with most supervision being enacted on a post hoc basis. This reinforces the adage that one not need ask permission if one can ask forgiveness, and consequently, calls for regulation seem only to follow financial crises caused by new instruments and are almost never attached to highly profitable financial innovation. This garbage can approach to financial regulation has repeatedly had disastrous consequences for nearly a century and must be addressed by federal lawmakers. We also propose that new financial innovations be justified with best and worst case scenarios to which the industry is held accountable; perhaps the SEC can enact punishments if the worst case scenarios envisioned by financial innovators are not as bad as markets enact, after all.

Although the causes of the current economic crisis are many, we hope our extension of institutional theory will strengthen understanding of the role of institutions within organizational behavior and economic life more generally and improve our ability to identify and rectify maladaptive practices in the future.

ACKNOWLEDGMENTS

The authors would like to thank RSO editor Michael Lounsbury for his guidance and insights. We also thank Christopher Marquis, Mary Ann Glynn, Anna Rubtsova, Rich DeJordy, and Mayer Zald, as well as participants in the Markets on Trial Conference, for their helpful comments.

REFERENCES

- Abrahamson, E. (1991). Managerial fads and fashions: The diffusion and refection of innovations. *Academy of Management Review*, 16, 586.
- Ahmadjian, C. L., & Lincoln, J. R. (2001). Keiretsu, governance, and learning: Case studies in change from the Japanese automotive industry. *Organization Science*, 12, 683–701.
- Amason, A. C., & Mooney, A. C. (2008). The Icarus paradox revisited: How strong performance sows the seeds of dysfunction in future strategic decision-making. *Strategic Organization*, 6, 407–434.
- Appelbaum, B., & Nakashima, E. (2008). Banking regulator played advocate over enforcer. *Washington Post*. November 23.
- Argote, L., Beckman, S. L., & Epple, D. (1990). The persistence and transfer of learning in industrial settings. *Management Science*, 36, 140–154.
- Audia, P. G., Locke, E. A., & Smith, K. G. (2000). The paradox of success: An archival and a laboratory study of strategic persistence following radical environmental change. *Academy of Management Journal*, 43, 837–853.
- Baker, W. E., & Faulkner, R. R. (2004). Social networks and loss of capital. *Social Networks*, 26, 91–111.
- Barreto, I., & Baden-Fuller, C. (2006). To conform or to perform? Mimetic behaviour, legitimacy-based groups and performance consequences. *Journal of Management Studies*, 43, 1559–1581.
- Battilana, J., Leca, B., & Boxenbaum, E. (2009). How actors change institutions: Towards a theory of institutional entrepreneurship. *Academy of Management Annals*, 65–107.
- Burns, L. R., & Wholey, D. R. (1993). Adoption and abandonment of matrix management programs – effects of organizational characteristics and interorganizational networks. *Academy of Management Journal*, 36, 106–138.
- Burt, R. (2001). Structure holes versus network closure as social capital. In: N. Lin, K. S. Cook & R. Burt (Eds), *Social capital: Theory and research* (pp. 31–56). New York: Transaction Publishers.
- Burt, R. S. (1987). Social contagion and innovation: Cohesion versus structural equivalence. *American Journal of Sociology*, 92, 1287–1335.
- Camerer, C., & Lovo, D. (1999). Overconfidence and excess entry: An experimental approach. *American Economic Review*, 89, 306–318.
- Chomsisengphet, S., & Pennington-Cross, A. (2006). The evolution of the subprime mortgage market. Federal Reserve Bank of St. Louis. *Review*, 88, 31–56.
- Clemens, E., & Cook, J. (1999). Politics and institutionalism: Explaining durability and change. *Annual Review of Sociology*, 25, 441–466.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35, 25.
