

FINANCIAL REGULATION AND SOCIAL WELFARE: THE CRITICAL CONTRIBUTION OF MANAGEMENT THEORY

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While many studies explain how social science theories shape social reality, few reflect critically on how such theories *should* shape social reality. Drawing on a new conception of social welfare and focusing on financial regulation, we assess the performative effects of theories on public policy. We delineate how research that focuses narrowly on questions of efficiency and stability reinforces today's technocratic financial regulation that undermines social welfare. As a remedy, we outline how future management research can tackle questions of social justice and thereby promote an inclusive approach to financial regulation that better serves social welfare.

Social science theories contribute to the social construction of reality. In recent years management researchers (Ferraro, Pfeffer, & Sutton, 2005) and sociologists (Callon, 2007) have analyzed how theories—economic theories in particular—become “performative” (MacKenzie, 2006: 16). For example, Ferraro et al. (2005) described three mechanisms through which theories shape social reality: (1) theories influence institutional designs, (2) theories transform social norms of individual behavior, and (3) theories offer a language that influences how individuals see the world. Researchers have also pointed out negative consequences that performative theories can have on social welfare (Ghoshal, 2005; Ghoshal & Moran, 1996). For instance, critics (Colander et al., 2009;

Krugman, 2009a) have argued that theories of financial economics, such as the efficient market hypothesis (Fama, 1970), fueled poor financial regulation, which, in turn, contributed to the 2008 financial crisis (Dymski, 2011; Scherer & Marti, 2012; Willmott, 2011).

However, if management researchers want to “enable a better world” (per the Academy of Management’s Strategic Plan; see <http://aom.org/strategicplan/>) and to “meet society’s social and economic objectives” (Walsh, Weber, & Margolis, 2003: 859), they must do more than explain how theories shape social reality and seek to develop theories that enhance rather than diminish social welfare. To achieve this goal, it is essential to reflect on how theories *should* shape social reality. So far, research has not addressed this issue sufficiently. In this article we therefore develop a normative framework for assessing the impact of theories on social welfare. Normative theorizing about research starts from the insight that all research incorporates values (Connell & Nord, 1996; Ezzamel & Willmott, 2014), makes these values explicit for critically reflection (Steffy & Grimes, 1986; Trevino & Weaver, 1994), and then outlines how future research should influence social reality—and why (Spicer, Alvesson, & Kärreman, 2009; Swanson, 1999).

Financial regulation, which defines the rules, controls, and sanctions that restrict and enable the behavior of participants in financial markets (Marauhn, 2006), is an ideal context in which to

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develop such a framework. Financial innovations, which consist of new products, such as novel types of derivatives, and new processes, such as new ways of processing transactions (Tufano, 2003), constitute one of the main challenges for financial regulation today (Davis, 2009a; Munir, 2011). Financial innovations are a regulatory challenge for public policy because some, such as the advent of reasonably liquid stock markets (Ferguson, 2008), have benefited social welfare, whereas others, such as the more recent credit default swaps (Tett, 2009), have diminished social welfare. Regulation should therefore foster certain financial innovations but curtail others. The complexity of financial markets and the conflicting preferences of different social groups make this task difficult. In this article we explore the role of research in this process by analyzing *how theories should shape financial regulation so as to enhance social welfare*. Although we focus on financial regulation, our normative framework is also relevant for other contested policy issues (e.g., internet privacy, corporate tax, and climate change).

What complicates our analysis is that “social welfare” is a highly contested concept: different people and social groups have different views of how social welfare should be defined and measured. To tackle this pluralism, we build on philosopher Jürgen Habermas’s theory of knowledge-constitutive interests. Habermas (1971) argued that, in principle, all people share three distinct cognitive interests—technical, practical, and emancipatory—because they face similar challenges in the world, regardless of their preferences with respect to specific issues of public policy (Willmott, 2003). From this theory we derive three questions that should be the main concern for public policy when exploring the social welfare implications of financial innovations: (1) Does a certain financial innovation make the economy more efficient? (2) Does a certain financial innovation make the economy more stable? (3) Does a certain financial innovation make the economy more just?

Current research does not provide adequate answers to all three questions. Financial economists tackle the first question and sociologists of finance the second. Social science researchers, however, largely ignore the third question. As a result, the body of existing research reinforces *technocratic financial regulation*, which focuses on finding optimal means to realize ends that

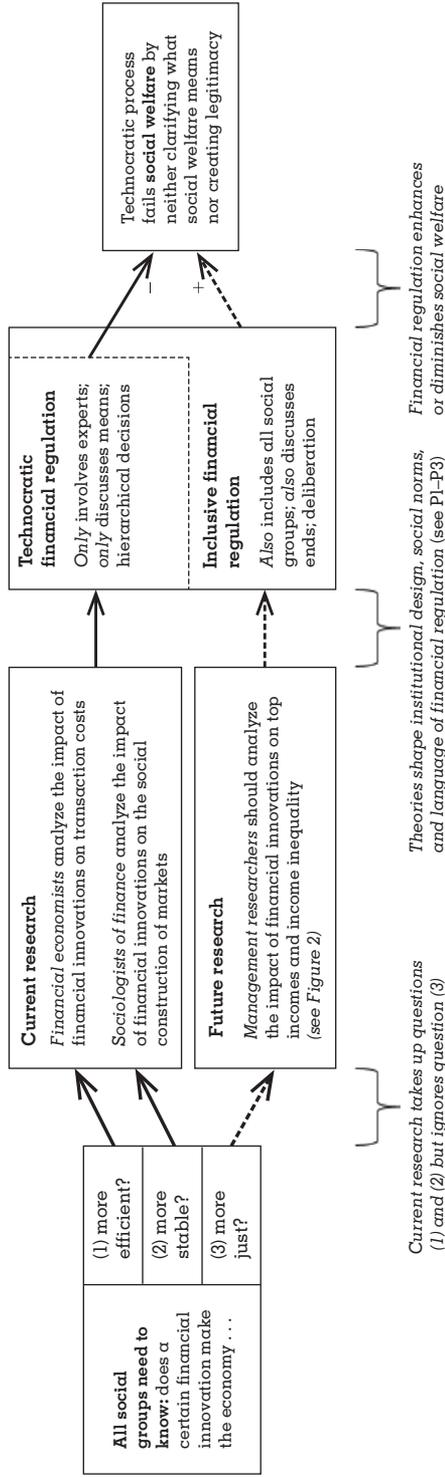
are largely taken for granted (currently, efficiency and stability). However, for contested issues of public policy, such as financial regulation, technocratic financial regulation tends to undermine social welfare by neither (a) clarifying what social welfare means (e.g., by neglecting the problems of income inequality) nor (b) creating legitimacy for policy decisions (e.g., by neglecting the problems of power and influence of special interest groups).

To enhance social welfare, researchers from different social sciences—for example, economics, political science, sociology—should consider the question of whether financial innovations make the economy more just. Management researchers can make a unique contribution to this endeavor by exploring whether financial innovations, mediated by financial and non-financial firms, increase top incomes and income inequality. Through the performative effects of theories on public policy, research along these lines would promote *inclusive financial regulation* that not only focuses on the means but also enables discussion about the ends of financial regulation in a process of democratic will formation. Such regulation needs to involve diverse social groups in deliberation (Fishkin, 2009; Habermas, 1996) about “what finance could and should do in economy and society” (Froud, Moran, Nilsson, & Williams, 2010: 25). Figure 1 illustrates our argument.

To illustrate how theories should shape financial regulation, we focus on a recent financial innovation: high-frequency trading. High-frequency traders use computer algorithms to trade on financial markets, sometimes sending hundreds of orders per second to trading venues (Madrigal, 2010; Perez, 2011). High-frequency trading is a major financial innovation that now accounts for 50 to 70 percent of transactions on stock markets (*The Economist*, 2012). The involvement of high-frequency traders in the Flash Crash of May 6, 2010, when U.S. stock markets fell around 7 percent within 13 minutes (Kirilenko, Kyle, Samadi, & Tuzun, 2011), triggered discussions on whether high-frequency trading should be regulated and, if so, how.

Our article makes three contributions. First, it expands research on performativity in management studies (Cabantous & Gond, 2011; Ferraro et al., 2005) by developing a normative framework that will enable researchers to think about the “ethical consequences of theory” (Ferraro, Pfeffer,

FIGURE 1
A Normative Framework of How Theories Should Shape Financial Regulation



& Sutton, 2009: 673). We theorize on three mechanisms through which researchers foster either a technocratic or an inclusive approach to regulation. Second, the article contributes to the debate on how to reform financial regulation (Froud et al., 2010; Schneiberg & Bartley, 2010) by problematizing how current research reinforces today's technocratic financial regulation. To support inclusive financial regulation, future research should tackle questions of justice; management researchers can contribute to this endeavor by analyzing how financial innovations influence top incomes and income inequality. Third, the article demonstrates that monistic conceptions of social welfare, which rely on a single welfare criterion such as gross domestic product (GDP; see Fleurbaey, 2009) or overall happiness (Jones & Felps, 2013), are limited when it comes to contested issues of public policy. We instead advocate a pluralistic conception of social welfare that builds on three welfare dimensions—efficiency, stability, and justice—and outline a process for dealing with conflicts between these dimensions.

We structure the article as follows. In the next section we show that because existing research on financial innovations ignores questions of justice, it reinforces a technocratic approach to financial regulation that is likely to undermine social welfare. Following that, we outline how future research on topics such as top incomes and income inequality could promote a more inclusive approach to financial regulation that better serves social welfare. In the concluding section we present the implications of our study for management theory in general.

HOW CURRENT THEORIES SHAPE FINANCIAL REGULATION

Three Key Questions for Regulating Financial Innovations

To explore how theories should shape financial regulation so as to enhance social welfare, we first have to discuss the term “social welfare” (Walsh et al., 2003: 860). *Social welfare* is a normative concept that different people or social groups use to reflect on the ends—the “greater good” (Jones & Felps, 2013: 373)—that public policy should pursue to improve the status quo of society. Importantly, for many issues of public policy, people mean different things when they refer to social welfare, depending on their self- and other-

regarding preferences (Ghoshal, 2005), as well as sociodemographic characteristics such as education, income, wealth, and influence (Doob, 2013; Mills, 1956). To simplify our argument, we describe people with similar preferences and sociodemographic characteristics as a “social group” (Honneth, 1996; Piketty, 2014; Saunders, 1990). We posit that members of different social groups, such as investors, employees, home owners, or retirees, are likely to have different views on social welfare—that is, on the ends that public policy should pursue.

The fact that different social groups often view social welfare differently challenges economists and utilitarians who define social welfare on behalf of “society” and reduce everything that matters in relation to social welfare to a single criterion, such as GDP (Fleurbaey, 2009) or overall happiness (Jones & Felps, 2013). Drawing on the philosophical distinction between monism and pluralism (Berlin, 1969; Buchholz & Rosenthal, 1996; Hurka, 1996), we describe such conceptions of social welfare as monistic. Monistic conceptions make it easier to handle conflicts by offering “a common basis for determining the respective weights” (Larmore, 1994: 65) of different concerns.¹ However, as we discuss below, in the case of contested issues such as financial regulation, enhancing social welfare requires a process that involves all social groups, with their competing views on what ends public policy should pursue.

In this article we therefore develop a pluralistic conception of social welfare. Pluralistic conceptions acknowledge the coexistence of competing values and world views (Larmore, 1994) and require a process that balances different perspectives (Miller, 1999). Such conceptions redefine the role of researchers, whose task it becomes to ask, “How should researchers support a process in which social groups themselves define social welfare?” rather than “How should researchers define social welfare?” To develop our pluralistic conception of social welfare, we must first clarify what

¹ Monism does not preclude the possibility that many factors are relevant to social welfare. For example, as the editor kindly reminded us, some economists stress that factors related to stability and justice are as important for happiness as material wealth (Easterlin, 1974; Layard, 2011). Monism simply means that all these factors are commensurable and can be added up to a single measure (e.g., money or happiness).

knowledge diverse social groups need to possess. Habermas (1971) offers an ideal starting point for this purpose. While championing deliberative processes that take into account conflicting views of what is good for society (Habermas, 1996, 2003), Habermas (1966, 1971) also argued that all people, regardless of the social group they belong to, face three challenges with respect to the world and with one another. Habermas (1971) maintained that these challenges motivate three different "cognitive interests" that make people raise questions about how to make societal institutions more efficient, stable, and just (for prior management research on cognitive interests, see Stablein & Nord, 1985; Steffy & Grimes, 1986; Willmott, 2003).²

The first challenge that Habermas (1971) outlined is that people need to exert some control over the world in which they live. For example, people must know which time of the year is the best for planting particular seeds and how to construct houses that do not collapse. This need for efficient solutions motivates a "technical cognitive interest" (Habermas, 1971: 172), which leads people to strive for knowledge about causes and effects. Such knowledge helps to "enhance prediction and control" (Willmott, 2003: 95) and to optimize means-ends relationships. Enhancing prediction and control is also important in the economy because people have scarce resources and thus try to allocate resources as efficiently as possible (Walsh et al., 2003). This knowledge about causes and effects is crucial with regard to financial innovations, since these innovations change how financial markets allocate capital and risk. The technical cognitive interest thus leads to the first of the three key questions that we identified: *Does a certain financial innovation make the economy more efficient?*

The second challenge is that people need some degree of mutual understanding in order to interact with one another. For example, people need common practices that are based on a shared understanding of actions, roles, and routines to jointly cultivate grain or to cooperatively build a house. Without common practices, cooperation

will almost certainly break down and become close to impossible. This need motivates what Habermas (1971: 173) called "practical cognitive interest." This interest prompts people to search for knowledge that helps them "improve mutual understanding" (Willmott, 2003: 95) and is also crucial for financial markets: as social constructions (MacKenzie, 2006), financial markets function properly only if interactions between market participants become institutionalized through roles and routines (Berger & Luckmann, 1966) and stabilized by processes of joint "sensemaking" (Weick, 1993). Stability at the systemic level requires a certain degree of mutual understanding at the individual level: "Complex patterns of interaction that are stable require actors who share cognitive assumptions and expectations" (Fligstein, 2001: 27). Financial innovations such as high-frequency trading transform how market participants interact with each other, particularly, as we elaborate later on, because high-frequency algorithms have largely replaced human intermediaries (Beunza & Millo, 2014). As a result, such innovations potentially affect the stability of financial markets and the economy as a whole. The practical cognitive interest thus leads to the second key question: *Does a certain financial innovation make the economy more stable?*

The third challenge is that people encounter relations and institutions that are unjust, such as when some individuals or groups have a disproportionate influence on how food, housing, and other goods are produced and distributed. Such injustices motivate what Habermas (1971: 194) called "emancipatory cognitive interest." Habermas argued that this interest is not merely a subjective attitude that some people happen to have but, rather, something "profoundly ingrained in the structure of human societies" (1986: 198). Indeed, that people long for freedom and justice is not only postulated by philosophers (Horkheimer & Adorno, 1972; Kant, 1958/1788, 1959/1785) but also documented in empirical research (see Stout, 2011a), which indicates that people often think in terms of "fairness" (Kahneman, Knetsch, & Thaler, 1986), "reciprocity" (Fehr & Gächter, 2000), or "honesty" (Ariely, 2012). While this concern with justice does not suggest that people always act justly (Ariely, 2012), it does suggest that people want to know whether and, if so, how societal institutions and relationships could be transformed so that fewer people suffer and struggle. By transforming how financial markets function,

² Some points about the three cognitive interests remain controversial, such as whether these cognitive interests have grown historically or whether one can derive them (quasi-transcendentally) from the conditions of human existence. Burrell (1994) and Willmott (2003) discussed this and other points.

financial innovations influence the distribution of economic output among different individuals and social groups. With respect to the emancipatory cognitive interest, the third key question that arises about financial innovations is: *Does a certain financial innovation make the economy more just?*

On the basis of the theory of cognitive interests, we can now give a more detailed account of the challenges that public policy faces. Although all social groups are, in principle, interested in questions of efficiency, stability, and justice, social groups differ in two ways with regard to specific policy issues. First, different social groups may favor different trade-offs between efficiency, stability, and justice. When a specific issue is at stake, some groups may focus on efficiency, others may be willing to sacrifice efficiency in order to increase stability, and yet others may see justice as the most urgent end for public policy. Second, different social groups may disagree over what efficiency, stability, and justice mean in the first place. This disagreement is also reflected in academic discourse, in the form of controversies about what to include in efficiency measures such as GDP (Boyd, 2007; Landefeld & McCulla, 2000), or about whose concern for stability matters more—for instance, shareholders' concern for preventing stock market crashes versus employees' concern for job security (Allen & Wood, 2006; Piketty, 2014). As we discuss later, there is particularly strong disagreement on what "justice" means (Bowman & Rugg, 2013; Frohlich & Oppenheimer, 1992).

Next we document that current research on financial innovations tackles only the first two key questions (on efficiency and stability), while ignoring the third key question (on justice)—with problematic consequences for financial regulation and, ultimately, social welfare.

Insights from Current Research on Efficiency and Stability

We use the case of high-frequency trading to illustrate how current research—by financial economists and sociologists of finance—analyzes financial innovations. Both financial economists and sociologists of finance study liquidity. Liquid markets allow investors to instantly buy and sell assets at low transaction costs (Hasbrouck, 2007). Liquidity affects the efficiency and stability of financial markets and, ultimately, the economy.

High liquidity increases efficiency by lowering transaction costs. If investors know that they can sell assets on the secondary market at lower costs, they will pay more for newly offered securities on the primary market, thereby potentially reducing the cost of capital for firms and, ultimately, increasing GDP (Hendershott, Jones, & Menkveld, 2011). In contrast, low liquidity can undermine the stability of financial markets, because, with few buyers and sellers, even medium-sized orders can induce big price movements and thus increase volatility. The Flash Crash of May 6, 2010, was such a "liquidity-induced crash" (Easley, López de Prado, & O'Hara, 2011: 122).

Financial economists focus on the question of whether, by increasing liquidity, high-frequency trading makes the economy more efficient. Motivated by the technical cognitive interest, financial economists want to "predict" how financial innovations such as high-frequency trading influence liquidity so that they can offer regulators a certain degree of "control" (Willmott, 2003: 98) over financial markets and the economy. According to an extensive literature review by Gomber, Arndt, Lutat, and Uhle (2011: 2), the "majority of papers" by financial economists find "positive effects on liquidity." These papers conclude that high-frequency trading reduces transaction costs for investors and, ultimately, the cost of capital for firms (Chaboud, Chiquoine, Hjalmarsson, & Vega, 2014; e.g., Hasbrouck & Saar, 2013; Hendershott et al., 2011; Hendershott & Riordan, 2013; Menkveld, 2013; Riordan & Storckenmaier, 2012). Financial economists thus provide insights that help different social groups decide whether high-frequency trading makes the economy more efficient. Overall, financial economists suggest that this is indeed the case.

Sociologists of finance, with their "social studies of finance" (Beunza, Hardie, & MacKenzie, 2006: 721), have also started to investigate high-frequency trading. While financial economists assume that liquidity emerges automatically wherever there is supply and demand for an asset, sociologists of finance try to understand how liquidity is "constructed and maintained" (MacKenzie, Muniesa, & Siu, 2007: 8). These researchers are interested in the "mutual understanding" (Willmott, 2003: 95) that is necessary for different actors to interact smoothly. By conceptualizing financial markets as social practices, sociologists of finance provide insights into the question of whether financial innovations

make the economy more stable. Today, high-frequency algorithms have largely crowded out human intermediaries who, until ten years ago, interacted on trading floors to match buyers and sellers (MacKenzie, 2015; MacKenzie & Pardo-Guerra, 2014). Sociologists of finance warn that high-frequency traders may not be able to assume all the functions that human intermediaries traditionally performed (Beunza & Millo, 2014). In particular, they raise doubts about whether high-frequency traders can engage in "sensemaking" (Weick, 1993).

Sensemaking means that intermediaries use and produce "social cues" that help market participants "give meaning to orders and prices" (Beunza & Millo, 2014: 7). On trading floors, human intermediaries receive and provide many social cues. Such cues include speaking in a confident manner (Zaloom, 2003) or disclosing certain information on market conditions (Beunza & Millo, 2014). In contrast, the secret algorithms of high-frequency traders produce fewer social cues. Algorithms may cause "tunnel vision" (Beunza, MacKenzie, Millo, & Pardo-Guerra, 2011: 23) that undermines the ability of market participants to make sense of turbulent market conditions; such a breakdown in sensemaking will increase volatility (Beunza & Millo, 2014). Sociologists of finance thus offer insights for diverse social groups to decide whether high-frequency trading makes the economy more stable. Overall, sociologists of finance suggest that this is not the case.

Despite their valuable insights into efficiency and stability, financial economists and sociologists of finance fail to provide the knowledge that different social groups require to clarify what trade-offs between efficiency, stability, and justice financial regulation should enact, as well as what each dimension means in the first place. In addition to hardly problematizing their measures for efficiency (in terms of GDP) and stability (in terms of volatility), current researchers completely ignore the third key question—whether financial innovations make the economy more just—and thus fail to produce insights that would enable various social groups to assess the regulation of financial innovations in terms of social justice. In the next section we will delineate how future management research on top incomes and income inequality—together with research from other disciplines—could tackle the third key question. Before that, however, we will look at how current research, through the performative

effects of theories on public policy, reinforces a technocratic approach to financial regulation that, in fact, undermines social welfare.

Mechanisms That Reinforce Technocratic Financial Regulation

By ignoring the third key question on justice, current research strengthens the technocratic approach to financial regulation that has become dominant in most countries over the last forty years (Froud et al., 2010). Technocratic financial regulation grants a lot of influence to experts and little to politicians and social groups (Underhill & Zhang, 2008). The key experts in financial regulation are usually found in (a) government departments, regulatory agencies (e.g., the U.S. Securities and Exchange Commission), and central banks; (b) financial firms and trade associations; and (c) research institutions, such as universities or business schools. These experts engage in a hierarchical decision-making process in which senior regulators make important policy decisions and supervision by politicians is mostly symbolic, as, for example, Froud et al. (2010) documented for the United Kingdom (see also Underhill & Zhang, 2008). The process then focuses on finding optimal means for realizing ends that rarely get questioned (Crouch, 2004; Habermas, 1970; Marcuse, 1964).

Power plays an important role in technocratic financial regulation, with financial firms gaining a lot of influence by sponsoring reports (Kocieniewski, 2013) and campaigns (Johnson & Kwak, 2010), as well as through regulatory capture (Perrow, 2010) and "private sector expertise" (Baker, 2010: 653). In this article we address more fundamental problems of technocratic financial regulation that would remain relevant even if power problems were largely resolved (e.g., by limiting the influence of banks that are too big to fail; see Johnson & Kwak, 2010). Our critique shows that technocratic financial regulation—even at its best—cannot be the type of regulation that researchers should reinforce if they want to enhance social welfare.

Until the 2008 financial crisis, most experts assumed—for well-intentioned or self-interested reasons—that financial regulation should focus exclusively on efficiency (see Engelen et al., 2011). Nobel laureate Robert Lucas (2003: 1) had famously declared that the "problem of depression prevention has been solved, for all practical

purposes,” and argued that “macroeconomic priorities” should be focused on questions of efficiency—a view that, at the time, resonated among researchers, regulators, and other experts (Engelen et al., 2011). The 2008 financial crisis “repoliticized” financial regulation for a while, but the “complexities of managing the aftermath of the crisis” soon drove financial regulation back “into the arms of the financial elite” (Froud et al., 2010: 27–29; see also Glynos, Klimecki, & Willmott, 2012, and Scholes, 2010). As a result, experts now search for ways to enhance both efficiency and stability (Engelen et al., 2011; Krugman, 2009b) by also examining parameters such as “systemic risk” (Brunnermeier & Sannikov, 2014; Rochet, 2010). By focusing on issues of efficiency and stability, the technocratic approach explores challenging and important issues of public policy but still largely ignores questions of justice and fails to consider the trade-offs between conflicting ends of financial regulation.

Technocratic financial regulation builds on three pillars: institutional design, social norms, and language (Ferraro et al., 2005). Here we describe three mechanisms through which existing research reinforces each of these pillars. These mechanisms explain the performative effects of theories on the formation of public policy. Again, power relations (Dymski, 2014; Fourcade, 2009) and conflicts of interest (Carrick-Hagenbarth & Epstein, 2012; Kocieniewski, 2013) create problems of their own for how theories shape financial regulation. However, the mechanisms that we are about to explain operate on a more fundamental level and would remain relevant even if researchers emancipated themselves from the influence of financial firms and other powerful actors.

First, the *institutional design* of financial regulation determines which actors play a role in financial regulation. The institutional design of technocratic financial regulation grants a great deal of influence to experts but little influence to politicians and the social groups they represent (Froud et al., 2010; Underhill & Zhang, 2008; Willke, 2014; Willke, Becker, & Rostásy, 2013). Experts bring in their knowledge through expert groups (Seabrooke & Tsingou, 2014) and “revolving doors” between the financial sector and regulatory agencies (Johnson & Kwak, 2010). Indeed, Froud et al. describe financial regulation since the 1970s as a “mostly successful attempt to insulate markets from democratic politics” (2010:

25) through self-regulatory bodies (Gerding, 2009; Willke et al., 2013) and more independent central banks (Abolafia, 2012; Marcussen, 2009). Excluding most social groups allows technocratic financial regulation to focus on finding the optimal means to realize ends that experts largely take for granted (currently, efficiency and stability).