- Davis, G. F. (1991). Agents without principles? The spread of the poison pill through the intercorporate network. *Administrative Science Quarterly*, 36, 583.
- Davis, G. F., & Greve, H. R. (1997). Corporate elite networks and governance changes in the 1980s. *American Journal of Sociology*, 103, 1–37.
- Dearborn, D. C., & Simon, H. A. (1958). Selective perception: A note on the departmental identifications of executives. *Sociometry*, 21, 140–144.
- Diekmann, K., Samuels, S., Ross, L., & Bazerman, M. (1997). Self-interest and fairness in problems of resource allocation: Allocators versus recipients. *Journal of Personality and Social Psychology*, 25, 1061–1074.
- DiMaggio, P. (1988). Interest and agency in institutional theory. In: L. G. Zucker (Ed.), *Institutional patterns and organizations: Culture and environment*. Cambridge, MA: Ballinger.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147.
- Dobbin, F. (1998). The strength of a weak state: The rights revolution and the rise of human resources management divisions. *American Journal of Sociology*, 104, 441–476.
- Dobbin, F., & Sutton, J. R. (1998). The strength of a weak state: The rights revolution and the rise of human resources management divisions. *American Journal of Sociology*, 104, 441–476.
- Dougherty, D. (1992). Interpretive barriers to successful product innovation in large firms. *Organization Science*, 3, 179–202.
- D'Aunno, T., Succi, M., & Alexander, J. A. (2000). The role of institutional and market forces in divergent organizational change. *Administrative Science Quarterly*, 45, 679–703.
- Edelman, L. B. (1990). Legal environments and organizational governance – the expansion of due-process in the American workplace. *American Journal of Sociology*, 95, 1401–1440.
- Edelman, L. B. (1992). Legal ambiguity and symbolic structures-organizational mediation of civil-rights law. *American Journal of Sociology*, 97, 1531–1576.
- Edelman, L. B., Uggen, C., & Erlanger, H. S. (1999). The endogeneity of legal regulation: Grievance procedures as rational myth. *American Journal of Sociology*, 105, 406–454.
- Espeland, W. (1994). Legally mediated identity – the national environmental-policy act and the bureaucratic construction of interests. *Law & Society Review*, 28, 1149–1179.
- Fiss, P. C., & Zajac, E. J. (2006). The symbolic management of strategic change: Sensegiving via framing and decoupling. *Academy of Management Journal*, 49, 1173–1193.
- Fligstein, N. (1990). *Transformation of corporate control*. Cambridge, MA: Harvard University Press.
- Fligstein, N., & Brantley, P. (1992). Bank control, owner control, or organizational dynamics – who controls the large modern corporation. *American Journal of Sociology*, 98, 280–307.
- Francis, J. G. (1993). *The politics of regulation: A comparative perspective*. Oxford: Blackwell.
- Friedland, R., & Alford, R. R. (1991). Bringing society back in: Symbols, practices, and institutional contradictions. In: W. W. Powell & P. DiMaggio (Eds), *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Galaskiewicz, J., & Wasserman, S. (1989). Mimetic processes within an interorganizational field – an empirical-test. *Administrative Science Quarterly*, 34, 454–479.
- Geithner, T. (2006). Risk management challenges in the financial system. In: *Global association of risk professionals (GARP)*. The 7th Annual Risk Management Convention & Exhibition, New York, NY, USA.
- George, E., Chattopadhyay, P., Sitkin, S. B., & Barden, J. (2006). Cognitive underpinnings of institutional persistence and change: A framing perspective. *Academy of Management Review*, 31, 347–365.
- Getz, K. A. (1997). Research in corporate political action: Integration and assessment. *Business and Society*, 36, 32–72.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91, 481–510.

- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360–1380.
- Greenspan, A. (2004). Globalization and innovation. Conference on Bank Structure and Competition, Chicago, IL. Available from the Federal Reserve Web site at: <http://www.federalreserve.gov/boarddocs/speeches/2004/200405062/default.htm>. Retrieved on May 6, 2004.
- Greenspan, A. (2008). Testimony of Dr. Alan Greenspan. In: *Government, oversight and reform committee*. Washington, DC.
- Greenspan, A. (2009). We need a better cushion against risk. *Financial Times*, March 26.
- Greenwood, R., & Hinings, C. R. (1993). Understanding strategic change – the contribution of archetypes. *Academy of Management Journal*, 36, 1052–1081.
- Greenwood, R., & Hinings, C. R. (1996). Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 21, 1022–1054.
- Greenwood, R., & Suddaby, R. (2006). Institutional entrepreneurship in mature fields: The big five accounting firms. *Academy of Management Journal*, 49, 27–48.
- Greve, H. R. (2005). Interorganizational learning and heterogeneous social structure. *Organization Studies*, 26, 1025–1047.
- Greve, H. R., Pozner, J.-E., & Rao, H. (2006). Vox Populi: Resource partitioning, organizational proliferation, and the cultural impact of the insurgent microradio movement. *American Journal of Sociology*, 112, 802–837.
- Greve, H. R., & Taylor, A. (2000). Innovations as catalysts for organizational change: Shifts in organizational cognition and search. *Administrative Science Quarterly*, 45, 54–80.
- Hargadon, A. B., & Douglas, Y. (2001). When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly*, 46, 476–501.
- Haveman, H. A. (1993). Organizational size and change – diversification in the savings and loan industry after deregulation. *Administrative Science Quarterly*, 38, 20–50.
- Hayward, M. L. A., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 42, 103–127.
- Hedberg, B. L. T. (1981). How organizations learn and unlearn. In: W. H. Starbuck & P. C. Nystrom (Eds), *Handbook of organization design*. New York: Oxford University Press.
- Hiller, N. J., & Hambrick, D. C. (2005). Conceptualizing executive hubris: The role of (hyper-)core self-evaluations in strategic decision-making. *Strategic Management Journal*, 26, 297–319.
- Hirsch, P. M. (1986). From ambushes to golden parachutes: Corporate takeovers as an instance of cultural framing and institutional integration. *American Journal of Sociology*, 91, 800–837.
- Ingram, P., & Rao, H. (2004). Store wars: The enactment and repeal of anti-chain-store legislation in America. *American Journal of Sociology*, 110, 446–487.
- Inside Mortgage Finance, Inc. (2008). Inside Mortgage Finance, September 5, 2008. (NB: Corporate author has same name as its newsletter).
- Jepperson, R. L. (1991). Institutions, institutional effects and institutionalism. In: W. W. Powell & P. J. diMaggio (Eds), *The new institutionalism in organization analysis* (pp. 143–163). Chicago: University of Chicago Press.
- Johnson, C., Dowd, T. J., & Ridgeway, C. L. (2006). Legitimacy as a social process. *Annual Review of Sociology*, 32, 53–78.

- Jonsson, S. (2009). Refraining from imitation: Professional resistance and limited diffusion in a financial market. *Organization Science*, 20, 172–186.
- Kahneman, D., & Lovallo, D. (1993). Timid choices and bold forecasts: A cognitive perspective on risk taking. *Management Science*, 39, 17.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263–292.
- Kraatz, M. S., & Moore, J. H. (2002). Executive migration and institutional change. *Academy of Management Journal*, 45, 120–143.
- Kraatz, M. S., & Zajac, E. J. (1996). Exploring the limits of the new institutionalism: The causes and consequences of illegitimate organizational change. *American Sociological Review*, 61, 812.
- Labaton, S. (1999). Deal on bank bill was helped along by midnight talks. *The New York Times*, New York.
- Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19, 461–477.
- Lawrence, T. B., & Suddaby, R. (2006). Institutions and institutional work. In: S. R. Clegg, C. Hardy, T. B. Lawrence & W. R. Nord (Eds), *Handbook of organization studies*. London: Sage.
- Leblebici, H., Salancik, G. R., Copay, A., & King, T. (1991). Institutional change and the transformation of interorganizational fields: An organizational history of the U.S. radio broadcasting industry. *Administrative Science Quarterly*, 36, 31.
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, 14, 319–340.
- Lorrain, F., & White, H. C. (1971). Structural equivalence of individuals in social networks. *Journal of Mathematical Sociology*, 5, 49–80.
- Lounsbury, M. (2002). Institutional transformation and status mobility: The professionalization of the field of finance. *Academy of Management Journal*, 45, 255–266.
- March, J. G., & Shapira, Z. (1987). Managerial perspectives on risk and risk taking. *Management Science*, 33, 1404–1408.
- Marquis, C., & Lounsbury, M. (2007). Vive la resistance: Competing logics and the consolidation of US community banking. *Academy of Management Journal*, 50, 799–820.
- Martin, M. (1998). Citicorp and travelers plan to merge in record \$70 billion deal. *International Herald Tribune*.
- McAdam, D., & Scott, R. W. (2005). Social movements and organization theory. In: G. F. Davis, D. McAdam, R. W. Scott & M. N. Zald (Eds), *Social movements and organizations*. Cambridge: University Press.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83, 340–363.
- Miller, D. (1992). The icarus paradox: How exceptional companies bring about their own downfall. *Business Horizons*, 35, 24–25.
- Mizruchi, M. S. (1993). Cohesion, equivalence, and similarity of behavior: A theoretical and empirical assessment. *Social Networks*, 15, 275–307.
- Munir, K. A. (2005). The social construction of events: A study of institutional change in the photographic field. *Organization Studies*, 26, 93–112.
- North, D. C. (1991). Institutions. *Journal of Economic Perspectives*, 5, 97–112.
- Ocasio, W. (1994). Political dynamics and the circulation of power: CEO succession in U.S. industrial corporations, 1960–1990. *Administrative Science Quarterly*, 39, 285–312.

- Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16, 145–179.
- Oliver, C., & Holzinger, I. (2008). The effectiveness of strategic political management: A dynamic capabilities framework. *Academy of Management Review*, 33, 496–520.
- Owen-Smith, J., & Powell, W. W. (2004). Knowledge networks as channels and conduits: The effects of spillovers in the Boston biotechnology community. *Organization Science*, 15, 5–21.
- O'Neill, H. M., Poudier, R. W., & Buchholtz, A. K. (1998). Patterns in the diffusion of strategies across organizations: Insights from the innovation diffusion literature. *Academy of Management Review*, 23, 98–114.
- Powell, W. W. (1991). Expanding the scope of institutional analysis. In: W. W. Powell & P. DiMaggio (Eds), *The new institutionalism in organizational analysis* (pp. 183–203). Chicago: University of Chicago Press.
- Powell, W. W., & DiMaggio, P. J. (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Powell, W. W., White, D. R., Koput, K. W., & Owen-Smith, J. (2005). Network dynamics and field evolution: The growth of interorganizational collaboration in the life sciences. *American Journal of Sociology*, 110, 1132–1205.
- Pozner, J.-E., & Rao, H. (2006). Fighting a common foe: Enmity, identity and collective strategy. In: J. A. C. Baum, S. D. Dobrev & A. van Witteloostuijn (Eds), *Ecology and strategy: Advances in strategic management* (Vol. 23, pp. 445–479). Amsterdam, The Netherlands: JAI/Elsevier.
- Pratley, N. (2008). Wall street crisis: Is this the deathknell for derivatives? *The Guardian*.
- Putnam, R., & Gross, K. (2002). Introduction. In: R. Putnam (Ed.), *Democracies in flux*. Oxford: Oxford University Press.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Putnam, R. D., Leonardi, R., & Nanetti, R. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton, NJ: Princeton University Press.
- Rao, H., Monin, P., & Durand, R. (2003). Institutional change in Toque Ville: Nouvelle cuisine as an identity movement in French gastronomy. *American Journal of Sociology*, 108, 795–843.
- Rao, H., Monin, P., & Durand, R. (2005). Border crossing: Bricolage and the erosion of categorical boundaries in French gastronomy. *American Sociological Review*, 70, 968–991.
- Reeves, S. (2004). Why homeownership makes sense. *Forbes*.
- Rogers, E. M. (1995). *Diffusion of innovation*. New York: The Free Press.
- Röll, R. (1986). The hubris hypothesis of corporate takeovers. *Journal of Business*, 59, 197–216.
- Russo, M. V. (1992). Bureaucracy, economic-regulation, and the incentive limits of the firm. *Strategic Management Journal*, 13, 103–118.
- Russo, M. V. (2001). Institutions, exchange relations, and the emergence of new fields: Regulatory policies and independent power production in America, 1978–1992. *Administrative Science Quarterly*, 46, 57.
- Schiller, R. (2005). *Irrational exuberance*. Newark, NJ: Princeton University Press.
- Schneiber, M., & Bartley, T. (2001). Regulating American industries: Markets, politics, and the institutional determinants of fire insurance regulation. *American Journal of Sociology*, 107, 101–146.
- Scott, W. R. (1995). *Institutions and organizations*. Newbury Park: Sage Publications.