Existing research supports this technocratic institutional design. Researchers help frame what financial regulation is about, thereby influencing who will get involved in tackling regulatory challenges. Today, both financial economists and sociologists of finance emphasize that financial regulation is about efficiency and stability. For example, financial economists examine ways of ensuring competition among high-frequency traders (Hendershott et al., 2011), while sociologists of finance investigate how exchanges can keep human trading alive as a fallback option during flash crashes (Beunza & Millo, 2014). At most, researchers highlight the fact that financial regulation involves trade-offs between efficiency and stability (Linton & O’Hara, 2011). In addition, because most researchers measure efficiency in terms of GDP and stability in terms of volatility (Crockett, 2001; Fleurbaey, 2009), it is hardly possible to infer from existing studies on financial innovations that defining efficiency and stability is, in fact, quite controversial. Researchers who “declare that an issue is technical . . . remove it from the influence of public debate” (Callon, Lascoumes, & Barthe, 2009: 25), since experts see no need to involve social groups in technicalities, while social groups have no motivation to engage in technical discussions. We thus offer our first proposition.

Proposition 1: The less researchers emphasize that financial regulation involves trade-offs between efficiency, stability, and justice, as well as controversies on how to define each dimension, the less likely are social groups and their representatives to get involved in the regulatory process.

Second, *social norms* define how actors should engage in financial regulation. For example, social norms may lead actors to “consider a far-reaching restructuring of financial markets” (Schneiberg & Bartley, 2010: 301) that does not take existing market structure for granted. In fact, this social norm prevailed in the United States during the 1930s, when “financial reforms were truly revolutionary . . . and in many ways visionary”

(Cooley & Walter, 2010: 40). In contrast, the currently relevant social norm dictates that actors merely propose incremental changes without questioning the ends that existing financial regulation pursues—namely, efficiency and stability. Such financial regulation “mainly patches holes” (Cooley & Walter, 2010: 40) and represents “a remarkably narrow vision of what regulation is and does” (Schneiberg & Bartley, 2010: 282). This social norm constitutes a challenge for actors—such as the Occupy Wall Street movement (Lowenstein, 2011)—who raise fundamental questions about the purpose of financial markets but deliver no solutions to regulatory problems. Many commentators “criticized [Occupy Wall Street] for not formulating any demands” (Haug, 2013: 726). Such criticism reflects the prevailing social norm according to which serious actors within financial regulation are expected to know precisely how to improve existing regulation.

Current research reinforces the technocratic social norm by choosing research topics that are fully in line with how existing financial regulation defines and weighs efficiency, stability, and justice. Tellingly, technocratic financial regulation focuses on the dimensions of efficiency and stability but neglects issues of justice—and so does existing research (Beunza & Millo, 2014; Hendershott et al., 2011). Through their choice of research topics, financial economists and sociologists of finance personify the technocratic social norm that discussions on financial markets should stick closely to existing financial regulation, thereby leading other actors by example. Compared to these experts, actors who raise fundamental questions about the purpose of financial markets are made to look like dabblers who do not know what financial regulation is. This, of course, undermines their credibility as serious actors within financial regulation.

Proposition 2: The more research topics are in line with how existing financial regulation defines and weighs efficiency, stability, and justice, the stronger the social norm becomes that dictates that actors should merely propose incremental changes.

Third, financial regulation relies on a language that influences the topics of discussion. Language matters because it “shapes what people notice and ignore and what they believe is and is not important” (Ferraro et al., 2005: 9). The language of

financial regulation can have a broad or narrow scope, which affects the range of topics that actors discuss. Technocratic financial regulation relies on a narrow language that acts as a filter and limits discussion to concerns about efficiency and stability. This narrow language makes it more difficult for actors to introduce new topics into the regulatory discourse. Despite widespread dissatisfaction with financial markets and how they are regulated (Pew Research Center, 2013), actors find it difficult to articulate their concerns and end up becoming entangled in established discourses (Glynos et al., 2012). Indeed, Admati and Hellwig argue that bankers attempt to make the language of financial regulation “deliberately impenetrable” in order to “confuse policy-makers and the public” (2013: xiv). A narrow language thus allows technocratic financial regulation to exclude other voices and focus on finding the optimal means of realizing ends that rarely get questioned.

Existing research lends credence to the narrow language of technocratic financial regulation by focusing only on efficiency and stability and ignoring such topics as rising top incomes or income inequality (Piketty, 2014). The fact that researchers marginalize certain topics has important consequences, because other actors, such as politicians or the media, take up and propagate the topics that researchers discuss within the regulatory discourse. For example, Engelen et al. explored the processes that “convert the assumptions of neoclassical economists into stories for laypeople about the benefits of financial innovation” (2011: 16). Topics such as liquidity, market efficiency, and volatility have become commonplace; politicians use them in their speeches, newspapers in their editorials, and special interest groups in their press releases (Engelen et al., 2011; Froud, Nilsson, Moran, & Williams, 2012). This narrow language penalizes actors who want to introduce new topics and perspectives into the regulatory discourse. For example, to discuss how financial regulation influences top incomes or income inequality, actors must resort to everyday speech, which exposes them to the claim that they merely express a “general fear” that is “misplaced” (Riordan & Storckenmaier, 2012: 425).

Proposition 3: The less researchers investigate the full range of implications that financial regulation has for efficiency, stability, and justice, the narrower the vocabulary becomes that

actors affected by financial regulation can use to articulate their concerns.

Technocratic versus Inclusive Financial Regulation

We now evaluate the impact of financial regulation on social welfare by distinguishing between two types of financial regulation on the basis of *who* engages in the regulatory process, *what* gets discussed, and *how* decisions are made. As mentioned, technocratic financial regulation involves only experts, focuses on finding means to realize largely taken-for-granted ends, and forms public policy through a hierarchical decision-making process. In contrast, inclusive financial regulation would involve—in addition to experts—all affected social groups, discuss the ends and means of financial

regulation, and shape public policies through deliberative processes (see Table 1).

Inclusive financial regulation relies on deliberation (Habermas, 1996; Luskin, Fishkin, & Jowell, 2002), a “process by which individuals sincerely weigh the merits of competing arguments in discussions together” (Fishkin, 2009: 33). Deliberation allows affected social groups to discuss the ends that public policy should pursue. Indeed, deliberation “over incommensurable ends is the bread and butter of democratic politics, at least when it is working as it should” (Skidelsky & Skidelsky, 2012: 168). Inclusive financial regulation allows politicians and different social groups to set the tone for financial regulation and “channel the use of administrative power in specific directions” (Habermas, 1998: 250). However, politicians and social groups lack the expertise to take financial regulation into their

TABLE 1
Two Approaches to Financial Regulation

Characteristics	Technocratic Financial Regulation	Inclusive Financial Regulation
Who is involved	Primarily experts from regulatory agencies, the financial sector, and research institutions	In addition to experts, all affected social groups and their representatives in the political system
What gets discussed	Focus on means for realizing ends that experts largely take for granted (currently, efficiency and stability)	Focus on both the means and ends of financial regulation
How decisions are made	Hierarchical decision-making process within the administrative apparatus	Deliberative decision-making process involving all affected social groups, politicians, and experts
Institutional design	Technocratic regulation revolves around regulatory agencies, expert groups, and self-regulatory bodies	Inclusive regulation, in addition to involving experts, creates platforms for public deliberation
Social norms	Technocratic regulation rests on the social norm that actors should merely propose incremental regulatory changes	Inclusive regulation rests on the social norm that financial regulation is an opportunity for rethinking the role of financial markets
Language	Technocratic regulation offers actors only a narrow vocabulary for articulating their concerns	Inclusive regulation offers actors a broad vocabulary for articulating their concerns
Performative effect of theories	Current research on financial innovations reinforces the institutional design, social norms, and language of technocratic financial regulation	Future research in the field of management theory and related disciplines on income inequality and other issues of justice could strengthen inclusive financial regulation
Relation to social welfare	Technocratic regulation may enhance social welfare with regard to relatively uncontested issues of public policy; however, financial regulation is a highly contested issue	Inclusive regulation better serves social welfare by clarifying what ends financial regulation should pursue and by creating legitimacy for policy decisions

own hands and “rule” themselves (Habermas, 1998: 250), and they therefore still need experts, particularly when it comes to choosing the right means to realize ends. Regulation without experts would be “too idealistic” (Habermas, 1998: 244) a vision of democracy.

Deliberative democracy is an idea that is becoming increasingly important in political science (Dryzek, 2000; Thompson, 2008) and management research (Scherer & Palazzo, 2007, 2011), despite some criticism (Edward & Willmott, 2008; Mouffe, 1999; Noonan, 2005; Norval, 2004). Its proponents aim to enrich representative and direct forms of democracy through procedures that “shun merely adding up votes in favor of talking together” (Goodin, 2008: 2). Such procedures may involve meetings in which citizens deliberate on issues of public policy (for an overview see Goodin & Dryzek, 2006). Fishkin and colleagues, who conducted over twenty “deliberative polls” in which randomly sampled citizens intensively discussed an issue for one day or longer, found that participants became better informed in the process and changed many of their preconceived opinions (Fishkin, 2009; Luskin et al., 2002). For example, 119 citizens from an Italian region came together to deliberate over how to spend money that the region collected by issuing “ethical bonds” (Center for Deliberative Democracy, 2007). The one-day event substantially increased the knowledge of participants about this new financial product and changed their preferences about how the region should spend the collected money.

Such meetings could also become the setting for discussing other financial innovations. The participants could talk with “competing experts” (Fishkin, 2009: 126) about how a particular financial innovation works and what consequences different policy options may have for different social groups. The knowledge on efficiency, stability, and justice that experts provide from different perspectives is thus essential for the deliberative process. At the same time, experts would not only give answers—deliberation can also engender new impulses for research. For example, people may propose that researchers take into account new aspects when calculating “efficiency” or assessing “stability” (for examples see Callon et al., 2009). Insights by laypeople may therefore lead to “reformulation of the terms of the problem and the emergence of new questions and scenarios” for researchers (Callon et al., 2009: 15). The results of such discussions would be published

in the media (Fishkin, 2009; Goodin & Dryzek, 2006), thereby—via the public discourse—influencing politicians, government departments, and regulatory agencies.

However, inclusive regulation and deliberation are “costly” (Habermas, 1996: 321). Social groups have neither the time nor the willingness to deliberate about every issue. Habermas argued that “in complex societies . . . the administrative system has to accept tasks that increasingly overburden the costly deliberative mode of decision making” (1996: 321). As a result, social groups must delegate many issues to experts and can engage in deliberation only selectively. Here we argue that in order to enhance social welfare, social groups should use their scarce “deliberative resources” to address *contested issues of public policy*—that is, issues where (a) people disagree on what ends public policy should pursue and (b) legitimacy is key because policy decisions have far-reaching implications for people’s lives. We show that financial regulation is a contested issue, and we identify two advantages that put inclusive regulation in a better position to enhance social welfare for such issues.

The first advantage of inclusive regulation is that it helps *clarify what social welfare means* in the context of financial regulation—that is, what ends financial regulation should pursue to improve the status quo of society. People disagree about these ends: some seek stricter regulation to prevent crises, whereas others resist regulation on the grounds that it may inhibit economic growth (see *Allstate/National Journal*, 2011; CBS, 2010). However, it is not possible to enhance social welfare without clarifying first what ends public policy should pursue with respect to financial regulation. As baseball legend Yogi Berra quipped, “If you don’t know where you’re going, you might not get there” (2001: 53). Experts sometimes try to clarify the ends of public policy through surveys that simply aggregate people’s existing preferences. Yet surveys only measure “top of the head” preferences, while researchers such as Fishkin have found that “even one day’s serious discussion” can actually change ordinary citizens’ “preferences in significant ways” (2009: 26–30; see also Barabas, 2004, and Druckman & Nelson, 2003). To develop informed preferences about how public policy should deal with difficult trade-offs, people need to deliberate on the issues involved. Deliberation is thus indispensable to clarify what social welfare means for contested issues, because

deliberation will form—and transform—people’s preferences in ways that experts cannot anticipate by analyzing the results of surveys (Elster, 1986; Zey, 1998).

The second advantage of inclusive regulation is that it *creates legitimacy* for policy decisions (Buchanan, 2002; Rawls, 1993). Legitimacy refers to whether “collective decisions can be morally justified to those who are bound by them” (Thompson, 2008: 502). For that reason, legitimacy is particularly important for decisions that have far-reaching implications for people’s lives.³ Legitimacy requires “equal participation,” in the sense that “no one person or advantaged group completely dominate[s] the reason-giving process” (Thompson, 2008: 504–505); this requirement casts a negative light on the disproportionate influence of financial firms that we discussed before (Johnson & Kwak, 2010). While financial regulation now shapes people’s lives more than ever (Davis, 2009a), many of those it affects harbor doubts about whom regulation serves (Pew Research Center, 2012). For example, 69 percent of the U.S. public sees large banks and financial institutions—that is, special interest groups—as the main beneficiaries of post-recession government policies (Pew Research Center, 2013). Inclusive regulation can limit the influence of special interest groups by mobilizing social groups as countervailing powers (Galbraith, 1970) and by opening up a discussion about the ends of financial regulation that forces all actors—including special interest groups—to make explicit what they mean when they argue that their proposals would be good for “society.”

Given these two advantages, we conclude that an inclusive process is a *necessary* condition for promoting social welfare for contested issues of public policy. In contrast, a technocratic process is likely to fail social welfare, because such a process neither clarifies what social welfare means for contested issues—that is, what ends to pursue and how to balance trade-offs—nor

creates legitimacy for policy decisions. Nevertheless, deliberation about the ends of financial regulation is not a *sufficient* condition for promoting social welfare, because in order to achieve those ends, public policy must also pick the right means—namely, the right policies. Researchers and other experts play a key role in this process by investigating the consequences of different policies. However, financial regulation may also have unintended consequences (Krippner, 2011; Rajan, 2010) that even the most comprehensive research on efficiency, stability, and justice cannot anticipate.⁴ Deliberation is not a panacea that sidesteps these difficulties.

Deliberation on financial innovations can also initiate further changes. When deliberating financing innovations, participants may recognize that public policy can realize certain ends only if other changes occur in the economic system. Indeed, financial innovations—together with regulatory changes and the rise of institutional investors—should “be seen as part of an *interconnected* movement toward a finance-centered economy” (Davis, 2009b: 27, *emphasis added*). Participants who deliberate on financial innovations may therefore call for further deliberation on such topics as the relationship between the state and the financial sector (Baker, 2010; Johnson & Kwak, 2010) and the responsibility of institutional investors (Gond & Piani, 2013; Sandberg, 2011).

HOW FUTURE THEORIES CAN RESHAPE FINANCIAL REGULATION

Justice Concerns, Income Inequality, and Top Incomes

In the preceding section we argued that existing research on questions of efficiency and stability reinforces technocratic financial regulation, which undermines social welfare. In this section we delineate how future research on questions of

³ Happiness economists support the idea that the process of political participation—not merely its outcomes—matters. As Frey and Stutzer noted, “Procedural utility, over and above outcome utility, is an important source of satisfaction due to direct democracy” (2000: 933; see also Graham & Pettinato, 2001, and Matsusaka, 2005). Still, while happiness and legitimacy may often coincide, we assume—in line with most political philosophers (Cohen, 1989; Rawls, 1971)—that legitimacy is the more fundamental concept for democratic politics.

⁴ Stout (2011b) cautions against the democratic governance of financial regulation, because people with too optimistic expectations about their stock market returns will push for loose regulation. Inclusive financial regulation precludes this selection bias by involving all social groups—for example, deliberative polls use random sampling (see Fishkin, 2009). Moreover, through deliberation, people who are too optimistic may develop more realistic expectations about their returns and start seeing regulation through the eyes of citizens, rather than through those of special interest groups (Elster, 1986).

justice could promote a more inclusive approach to financial regulation that better serves social welfare. As we discussed earlier, prompted by their cognitive interests (Habermas, 1971), people want to know how to make the economy and society more just, and they use their views of "justice" to advocate specific ends that public policy should pursue.

Broadly speaking, social justice is about "how the good and bad things in life should be distributed among the members of a human society" (Miller, 1999: 1). The various views of justice specify which "good and bad things" (e.g., income, opportunities, property rights, or hard work) should be distributed according to what principle (e.g., desert, need, or equality; see Miller, 1999). In simplified terms, egalitarians want to distribute material goods as equally as possible (Dworkin, 1981; Rawls, 1971), meritocrats want to distribute positions and privileges according to what people deserve (Scheffler, 2000; Sher, 1989), sufficientarians want to distribute goods according to what each person needs so that everybody can reach the minimum threshold of what is necessary for a decent life (Nussbaum, 1992; Sen, 2009), and libertarians want to distribute property rights—and nothing else—equally among citizens (Hayek, 1979; Nozick, 1974).

Like "social welfare," "justice" is also a contested concept (Elster, 1992; Gallie, 1956)—that is, different people and social groups have different views of social justice (Frohlich & Oppenheimer, 1992; Hochschild, 1981). However, irrespective of these differences, discussing social justice presupposes that people possess some knowledge about the factors that "determine distributive outcomes" (Miller, 1999: 5). To put it differently, discussions about justice would be pointless without knowing whether certain "relations of dependence . . . can in principle be transformed" (Habermas, 1971: 310) and, if so, how. It follows that researchers from different disciplines should investigate how financial innovations influence the distribution of various goods, such as income, opportunities, and so on. Here we focus on income distribution because many people and social groups (with different views of justice) care about rising income inequality (Bowman & Rugg, 2013; Norton & Ariely, 2011).

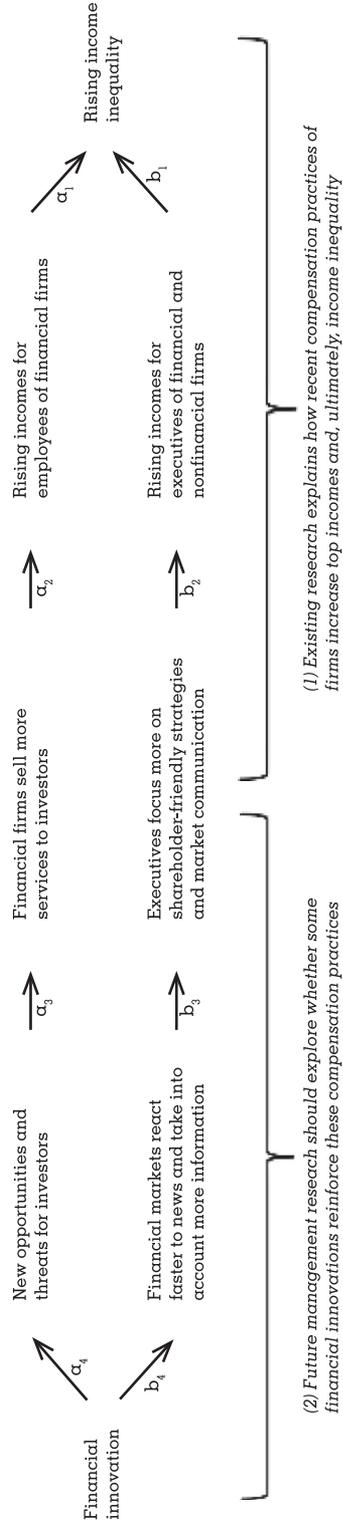
Piketty has pointed out that in "all the English-speaking countries, the primary reason for increased income inequality in recent decades is

the rise of [the top income of] the supermanager in both the financial and nonfinancial sectors" (2014: 315; see also Atkinson, Piketty, & Saez, 2011, and Wolff & Zacharias, 2009). In sum, although different people and social groups may have different concerns about justice, income inequality is one justice concern that many share, and top incomes are a crucial factor that helps explain why income inequality is on the rise. Together with research on other justice concerns, research on top incomes and income inequality enables people and social groups to assess (from their viewpoint) whether particular financial innovations make the economy more just and allows them to work out how to deal with trade-offs between justice and the other two dimensions of social welfare—namely, efficiency and stability. The division of labor is that researchers investigate whether a financial innovation will increase income inequality and people and social groups evaluate whether an increase would be problematic in terms of justice.

We now show that management theory can make a unique contribution to explaining how financial innovations influence top incomes and income inequality because financial firms (e.g., investment banks, hedge funds, and mutual funds) and nonfinancial firms (i.e., firms that do not primarily provide financial services) mediate this effect. Figure 2 illustrates the mechanisms that we explain in what follows.

We start by reviewing existing research on how financial and nonfinancial firms influence top incomes and income inequality through their compensation practices (see arrows a_1 , a_2 , b_1 , and b_2 in Figure 2). Financial firms influence top incomes through performance-based compensations that depend on the fees that investors pay for financial services. In the United States these fees have increased more than tenfold since 1980 (Greenwood & Scharfstein, 2013; Kaplan & Rauh, 2010), and investors today spend about 4 percent of GDP each year on financial services (Bogle, 2008). The employees of financial firms—or partners, in the case of hedge funds and private equity firms (Erturk, Froud, Johal, Leaver, & Williams, 2010)—receive a substantial share of these fees (Godechot, 2008), which increases their incomes (see arrow a_2 in Figure 2). Bakija, Cole, and Heim (2012) calculated that rising wages for financial employees account for about 25 percent of the rising GDP share that goes to the top 0.1 percent income group in the United States. In a related study Philippon and Reshef calculated that rising

FIGURE 2
How Firms Mediate the Impact of Financial Innovations on Income Inequality



wages in the finance sector account “for 15% to 25% of the overall increase in wage inequality since 1980” (2012: 1552). Similarly, Bell and Van Reenen (2010) found that in the United Kingdom wages in the area of finance accounted for 60 percent of the rise in income among the top 1 percent between 1998 and 2008 (see also Godechot, 2012, and Panico, Pinto, & Anyul, 2012). These numbers show that the expansion of financial services is an important factor behind the increase in income inequality (see arrow α_1 in Figure 2).

It is puzzling that financial firms can sell so many services, because studies that span the past forty years show that financial firms cannot consistently generate above-market returns for their customers’ portfolios (Bogle, 1999; Fama, 1970; French, 2008). On the whole, it makes little sense for investors to pay high fees to financial firms for “active investment” strategies; on the contrary, it would make sense for investors to pay low fees so that financial firms merely buy and hold the market portfolio—what is known as “passive investment.” French (2008: 1562), in his 2008 presidential address to the American Finance Association, diagnosed “a general misperception about investment opportunities” among investors. On average, French pointed out, investors in the United States spend 0.67 percent of their portfolios each year on “a futile search for superior returns” (2008: 1558). Indeed, as Stout noted for actively managed mutual funds, the “hope to ‘beat the market’ . . . is the basic business model for the entire industry” (2012: 1184).

Furthermore, both financial and nonfinancial firms contribute to rising top incomes by paying ever larger compensations to their executives (Atkinson et al., 2011; Cobb, 2016). For example, the compensation for the fifty best-paid CEOs in the United States rose from an average of \$1.56 million (in today’s money) in the 1970s to an average of \$12.27 million in 2000–2005 (Frydman & Saks, 2010). These increases, as Piketty (2014) has noted, help explain rising income inequality (see arrow b_1 in Figure 2). Executive compensations have risen in parallel with a massive increase in financially motivated shareholder activism (Goranova & Ryan, 2014). Since the 1980s, both increases in institutional ownership and a number of regulatory changes have enabled big institutional investors to influence the strategies and practices of firms through public shareholder resolutions (Reid & Toffel, 2009) and private negotiations with top management (Becht, Franks, Mayer, & Rossi, 2010).

Given the antimanagerialist stance of many investors, it may seem “paradoxical” that “the shareholder value revolution failed to staunch the growth of managerial positions and pay” (Goldstein, 2012: 269).

However, a closer look reveals that shareholders depend on executives in two important ways. On the one hand, shareholders need executives to implement corporate strategies that shareholders perceive as favorable to shareholder value, such as cutting labor costs (Ezzamel, Willmott, & Worthington, 2008; Gordon, 1996). Shareholder activism has thus “heightened demand for managerial labor and enhanced managers’ ability to capture rents” (Goldstein, 2012: 269–270). On the other hand, shareholders depend on executives to create and sustain high market valuations. In the age of shareholder activism, what executives communicate can create or destroy billions in terms of market value (Earl & Feeney, 2012). This has intensified the search for superstar CEOs who can “instill confidence in analysts and investors” (Khurana, 2002: xi). Because shareholders depend on executives in these two respects, and as agency theory suggests (Jensen & Murphy, 1990), shareholders—particularly private equity firms and other shareholders with short-term financial interests (Cobb, 2016)—have been offering executives ever larger stock options to get them to work in shareholders’ interests (Frydman & Saks, 2010). Existing management research thus posits that the focus of executives on shareholder-friendly strategies and market communication helps explain their rising compensations (see arrow b_2 in Figure 2). What remains less clear, however, is how executives can implement shareholder-friendly strategies despite opposition from nonexecutive employees and why executives’ role as communicators becomes increasingly important.

The Promise of Future Management Research on Justice

Here we show how future management research (see arrows α_3 , α_4 , b_3 , and b_4 in Figure 2) can provide insights that will help people and social groups evaluate whether certain financial innovations make the economy more just or not. Management researchers can complement existing research on financial innovations (e.g., Beunza & Millo, 2014; Hendershott et al., 2011) by investigating whether certain financial innovations

help explain the compensation practices of financial and nonfinancial firms.