- Sherer, P. D., & Lee, K. (2002). Institutional change in large law firms: A resource dependency and institutional perspective. *Academy of Management Journal*, 45, 102–119.
- Simpson, G. (2007). Lender lobbying blitz abetted mortgage mess. *Wall Street Journal*, December 31. Available at http://online.wsj.com/public/article_print/SB119906606162358773.html
- Sorenson, O., & Audia, P. G. (2000). The social structure of entrepreneurial activity: Geographic concentration of footwear production in the United States, 1940–1989. *American Journal of Sociology*, 106, 424–461.
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat-rigidity effects in organizational behavior – a multilevel analysis. *Administrative Science Quarterly*, 26, 501–524.
- Stigler, G. J. (1971). Theory of economic regulation. *Bell Journal of Economics and Management Science*, 2, 3–21.
- Strang, D., & Soule, S. A. (1998). Diffusion in organizations and social movements: From hybrid corn to poison pills. *Annual Review of Sociology*, 24, 265–290.
- Stuart, T., & Sorenson, O. (2003). The geography of opportunity: Spatial heterogeneity in founding rates and the performance of biotechnology firms. *Research Policy*, 32, 229–253.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20, 571–610.
- The Economist. (2009). The revolution within. *The Economist*.
- Thornton, P. H. (2001). Personal versus market logics of control: A historically contingent theory of the risk of acquisition. *Organization Science*, 12, 294–311.
- Thornton, P. H. (2002). The rise of the corporation in a craft industry: Conflict and conformity in institutional logics. *Academy of Management Journal*, 45, 81–101.
- Thornton, P. H., & Ocasio, W. (1999). Institutional logics and the historical contingency of power in organizations: Executive. *American Journal of Sociology*, 105, 801.
- Tolbert, C. J., Irwin, M., Lyson, T., & Nucci, A. (2002). Civic community in small town America: How civic welfare is influenced by local capitalism and civic engagement. *Rural Sociology*, 67, 90–113.
- Tolbert, C. J., Lyson, T., & Irwin, M. (1998). Social capital, local engagement, and economic well-being. *Social Forces*, 77, 401–428.
- Tolbert, P. S., & Zucker, L. G. (1983). Institutional sources of change in the formal-structure of organizations – the diffusion of civil-service reform, 1880–1935. *Administrative Science Quarterly*, 28, 22–39.
- Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31, 439–465.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, 61, 674–698.
- Uzzi, B. (1999). Embeddedness in the making of financial capital: How social relations and networks benefit firms seeking financing. *American Sociological Review*, 64, 481–505.
- Vickers, M., & Timmons, H. (2002). The housing boom's dark side. *BusinessWeek*.
- 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, 366–394.
- Westphal, J. D., & Zajac, E. J. (1998). The symbolic management of stockholders: Corporate governance reforms and shareholder reactions. *Administrative Science Quarterly*, 43, 127–153.

- Zajac, E. J., & Westphal, J. D. (1995). Accounting for the explanations of CEO compensation: Substance and symbolism. *Administrative Science Quarterly*, *40*, 283–308.
- Zajac, E. J., & Westphal, J. D. (2004). The social construction of market value: Institutionalization and learning perspectives on stock market reactions. *American Sociological Review*, *69*, 433–457.
- Zbaracki, M. J. (1998). The rhetoric and reality of total quality management. *Administrative Science Quarterly*, *43*, 602–636.