As for the rising compensations for employees of financial firms, researchers need to analyze why these firms can sell so many financial services even though customers hardly benefit from active investing. Financial innovations help explain this. By creating both opportunities and threats for investors, certain financial innovations enable financial firms to sustain demand for their services (see arrow α_4 in Figure 2). On the one hand, financial innovations provide investors with opportunities to invest in new financial products or apply new investment processes (Tufano, 2003). On the other hand, in highly competitive financial markets, where the gains of some investors may come from the losses of others, new products or processes can undermine the (relative or absolute) returns of investors who continue to use established products and processes. In that sense, financial innovations can also create conditions that investors perceive as threatening if their (relative or absolute) returns appear to suffer because other actors are using new products or processes.

High-frequency trading is a good case in point. Although the evidence that financial economists present suggests the contrary (Linton & O'Hara, 2011; Riordan & Storckenmaier, 2012), many investors fear that high-frequency traders engage in front running (for a survey see Foresight, 2011)—that is, that they use their speed to trade ahead of other market participants (*The Economist*, 2012; Lewis, 2014). To avoid this threat, investors seek the protection of financial firms, which thus benefit from high-frequency trading. For example, financial firms can offer investors access to new trading venues where high-frequency traders are often less active. In these so-called dark pools of liquidity, participants have no information about buy and sell orders (Lewis, 2014; Patterson, 2012). Financial firms also sell algorithms that investors can use to fend off predatory high-frequency traders. The fact that 15 percent of major institutional investors have bought such software from financial firms (Government Office for Science, 2012) shows again that the threat of predatory high-frequency traders helps financial firms demonstrate their expertise and sustain demand for their services (see arrow α_3 in Figure 2).

In addition to high-frequency trading, future management research should also investigate

how other financial innovations help financial firms sustain demand for their services. Management researchers can explore this topic through various theoretical lenses, including one of institutional complexity (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011). Financial innovations often create connections between financial markets and previously unrelated markets. Recent examples are "commodity index funds," which popularized investments in commodity markets (Irwin & Sanders, 2011), and "mortgage securitization," which enabled investments into the mortgage market (Fligstein & Goldstein, 2010). Because different markets are guided by different logics (Huault & Rainelli-Weiss, 2011), creating connections between financial markets and previously unrelated markets increases the institutional complexity in the finance field.⁵ A higher degree of institutional complexity, in turn, strengthens the position of financial firms because investors need increasing support either to exploit new opportunities for profit or to protect themselves against new threats (Erturk et al., 2010). Future management research on such phenomena could provide valuable insights into whether some financial innovations—by enabling financial firms to sell more financial services and pay high compensations—increase top incomes and, ultimately, income inequality.

As for rising executive compensations, researchers must explore why executives can implement shareholder-friendly strategies (despite opposition from nonexecutive employees) and why their role as communicators becomes increasingly important. Financial innovations help explain this. By making new products and processes available, financial innovations create new possibilities for investors to make money on the basis of how they assess the value of various firms (Tufano, 2003). For example, high-frequency trading introduced newsreader algorithms that analyze news and then trade in fully automated ways (Groß-Klußmann & Hautsch, 2011; Kleinnijenhuis, Schultz, Oegema, & van Atteveldt, 2013). These algorithms allow sophisticated investors to trade shares on the basis of new types of data (such as data retrieved from social media or customers' ratings in online shops) and with unprecedented speed. Similarly, "credit default

⁵ These ideas build on a comment from one of the reviewers.

swaps"—new financial products that compensate buyers if a firm defaults on its debt—make it faster and easier for investors to trade on the basis of any information that they deem relevant for the likelihood of a bankruptcy (Morgan, 2010; Tett, 2009). As a consequence of such financial innovations, financial markets react faster to news and take into account more information (see arrow b_4 in Figure 2).

We posit that faster reactions by financial markets to more information help executives implement shareholder-friendly strategies. Executives often know more than nonexecutive employees about how financial markets will react to new information about firms, because executives increasingly have a background in finance (Cobb, 2016; Fligstein, 1987) and spend a lot of time talking to shareholders, analysts, and investment bankers (Earl & Feeney, 2012; Westphal & Bednar, 2008). Executives can use this informational advantage about financial market reactions to present shareholder-friendly strategies, such as "cost cutting . . . as something *imposed* by Wall Street" (Ezzamel et al., 2008: 122). Cost cutting, in turn, boosts the performance-based compensations of executives, while nonexecutive employees lose jobs or income (Lazonick & O'Sullivan, 2000), which may be detrimental for justice. We also suggest that faster reactions by financial markets to more information will make communication by executives even more crucial. For example, newsreader algorithms can move share prices in reaction to a single utterance by an influential executive in the social media (Chozick & Perloth, 2013). On those grounds, we argue that many financial innovations—by transforming financial market reactions—help executives implement shareholder-friendly strategies and strengthen their role as communicators (see arrow b_3 in Figure 2).

Future management research should analyze more systematically how different financial innovations strengthen or weaken the position of the different groups that constitute firms (executives, nonexecutive employees, shareholders, etc.). The literature on power could serve as a good basis for such research (Fleming & Spicer, 2014). In this research scholars recognize that firms are not "groups of people working together to achieve a common goal" but, rather, places in which "power and politics are endemic" (Fleming & Spicer, 2007: 11–12) and in which different groups struggle about what goals to pursue and how to

achieve them (Fligstein, 1987; Pfeffer, 1981). By transforming financial markets, which are becoming an increasingly important part of the environment of firms (Davis, 2009a), financial innovations are likely to influence the bargaining power of different groups. For that reason, future research should analyze whether financial innovations create uncertainties for firms. If executives can cope better with such uncertainties compared to other groups, as we argue, this will increase the former's relative bargaining power (Crozier, 1964; Hickson, Hinings, Lee, Schneck, & Pennings, 1971). By exploring this topic, researchers can shed light on whether some financial innovations—mediated by their impact on the bargaining power of different groups within financial and nonfinancial firms—increase top incomes and, ultimately, income inequality.

Overall, management researchers can provide invaluable insights into financial innovations because they tend to focus on an "intermediate" level of analysis (Davis & Marquis, 2005; Stern & Barley, 1996). Financial economists mostly explore macrolevel efficiency measures and sociologists of finance look at the microdynamics of stability. In contrast, by exploring the "mechanisms through which organizational conduct affects the public good" (Walsh et al., 2003: 877), management researchers can identify which groups benefit most from financial innovations. For example, while many financial economists assume that faster reactions to more information bring financial markets closer to the "ideal" of a "market in which prices always 'fully reflect' available information" (Fama, 1970: 383), management researchers can show that such reactions are likely to strengthen the position of executives relative to that of non-executive employees and shareholders. Such management research reveals which groups benefit from financial innovations and which groups lose out. This knowledge is *critical* because it can help different social groups evaluate whether financial innovations make the economy more just and, if not, change the status quo (Scherer, 2009). In sum, management researchers who choose to further explore the topics and questions we have outlined here can help broaden the scope of financial regulation, which is currently limited to questions of efficiency and stability, and reintroduce issues of justice.

Mechanisms That Promote Inclusive Financial Regulation

Our outline of future management research on top incomes and income inequality shows one possible way of extending existing research on efficiency and stability. Emancipatory research along these lines offers new insights into how financial innovations influence the economy and society and reveals that trends such as rising income inequality “are open to challenge and change” (Willmott, 2003: 101). Importantly, through the performative mechanisms discussed previously (see Propositions 1 through 3), such research could help reshape the institutional design, social norms, and language of financial regulation, and thus promote a more inclusive approach to financial regulation. This can be achieved in three main ways, which we outline below.

First, future research in management theory and other disciplines can help reshape the institutional design of financial regulation. As we argued previously, inclusive financial regulation builds on an institutional design that includes all affected social groups through deliberative polls (Fishkin, 2009) and other forms of deliberation (Goodin, 2008). To promote such an institutional design, researchers should use their research to highlight the controversies involved in financial regulation. For example, management research on how high-frequency trading increases income inequality highlights issues of justice that are of concern to many people and social groups.

Once various social groups realize what is at stake—important trade-offs rather than technicalities—they will take a closer look at financial regulation, and experts will find it harder to exclude these groups from regulatory debates. By raising the attention of diverse social groups to neglected topics such as income inequality, research “brings out unforeseen actors, who, in turn, launch themselves into the debate” (Callon et al., 2009: 27). To motivate different social groups and their representatives to get involved in the regulatory process, future research should emphasize the controversial trade-offs between efficiency, stability, and justice that financial regulation entails, as well as the controversies over how to define each dimension (see Proposition 1).

Second, future research can help reshape the social norms of financial regulation. Inclusive financial regulation rests on the principle that

financial regulation is an opportunity for rethinking the role of financial markets. This social norm allows actors to distance themselves from the ends that existing financial regulation pursues and to start thinking about alternative ends. A main premise of inclusive financial regulation is that regulation does not merely interfere in existing markets but “constitutes markets” (Schneiberg & Bartley, 2010: 283). From an inclusive perspective, financial regulation should go, as Schneiberg and Bartley argued, “beyond a discourse of ‘intervention’ to consider a far-reaching restructuring of financial markets” (2010: 301). This social norm would empower politicians and social groups and prompt them to think (again) about a fundamental restructuring of financial markets. For example, these actors could consider introducing a financial transaction tax (McCulloch & Pacillo, 2011; Summers & Summers, 1989) that would curb financial innovations.

Future management research should focus on topics that existing regulation neglects. For example, the Dodd-Frank Act, whose 849 pages are “long, technical, and difficult even for an experienced regulatory lawyer to decipher” (Stout, 2011b: 33), only discusses issues of fairness with respect to investor protection (Angel & McCabe, 2013), without touching on distributive questions or broader justice concerns (Acharya, Cooley, Richardson, & Walter, 2010). By investigating rising top incomes and income inequality, future management research would thereby challenge the social norm according to which serious actors within financial regulation should stick closely to existing regulation. Given that researchers are among the most credible actors within financial regulation (Engelen et al., 2011; Riaz, Buchanan, & Bapuji, 2011), management researchers who put topics such as income inequality on the agenda would set an example that could motivate other actors—politicians, NGOs, and so on—to also think beyond the ends that financial regulation currently pursues. Future research can therefore promote a different social norm—namely, the premise that actors should use financial regulation as an opportunity to rethink the role of financial markets. To that end, researchers should pursue topics that deviate from the usual path of how existing financial regulation defines and weighs efficiency, stability, and justice (see Proposition 2).

Third, future management research that is guided by the emancipatory cognitive interest (Habermas, 1971) could reshape the language of

financial regulation by introducing concepts and constructs that facilitate discussions on such topics as rising top incomes and income inequality. Inclusive financial regulation builds on a language whose broad scope enables actors to introduce new topics into the regulatory discourse and to discuss the ends of financial regulation. Financial regulation has many consequences: it influences “the paths of economic development, variety of capitalism, level of inequality, and type of class structure we can or will sustain” (Schneiberg & Bartley, 2010: 285). The breadth of the language of inclusive financial regulation allows actors to discuss all those consequences, rather than only questions of efficiency and stability.

Future management research exploring how financial innovations create opportunities and threats for investors and transform financial market reactions will open up new perspectives on financial innovations and offer people and social groups a language for better articulating their concerns about justice in the context of financial markets (MacKenzie, Beunza, Millo, & Pardo-Guerra, 2012). Having access to such a language could empower social movements, motivate politicians to speak up on issues of justice, and fuel public debates within the media (Froud et al., 2010). Researchers can thereby “help to redefine the terms of debate” (Piketty, 2014: 3) and stimulate “public discussions about the possible meanings of the ‘good society’” (Burawoy, 2004: 1606). In sum, future research should investigate the full range of implications that financial innovations can have for efficiency, stability, and justice in order to provide actors with a broad vocabulary that will allow them to articulate all their concerns (see Proposition 3).

CONCLUSION

This article makes three contributions. First, it extends research on performativity in management studies (Cabantous & Gond, 2011; Ferraro et al., 2005, 2009; Wickert & Schaefer, 2015) by offering a normative framework that outlines the impact of theories on social welfare (Figure 1). While existing research clarifies the mechanisms through which theories shape social reality, researchers have not explicitly discussed how theories *should* shape social reality in order to enhance social welfare. To develop our normative framework, we showed that different social groups need

answers to three key questions (Habermas, 1971), and we argued that research diminishes social welfare even if it ignores just one of these questions. This insight is relevant to research on many contested issues of public policy, apart from financial regulation, because both the cognitive interests that Habermas (1971) identified and the mechanisms through which theories shape social reality (Ferraro et al., 2005) are general in scope. Thus, our normative framework can help scholars critically analyze whether current research on contested regulatory topics—such as internet privacy, corporate taxes, or global warming—enhances social welfare or not.

Second, the article contributes to the debate on how financial regulation should be reformed (Funk & Hirschman, 2014; Glynn et al., 2012; Riaz, Buchanan, & Ruebottom, in press; Schneiberg & Bartley, 2010) by analyzing the role of researchers. While existing research pinpoints many of the problems of current technocratic regulation (such as the disproportional influence of lobbyists), researchers have not systematically reflected on the performative effect of theories. We showed that current research reinforces the institutional design, social norms, and language of technocratic financial regulation, whereas future research could promote a more inclusive approach to financial regulation. To that end, guided by the emancipatory cognitive interest, researchers from different disciplines should develop knowledge that allows different social groups with diverse views of justice to assess whether financial innovations make the economy more just or not. Management researchers can make a unique contribution to this endeavor by investigating how financial innovations—mediated by their impact on financial and nonfinancial firms—reshape the economy and society (Figure 2). We therefore agree with Davis and Marquis’ (2005: 341) identification of financial markets as one of three “areas of research [that] deserve the greatest attention” and Munir’s (2011: 115) description of the financial crisis as a “goldmine” for institutional theorists.

Third, the article challenges the monistic conceptions of social welfare that most economists (Fleurbæy, 2009) and utilitarians (Jones & Felps, 2013) advance. Research that reduces the many aspects of social welfare to one criterion, such as GDP or overall happiness, can serve social welfare where relatively uncontested issues of public policy are concerned and where there is

broad agreement on what ends public policy should pursue. In those cases researchers articulate ends that are widely shared and then explore the best means for pursuing these ends. Where contested issues of public policy are concerned, however, researchers who define social welfare on behalf of “society” tend to privilege some social groups and ignore others. Researchers should therefore support an inclusive regulatory process that takes seriously the different perspectives of different people and social groups. In this article we advocated a pluralistic conception of social welfare, identifying efficiency, stability, and justice as the key dimensions of social welfare, and we outlined a process to deal with different views on how these dimensions should be weighted and understood (Larmore, 1994). This new conception of social welfare helps researchers rethink and redefine their role for the context of contested issues of public policy, such as financial regulation.

We developed the following vision: financial innovations are transforming the economy and—mediated by financial and nonfinancial firms—also influencing top incomes and income inequality. By studying these effects, researchers in the field of management theory and related disciplines can help different social groups assess whether financial innovations make the economy more just or not. Such research will help reshape financial regulation to make it more inclusive and enhance social welfare. We acknowledge that this endeavor needs to be accompanied by changes in the environment of management academia: to influence public policy, management researchers would have to increase their visibility outside academia (Bazerman, 2005; Munir, 2011) and develop strategies for engaging with social groups (Burawoy, 2004; Delbridge, 2014). These challenges go beyond the scope of this article. We are confident, however, that management researchers will find ways of dealing with these challenges and increasing their influence, despite the head start that economists have in that respect (Ferraro et al., 2005). While this article does not outline a roadmap for how management researchers can become more influential, we hope that it provides them with good reasons for why they should engage in this endeavor.

REFERENCES

Abolafia, M. Y. 2012. Central banking and the triumph of technical rationality. In K. K. Cetina & A. Preda (Eds.),

Handbook of the sociology of finance: 94–114. Oxford: Oxford University Press.

Acharya, V. V., Cooley, T. F., Richardson, M. P., & Walter, I. 2010. *Regulating Wall Street: The Dodd-Frank Act and the new architecture of global finance*. Hoboken, NJ: Wiley.

Admati, A. R., & Hellwig, M. F. 2013. *The bankers' new clothes: What's wrong with banking and what to do about it*. Princeton, NJ, & Oxford: Princeton University Press.

Allen, W. A., & Wood, G. 2006. Defining and achieving financial stability. *Journal of Financial Stability*, 2: 152–172.

Allstate/National Journal. 2011. Heartland monitor poll. Available at <http://syndication.nationaljournal.com/events/heartlandmonitor/HeartlandMonitorIXPresentation.ppt>.

Angel, J. J., & McCabe, D. 2013. Fairness in financial markets: The case of high frequency trading. *Journal of Business Ethics*, 112: 585–595.

Ariely, D. 2012. *The honest truth about dishonesty: How we lie to everyone—especially ourselves*. London: Harper.

Atkinson, A. B., Piketty, T., & Saez, E. 2011. Top incomes in the long run of history. *Journal of Economic Literature*, 49: 3–71.

Baker, A. 2010. Restraining regulatory capture? Anglo-America, crisis politics and trajectories of change in global financial governance. *International Affairs*, 86: 647–663.

Bakija, J., Cole, A., & Heim, B. T. 2012. *Jobs and income growth of top earners and the causes of changing income inequality: Evidence from U.S. tax return data*. Working paper, Williams College, Williamstown, MA.

Barabas, J. 2004. How deliberation affects policy opinions. *American Political Science Review*, 98: 687–701.

Bazerman, M. H. 2005. Conducting influential research: The need for prescriptive implications. *Academy of Management Review*, 30: 25–31.

Becht, M., Franks, J., Mayer, C., & Rossi, S. 2010. Returns to shareholder activism: Evidence from a clinical study of the Hermes UK Focus Fund. *Review of Financial Studies*, 23: 3093–3129.

Bell, B., & Van Reenen, J. 2010. *Bankers' pay and extreme wage inequality in the UK*. Centre for Economic Performance Special Papers (CEPSP21), London School of Economics, London.

Berger, P. L., & Luckmann, T. 1966. *The social construction of reality*. New York: Doubleday.

Berlin, I. 1969. Two concepts of liberty. In I. Berlin (Ed.), *Four essays on liberty*: 118–172. Oxford: Oxford University Press.

Berra, Y. 2001. *When you come to a fork in the road, take it! Inspiration and wisdom from one of baseball's greatest heroes*. New York: Hyperion.

Beunza, D., Hardie, I., & MacKenzie, D. 2006. A price is a social thing: Towards a material sociology of arbitrage. *Organization Studies*, 27: 721–745.

Beunza, D., MacKenzie, D., Millo, Y., & Pardo-Guerra, J. P. 2011. *Impersonal efficiency and the dangers of a fully automated securities exchange*. Foresight Driver Review 11. London: Government Office for Science.

- Beunza, D., & Millo, Y. 2014. *Blended automation: Integrating algorithms into the floor of the New York Stock Exchange*. Working paper, London School of Economics, London.
- Bogle, J. C. 1999. *Common sense on mutual funds: New imperatives for the intelligent investor*. New York: Wiley.
- Bogle, J. C. 2008. A question so important that it should be hard to think about anything else. *Journal of Portfolio Management*, 34(2): 95–102.
- Bowman, K., & Rugg, A. 2013. *Five years after the crash: What Americans think about Wall Street, banks, business, and free enterprise*. Washington, DC: American Enterprise Institute.
- Boyd, J. 2007. Nonmarket benefits of nature: What should be counted in green GDP? *Ecological Economics*, 61: 716–723.
- Brunnermeier, M. K., & Sannikov, Y. 2014. A macroeconomic model with a financial sector. *American Economic Review*, 104: 379–421.
- Buchanan, A. 2002. Political legitimacy and democracy. *Ethics*, 112: 689–719.
- Buchholz, R. A., & Rosenthal, S. B. 1996. Toward a new understanding of moral pluralism. *Business Ethics Quarterly*, 6: 263–275.
- Burawoy, M. 2004. Public sociologies: Contradictions, dilemmas, and possibilities. *Social Forces*, 82: 1603–1618.
- Burrell, G. 1994. Modernism, postmodernism and organizational analysis 4: The contribution of Jürgen Habermas. *Organization Studies*, 15: 1–19.
- Cabantous, L., & Gond, J.-P. 2011. Rational decision making as performative praxis: Explaining rationality's éternel retour. *Organization Science*, 22: 573–586.
- Callon, M. 2007. What does it mean to say that economics is performative? In D. MacKenzie, F. Muniesa, & L. Siu (Eds.), *Do economists make markets? On the performativity of economics*: 311–357. Princeton, NJ: Princeton University Press.
- Callon, M., Lascoumes, P., & Barthe, Y. 2009. *Acting in an uncertain world: An essay on technical democracy*. Cambridge, MA: MIT Press.
- Carrick-Hagenbarth, J., & Epstein, G. A. 2012. Dangerous interconnectedness: Economists' conflicts of interest, ideology and financial crisis. *Cambridge Journal of Economics*, 36(1): 43–63.
- CBS. 2010. *Where America stands: Economic worries persist: Dissatisfaction with Washington runs high*. Available at http://www.cbsnews.com/htdocs/pdf/poll_052510.pdf.
- Center for Deliberative Democracy. 2007. *Italy's first Deliberative Poll offers the informed views of citizens on health care and on investment priorities*. Available at <http://cdd.stanford.edu/2007/italys-first-deliberative-poll-offers-the-informed-views-of-citizens-on-health-care-and-on-investment-priorities/>.
- Chaboud, A., Chiquoine, B., Hjalmarsson, E., & Vega, C. 2014. Rise of the machines: Algorithmic trading in the foreign exchange market. *Journal of Finance*, 69: 2045–2084.
- Chozick, A., & Perloth, N. 2013. Twitter speaks, markets listen, and fears rise. *New York Times*, April 29: 1.
- Cobb, J. A. 2016. How firms shape income inequality: Stakeholder power, executive decision making, and the structuring of employment relationships. *Academy of Management Review*, 41: 324–348.
- Cohen, J. 1989. Deliberation and democratic legitimacy. In J. Bohman & W. Rehg (Eds.), *Deliberative democracy: Essays on reason and politics*: 67–92. Cambridge, MA: MIT Press.
- Colander, D., Föllmer, H., Haas, A., Goldberg, M., Juselius, K., Kirman, A., Lux, T., & Sloth, B. 2009. The financial crisis and the systemic failure of the economics profession. *Critical Review: A Journal of Politics and Society*, 21(2–3): 249–267.
- Connell, A. F., & Nord, W. R. 1996. The bloodless coup: The infiltration of organization science by uncertainty and values. *Journal of Applied Behavioral Science*, 32: 407–427.
- Cooley, T., & Walter, I. 2010. The architecture of financial regulation. In V. V. Acharya, T. Cooley, M. Richardson, & I. Walter (Eds.), *Regulating Wall Street: The Dodd-Frank Act and the new architecture of global finance*: 33–50. Hoboken, NJ: Wiley.
- Crockett, A. 2001. Why is financial stability a goal of public policy? *Handbook of Monetary and Fiscal Policy*, 97: 69–86.
- Crouch, C. 2004. *Post-democracy*. Malden, MA: Polity Press.
- Crozier, M. 1964. *The bureaucratic phenomenon*. Chicago: University of Chicago Press.
- Davis, G. F. 2009a. *Managed by the markets: How finance reshaped America*. Oxford: Oxford University Press.
- Davis, G. F. 2009b. The rise and fall of finance and the end of the society of organizations. *Academy of Management Perspectives*, 23(3): 27–44.
- Davis, G. F., & Marquis, C. 2005. Prospects for organization theory in the early twenty-first century: Institutional fields and mechanisms. *Organization Science*, 16: 332–343.
- Delbridge, R. 2014. Promising futures: CMS, post-disciplinary, and the new public social science. *Journal of Management Studies*, 51: 95–117.
- Doob, C. B. 2013. *Social inequality and social stratification in US society*. Upper Saddle River, NJ: Pearson.
- Druckman, J. N., & Nelson, K. R. 2003. Framing and deliberation: How citizens' conversations limit elite influence. *American Journal of Political Science*, 47: 729–745.
- Dryzek, J. S. 2000. *Deliberative democracy and beyond: Liberals, critics, contestations*. Oxford & New York: Oxford University Press.
- Dworkin, R. 1981. What is equality? Part 2: Equality of resources. *Philosophy and Public Affairs*, 10: 283–345.
- Dymski, G. A. 2011. On the possible replacement of the efficient-market hypothesis: Social efficiency as a "thick" approach to financial policy. In P. Arestis & M. Sawyer (Eds.), *New economics as mainstream economics*: 77–115. Hampshire, UK: Palgrave Macmillan.

- Dymski, G. A. 2014. The neoclassical sink and the heterodox spiral: Political divides and lines of communication in economics. *Review of Keynesian Economics*, 2(1): 1–19.
- Earl, M., & Feeney, D. 2012. How to be a CEO for the information age. *Sloan Management Review*, 41(2): 11–23.
- Easley, D., López de Prado, M. M., & O'Hara, M. 2011. The microstructure of the Flash Crash: Flow toxicity, liquidity crashes and the probability of informed trading. *Journal of Portfolio Management*, 37(2): 118–128.
- Easterlin, R. A. 1974. Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth: Essays in honor of Moses Abramovitz*: 89–125. New York: Academic Press.
- The Economist*. 2012. High-frequency trading: The fast and the furious. 403: 13–15.
- Edward, P., & Willmott, H. 2008. Corporate citizenship: Rise or demise of a myth? *Academy of Management Review*, 33: 771–773.
- Elster, J. 1986. The market and the forum: Three varieties of political theory. In J. Elster & A. Hylland (Eds.), *Foundations of social choice theory*: 103–132. Cambridge & New York: Cambridge University Press.
- Elster, J. 1992. *Local justice: How institutions allocate scarce goods and necessary burdens*. New York: Russell Sage Foundation.
- Engelen, E., Ertürk, I., Froud, J., Johal, S., Leaver, A., Moran, M., Nilsson, A., & Williams, K. 2011. *After the great complacency: Financial crisis and the politics of reform*. Oxford: Oxford University Press.
- Erturk, I., Froud, J., Johal, S., Leaver, A., & Williams, K. 2010. Ownership matters: Private equity and the political division of ownership. *Organization*, 17: 543–561.
- Ezzamel, M., & Willmott, H. 2014. Registering “the ethical” in organization theory formation: Towards the disclosure of an “invisible force.” *Organization Studies*, 35: 1013–1039.
- Ezzamel, M., Willmott, H., & Worthington, F. 2008. Manufacturing shareholder value: The role of accounting in organizational transformation. *Accounting, Organizations and Society*, 33(2–3): 107–140.
- Fama, E. F. 1970. Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25: 383–417.
- Fehr, E., & Gächter, S. 2000. Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives*, 14(3): 159–181.
- Ferguson, N. 2008. *The ascent of money: A financial history of the world*. New York: Penguin Press.
- Ferraro, F., Pfeffer, J., & Sutton, R. I. 2005. Economics language and assumptions: How theories can become self-fulfilling. *Academy of Management Review*, 30: 8–24.
- Ferraro, F., Pfeffer, J., & Sutton, R. I. 2009. How and why theories matter: A comment on Felin and Foss (2009). *Organization Science*, 20: 669–675.
- Fishkin, J. S. 2009. *When the people speak: Deliberative democracy and public consultation*. Oxford & New York: Oxford University Press.
- Fleming, P., & Spicer, A. 2007. *Contesting the corporation: Struggle, power and resistance in organizations*. Cambridge: Cambridge University Press.
- Fleming, P., & Spicer, A. 2014. Power in management and organization science. *Academy of Management Annals*, 8: 237–298.
- Fleurbæy, M. 2009. Beyond GDP: The quest for a measure of social welfare. *Journal of Economic Literature*, 47: 1029–1075.
- Fligstein, N. 1987. The intraorganizational power struggle: Rise of finance personnel to top leadership in large corporations, 1919–1979. *American Sociological Review*, 52: 44–58.
- Fligstein, N. 2001. *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*. Princeton, NJ: Princeton University Press.
- Fligstein, N., & Goldstein, A. 2010. The anatomy of the mortgage securitization crisis. *Research in the Sociology of Organizations*, 30(A): 29–70.
- Fourcade, M. 2009. *Economists and societies: Discipline and profession in the United States, Britain, and France, 1890s to 1990s*. Princeton, NJ: Princeton University Press.
- French, K. R. 2008. Presidential address: The cost of active investing. *Journal of Finance*, 63: 1537–1573.
- Frey, B. S., & Stutzer, A. 2000. Happiness, economy and institutions. *Economic Journal*, 110: 918–938.
- Frohlich, N., & Oppenheimer, J. A. 1992. *Choosing justice: An experimental approach to ethical theory*. Berkeley: University of California Press.
- Froud, J., Moran, M., Nilsson, A., & Williams, K. 2010. Wasting a crisis? Democracy and markets in Britain after 2007. *Political Quarterly*, 81(1): 25–38.
- Froud, J., Nilsson, A., Moran, M., & Williams, K. 2012. Stories and interests in finance: Agendas of governance before and after the financial crisis. *Governance*, 25(1): 35–59.
- Frydman, C., & Saks, R. E. 2010. Executive compensation: A new view from a long-term perspective, 1936–2005. *Review of Financial Studies*, 23: 2099–2138.
- Funk, R. J., & Hirschman, D. 2014. Derivatives and deregulation: Financial innovation and the demise of Glass-Steagall. *Administrative Science Quarterly*, 59: 669–704.
- Galbraith, J. K. 1970. *American capitalism: The concept of countervailing power*. Piscataway, NJ: Transaction Publishers.
- Gallie, W. B. 1956. Essentially contested concepts. *Proceedings of the Aristotelian Society*, 56(1): 167–198.
- Gerding, E. F. 2009. Code, crash, and open source: The outsourcing of financial regulation to risk models and the global financial crisis. *Washington Law Review*, 84(2): 127–198.
- Ghoshal, S. 2005. Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, 4: 75–91.
- Ghoshal, S., & Moran, P. 1996. Bad for practice: A critique of the transaction cost theory. *Academy of Management Review*, 21: 13–47.

- Glynos, J., Klimecki, R., & Willmott, H. 2012. Cooling out the marks: The ideology and politics of the financial crisis. *Journal of Cultural Economy*, 5: 297–320.
- Godechot, O. 2008. "Hold-up" in finance: The conditions of possibility for high bonuses in the financial industry. *Revue Française de Sociologie*, 49(5): 95–123.
- Godechot, O. 2012. Is finance responsible for the rise in wage inequality in France? *Socio-Economic Review*, 10: 447–470.
- Goldstein, A. 2012. Revenge of the managers: Labor cost-cutting and the paradoxical resurgence of managerialism in the shareholder value era, 1984 to 2001. *American Sociological Review*, 77: 268–294.
- Gomber, P., Arndt, B., Lutat, M., & Uhle, T. 2011. *High-frequency trading*. Frankfurt am Main: Goethe University Frankfurt am Main.
- Gond, J.-P., & Piani, V. 2013. Enabling institutional investors' collective action: The role of the Principles for Responsible Investment initiative. *Business & Society*, 52: 64–104.
- Goodin, R. E. 2008. *Innovating democracy: Democratic theory and practice after the deliberative turn*. Oxford: Oxford University Press.
- Goodin, R. E., & Dryzek, J. S. 2006. Deliberative impacts: The macro-political uptake of mini-publics. *Politics & Society*, 34(2): 219–244.
- Goranova, M., & Ryan, L. V. 2014. Shareholder activism: A multidisciplinary review. *Journal of Management*, 40: 1230–1268.
- Gordon, D. M. 1996. *Fat and mean: The corporate squeeze of working Americans and the myth of managerial "downsizing."* New York: Martin Kessler Books.
- Government Office for Science. 2012. *Foresight: The future of computer trading in financial markets. Final project report*. London: Government Office for Science.
- Graham, C., & Pettinato, S. 2001. Happiness, markets, and democracy: Latin America in comparative perspective. *Journal of Happiness Studies*, 2: 237–268.
- Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. 2011. Institutional complexity and organizational responses. *Academy of Management Annals*, 5: 317–371.
- Greenwood, R., & Scharfstein, D. 2013. The growth of finance. *Journal of Economic Perspectives*, 27(2): 3–28.
- Groß-Klußmann, A., & Hautsch, N. 2011. When machines read the news: Using automated text analytics to quantify high frequency news-implied market reactions. *Journal of Empirical Finance*, 18: 321–340.
- Habermas, J. 1966. Knowledge and interest. *Inquiry: An Interdisciplinary Journal of Philosophy*, 9: 285–300.
- Habermas, J. 1970. Technology and science as "ideology." In J. Habermas (Ed.), *Toward a rational society: Student protest, science, and politics*: 81–122. Boston: Beacon Press.
- Habermas, J. 1971. *Knowledge and human interests*. Boston: Beacon Press.
- Habermas, J. 1986. Life forms, morality and the task of the philosopher. In P. Dews (Ed.), *Jürgen Habermas: Autonomy and solidarity—Interviews*: 187–210. London: Verso.
- Habermas, J. 1996. *Between facts and norms: Contributions to a discourse theory of law and democracy*. Cambridge: Polity Press.
- Habermas, J. 1998. Three normative models of democracy. In J. Habermas (Ed.), *The inclusion of the other: Studies in political theory*: 239–252. Cambridge, MA: MIT Press.
- Habermas, J. 2003. *Truth and justification*. Cambridge, MA: MIT Press.
- Hasbrouck, J. 2007. *Empirical market microstructure: The institutions, economics and econometrics of securities trading*. Oxford: Oxford University Press.
- Hasbrouck, J., & Saar, G. 2013. Low-latency trading. *Journal of Financial Markets*, 16: 646–679.
- Haug, C. 2013. Organizing spaces: Meeting arenas as a social movement infrastructure between organization, network, and institution. *Organization Studies*, 34: 705–732.
- Hayek, F. A. 1979. *Law, legislation, and liberty: The political order of a free people*, vol. 3. Chicago: University of Chicago Press.
- Hendershott, T., Jones, C. M., & Menkveld, A. J. 2011. Does algorithmic trading improve liquidity? *Journal of Finance*, 66: 1–33.
- Hendershott, T., & Riordan, R. 2013. Algorithmic trading and the market for liquidity. *Journal of Financial and Quantitative Analysis*, 48: 1001–1024.
- Hickson, D. J., Hinings, C. R., Lee, C. A., Schneck, R. E., & Penning, J. M. 1971. A strategic contingencies' theory of intraorganizational power. *Administrative Science Quarterly*, 16: 216–229.
- Hochschild, J. L. 1981. *What's fair: American beliefs about distributive justice*. Cambridge, MA: Harvard University Press.
- Honneth, A. 1996. *The struggle for recognition: The moral grammar of social conflicts*. Cambridge, MA: MIT Press.
- Horkheimer, M., & Adorno, T. W. 1972. *Dialectic of enlightenment*. New York: Herder and Herder.
- Hucult, I., & Rainelli-Weiss, H. 2011. A market for weather risk? Conflicting metrics, attempts at compromise, and limits to commensuration. *Organization Studies*, 32: 1395–1419.
- Hurka, T. 1996. Monism, pluralism, and rational regret. *Ethics*, 106: 555–575.
- Irwin, S. H., & Sanders, D. R. 2011. Index funds, financialization, and commodity futures markets. *Applied Economic Perspectives and Policy*, 33(1): 1–31.
- Jensen, M. C., & Murphy, K. J. 1990. CEO incentives—It's not how much you pay, but how. *Harvard Business Review*, 68(3): 138–153.
- Johnson, S., & Kwak, J. 2010. *13 bankers: The Wall Street takeover and the next financial meltdown*. New York: Pantheon Books.
- Jones, T. M., & Felps, W. 2013. Stakeholder happiness enhancement: A neo-utilitarian objective for the modern corporation. *Business Ethics Quarterly*, 23: 349–379.
- Kahneman, D., Knetsch, J. L., & Thaler, R. 1986. Fairness as a constraint on profit seeking: Entitlements in the market. *American Economic Review*, 76: 728–741.
- Kant, I. 1958. (First published in 1788.) *Critique of practical reason*. (Translated by L. W. Beck.) New York: Library of Liberal Arts.

- Kant, I. 1959. (First published in 1785.) *Foundations of the metaphysics of morals*. (Translated by L. W. Beck.) New York: Liberal Arts Press.
- Kaplan, S. N., & Rauh, J. 2010. Wall Street and Main Street: What contributes to the rise in the highest incomes? *Review of Financial Studies*, 23: 1004–1050.
- Khurana, R. 2002. *Searching for a corporate savior: The irrational quest for charismatic CEOs*. Princeton, NJ: Princeton University Press.
- Kirilenko, A. A., Kyle, A. S., Samadi, M., & Tuzun, T. 2011. *The Flash Crash: The impact of high frequency trading on an electronic market*. Working paper, Commodity Futures Trading Commission, Washington, DC.
- Kleinnijenhuis, J., Schultz, F., Oegema, D., & van Atteveldt, W. 2013. Financial news and market panics in the age of high-frequency sentiment trading algorithms. *Journalism*, 14(2): 271–291.
- Kocieniewski, D. 2013. Academics who defend Wall St. reap reward. *New York Times*, December 27: A1.
- Krippner, G. R. 2011. *Capitalizing on crisis: The political origins of the rise of finance*. Cambridge, MA: Harvard University Press.
- Krugman, P. 2009a. How did economics get it so wrong? *New York Times Magazine*, September 6: MM36.
- Krugman, P. 2009b. *The return of depression economics and the crisis of 2008*. New York: Norton.
- Landefeld, J. S., & McCulla, S. H. 2000. Accounting for non-market household production within a national accounts framework. *Review of Income and Wealth*, 46: 289–307.
- Larmore, C. 1994. Pluralism and reasonable disagreement. *Social Philosophy and Policy*, 11(1): 61–79.
- Layard, R. 2011. *Happiness: Lessons from a new science*. London: Penguin Books.
- Lazonick, W., & O'Sullivan, M. 2000. Maximizing shareholder value: A new ideology for corporate governance. *Economy and Society*, 29(1): 13–35.
- Lewis, M. 2014. *Flash boys: A Wall Street revolt*. New York: Norton.
- Linton, O., & O'Hara, M. 2011. *The impact of computer trading on liquidity, price efficiency/discovery and transaction costs*. Foresight working paper, Government Office for Science, London.
- Lowenstein, R. 2011. Occupy Wall Street: It's not a hippie thing. *Bloomberg Businessweek Magazine*, October 27: <http://www.businessweek.com/magazine/occupy-wall-street-its-not-a-hippie-thing-10272011.html>.
- Lucas, R. E. 2003. Macroeconomic priorities. *American Economic Review*, 93: 1–14.
- Luskin, R. C., Fishkin, J. S., & Jowell, R. 2002. Considered opinions: Deliberative polling in Britain. *British Journal of Political Science*, 32: 455–487.
- MacKenzie, D. 2006. *An engine, not a camera: How financial models shape markets*. Cambridge, MA: MIT Press.
- MacKenzie, D. 2015. Mechanizing the Merc: The Chicago Mercantile Exchange and the rise of high-frequency trading. *Technology and Culture*, 56: 646–675.
- MacKenzie, D., Beunza, D., Mollo, Y., & Pardo-Guerra, J. P. 2012. Drilling through the Allegheny mountains: Liquidity, materiality and high-frequency trading. *Journal of Cultural Economy*, 5: 279–296.
- MacKenzie, D., Muniesa, F., & Siu, L. 2007. Introduction. In D. MacKenzie, F. Muniesa, & L. Siu (Eds.), *Do economists make markets? On the performativity of economics*: 1–19. Princeton, NJ: Princeton University Press.
- MacKenzie, D., & Pardo-Guerra, J. P. 2014. Insurgent capitalism: Island, bricolage and the re-making of finance. *Economy and Society*, 43(2): 153–182.
- Madrigal, A. 2010. Market data firm spots the tracks of bizarre robot traders. *Atlantic*, August 4: <http://www.theatlantic.com/technology/archive/2010/08/market-data-firm-spots-the-tracks-of-bizarre-robot-traders/60829/>.
- Marauhn, T. 2006. Introduction: The regulatory dilemma in international financial relations. In R. Grote & T. Marauhn (Eds.), *The regulation of international financial markets: Perspectives for reform*: 1–23. Cambridge: Cambridge University Press.
- Marcuse, H. 1964. *One-dimensional man: Studies in the ideology of advanced industrial society*. Boston: Beacon Press.
- Marcussen, M. 2009. Scientization of central banking: The politics of a-politicization. In K. Dyson & M. Marcussen (Eds.), *Central banks in the age of the euro: Europeanization, convergence and power*: 373–390. Oxford: Oxford University Press.
- Matsusaka, J. G. 2005. Direct democracy works. *Journal of Economic Perspectives*, 19(2): 185–206.
- McCulloch, N., & Pacillo, G. 2011. *The Tobin tax: A review of the evidence*. Research Report No. 68. London: Institute of Development Studies.
- Menkveld, A. J. 2013. High frequency trading and the new market makers. *Journal of Financial Markets*, 16: 712–740.
- Miller, D. 1999. *Principles of social justice*. Cambridge, MA: Harvard University Press.
- Mills, C. W. 1956. *The power elite*. New York: Oxford University Press.
- Morgan, G. 2010. Legitimacy in financial markets: Credit default swaps in the current crisis. *Socio-Economic Review*, 8: 17–45.
- Mouffe, C. 1999. Deliberative democracy or agonistic pluralism? *Social Research*, 66: 745–758.
- Munir, K. A. 2011. Financial crisis 2008–2009: What does the silence of institutional theorists tell us? *Journal of Management Inquiry*, 20(2): 114–117.
- Noonan, J. 2005. Modernization, rights, and democratic society: The limits of Habermas's democratic theory. *Res Publica*, 11(2): 101–123.
- Norton, M. I., & Ariely, D. 2011. Building a better America—One wealth quintile at a time. *Perspectives on Psychological Science*, 6(1): 9–12.
- Norval, A. J. 2004. Democratic decisions and the question of universality: Rethinking recent approaches. In S. Critchley & O. Marchart (Eds.), *Laclau: A critical reader*: 140–166. London: Routledge.

- Nozick, R. 1974. *Anarchy, state, and utopia*. New York: Basic Books.
- Nussbaum, M. C. 1992. Human functioning and social justice: In defense of Aristotelian essentialism. *Political Theory*, 20(2): 202–246.
- Panico, C., Pinto, A., & Anyul, M. P. 2012. Income distribution and the size of the financial sector: A Sraffian analysis. *Cambridge Journal of Economics*, 36: 1455–1477.
- Patterson, S. 2012. *Dark pools: High-speed traders, AI bandits, and the threat to the global financial system*. New York: Crown Business.
- Perez, E. 2011. *The speed traders: An insider's look at the new high-frequency phenomenon that is transforming the investing world*. New York: McGraw-Hill.
- Perrow, C. 2010. The meltdown was not an accident. *Research in the Sociology of Organizations*, 30: 309–330.
- Pew Research Center. 2012. *Pervasive gloom about the world economy*. Report. Washington, DC: Pew Research Center for the People & the Press.
- Pew Research Center. 2013. *Household incomes, jobs seen as lagging in recovery: Five years after market crash, U.S. economy seen as "no more secure."* Report. Washington, DC: Pew Research Center for the People & the Press.
- Pfeffer, J. 1981. *Power in organizations*. Marshfield, MA: Pitman Publishing.
- Philippon, T., & Reshef, A. 2012. Wages and human capital in the U.S. finance industry: 1909–2006. *Quarterly Journal of Economics*, 127: 1551–1609.
- Piketty, T. 2014. *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.
- Rajan, R. 2010. *Fault lines: How hidden fractures still threaten the world economy*. Princeton, NJ: Princeton University Press.
- Rawls, J. 1971. *A theory of justice*. Cambridge, MA: Harvard University Press.
- Rawls, J. 1993. *Political liberalism*. New York: Columbia University Press.
- Reid, E. M., & Toffel, M. W. 2009. Responding to public and private politics: Corporate disclosure of climate change strategies. *Strategic Management Journal*, 30: 1157–1178.
- Riaz, S., Buchanan, S., & Bapuji, H. 2011. Institutional work amidst the financial crisis: Emerging positions of elite actors. *Organization*, 18: 187–214.
- Riaz, S., Buchanan, S., & Ruebottom, T. In press. Rhetoric of epistemic authority: Defending field positions during the financial crisis. *Human Relations*.
- Riordan, R., & Storckenmaier, A. 2012. Latency, liquidity and price discovery. *Journal of Financial Markets*, 15: 416–437.
- Rochet, J.-C. 2010. Systemic risk: Changing the regulatory perspective. *International Journal of Central Banking*, 6(4): 259–276.
- Sandberg, J. 2011. Socially responsible investment and fiduciary duty: Putting the Freshfields Report into perspective. *Journal of Business Ethics*, 101: 143–162.
- Saunders, P. 1990. *Social class and stratification*. London & New York: Routledge.
- Scheffler, S. 2000. Justice and desert in liberal theory. *California Law Review*, 88: 965–990.
- Scherer, A. G. 2009. Critical theory and its contribution to critical management studies. In M. Alvesson, T. Bridgman, & H. Willmott (Eds.), *The Oxford handbook of critical management studies*: 29–51. Oxford: Oxford University Press.
- Scherer, A. G., & Marti, E. 2012. The normative foundation of finance: How misunderstanding the role of financial models distorts the way we think about the responsibility of financial economists. In P. Shrivastava & M. Statler (Eds.), *Learning from the global financial crisis*: 260–290. Stanford, CA: Stanford University Press.
- Scherer, A. G., & Palazzo, G. 2007. Toward a political conception of corporate responsibility: Business and society seen from a Habermasian perspective. *Academy of Management Review*, 32: 1096–1120.
- Scherer, A. G., & Palazzo, G. 2011. The new political role of business in a globalized world: A review of a new perspective on CSR and its implications for the firm, governance, and democracy. *Journal of Management Studies*, 48: 899–931.
- Schneiberg, M., & Bartley, T. 2010. Regulating or redesigning finance? Market architectures, normal accidents, and dilemmas of regulatory reform. *Research in the Sociology of Organizations*, 30A: 281–307.
- Scholes, M. 2010. Foreword. In V. V. Acharya, T. Cooley, M. Richardson, & I. Walter (Eds.), *Regulating Wall Street: The Dodd-Frank Act and the new architecture of global finance*: xi–xvi. Hoboken, NJ: Wiley.
- Seabrooke, L., & Tsingou, E. 2014. Distinctions, affiliations, and professional knowledge in financial reform expert groups. *Journal of European Public Policy*, 21: 389–407.
- Sen, A. 2009. *The idea of justice*. Cambridge, MA: Harvard University Press.
- Sher, G. 1989. *Desert*. Princeton, NJ: Princeton University Press.
- Skidelsky, R., & Skidelsky, E. 2012. *How much is enough? Money and the good life*. New York: Other Press.
- Spicer, A., Alvesson, M., & Kärreman, D. 2009. Critical performativity: The unfinished business of critical management studies. *Human Relations*, 62: 537–560.
- Stablein, R., & Nord, W. 1985. Practical and emancipatory interests in organizational symbolism: A review and evaluation. *Journal of Management*, 11(2): 13–28.
- Steffy, B. D., & Grimes, A. J. 1986. A critical theory of organization science. *Academy of Management Review*, 11: 322–336.
- Stern, R. N., & Barley, S. R. 1996. Organizations and social systems: Organization theory's neglected mandate. *Administrative Science Quarterly*, 41: 146–162.
- Stout, L. A. 2011a. *Cultivating conscience: How good laws make good people*. Princeton, NJ: Princeton University Press.
- Stout, L. A. 2011b. Derivatives and the legal origin of the 2008 credit crisis. *Harvard Business Law Review*, 1(1): 1–38.

- Stout, L. A. 2012. Uncertainty, dangerous optimism, and speculation: An inquiry into some limits of democratic governance. *Cornell Law Review*, 97: 1177–1212.
- Summers, L. H., & Summers, V. P. 1989. When financial markets work too well: A cautious case for a securities transactions tax. *Journal of Financial Services Research*, 3(2–3): 261–286.
- Swanson, D. L. 1999. Toward an integrative theory of business and society: A research strategy for corporate social performance. *Academy of Management Review*, 24: 506–521.
- 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.
- Thompson, D. F. 2008. Deliberative democratic theory and empirical political science. *Annual Review of Political Science*, 11: 497–520.
- Trevino, L. K., & Weaver, G. R. 1994. Business ethics/business ethics: One field or two? *Business Ethics Quarterly*, 4: 113–128.
- Tufano, P. 2003. Financial innovation. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the economics of finance*: 307–335. Amsterdam: Elsevier.
- Underhill, G. R., & Zhang, X. 2008. Setting the rules: Private power, political underpinnings, and legitimacy in global monetary and financial governance. *International Affairs*, 84: 535–554.
- Walsh, J. P., Weber, K., & Margolis, J. D. 2003. Social issues and management: Our lost cause found. *Journal of Management*, 29: 859–881.
- Weick, K. E. 1993. The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38: 628–652.
- Westphal, J. D., & Bednar, M. K. 2008. The pacification of institutional investors. *Administrative Science Quarterly*, 53: 29–72.
- Wickert, C., & Schaefer, S. M. 2015. Towards a progressive understanding of performativity in critical management studies. *Human Relations*, 68: 107–130.
- Willke, H. 2014. *Demokratie im Zeitalter der Konfusion [Democracy in the age of confusion]*. Berlin: Suhrkamp.
- Willke, H., Becker, E., & Rostásy, C. 2013. *Systemic risk: The myth of rational finance and the crisis of democracy*. Frankfurt: Campus Verlag.
- Willmott, H. 2003. Organization theory as a critical science? Forms of analysis and “new organizational forms.” In H. Tsoukas & C. Knudsen (Eds.), *The Oxford handbook of organization theory: Meta-theoretical perspectives*: 88–112. Oxford: Oxford University Press.
- Willmott, H. 2011. Making sense of the financial meltdown—An extended review of “The spectre at the feast: Capitalist crisis and the politics of recession.” *Organization*, 18: 239–260.
- Wolff, E., & Zacharias, A. 2009. Household wealth and the measurement of economic well-being in the United States. *Journal of Economic Inequality*, 7(2): 83–115.
- Zaloom, C. 2003. Ambiguous numbers: Trading technologies and interpretation in financial markets. *American Ethnologist*, 30(2): 1–15.
- Zey, M. 1998. *Rational choice theory and organizational theory. A critique*. Thousand Oaks, CA: Sage.

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