

The Ghost in the Financial Machine

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This essay lays out an argument that leads back from some debates in contemporary social studies of finance to arguments that have not been fully developed in some classic writings of Marcel Mauss (1990 [1954]) and Max Weber (2009 [1920]). My starting point is Jacques Derrida's (1994) famous argument about the "impossibility" of the gift, which annuls itself by its implicit expectation (a negative performative) of a return. I focus here on the idea of the "return" as one entry into a new approach to contemporary financial devices.

Derrida's argument about the logical impossibility of the pure gift is in fact anticipated in the very first pages of Mauss's classic essay "The Gift," in the perception by Mauss of the inner contradiction between the voluntary and the compulsory as well as the disinterested and the self-serving elements of the gift. Two facts about Mauss's study have been lost from view. One is that his entire and fundamental interest throughout his essay is in the question of the force behind *the obligation to return*. The second point is that Mauss's thorough archaeology of the gift (in both primitive and archaic societies) was wholly motivated by his interest in the moral force behind the modern contract (legal, impersonal, obligatory, etc.). Bearing these two points in mind allows us to understand better what may have been Mauss's rich and only partial answer to his question, that is, that the obligation to return lay in the spirit of the thing given (the famous *hau* of Polynesia), which in turn provided a dynamic and forceful connection between giver and receiver, and the first giver and the second giver/returner, and so forth.

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I draw two conclusions from this reading of Mauss. The first is that Mauss was quite aware of the inner affinity between archaic and modern forms of binding obligation to return. And he was especially interested in the “spirit” behind the archaic gift, which he was also convinced was the “spirit” behind the modern contract. He found this spirit in a series of cosmologies (themselves dramatically different), all of which see some things as imbued with the spirit of the giver and thus as capable of exercising a moral force on the receiver. This spirit is what animates the specific devices or forms taken by the gift. Notice here that his sociological strategy is to induce the spirit not from the device but from some other nonmechanical source. This sense of spirit closely resembles Weber’s notion of the “spirit” of capitalism, by which usage Weber sought to capture the spirit, the *anima*, behind specific capitalist forms and devices (such as double-entry book-keeping and the rational calculation of profit).

Both Mauss and Weber stand on one side of a great divide that we also see before us today. On the one side, we have Michel Callon (1998, 2007; Callon et al. 2007; Callon and Muniesa 2003) and his many colleagues and collaborators (Beunza and David Stark [2004], Latour [2005], MacKenzie [2006; MacKenzie et al. 2007], and many others) who argue that the best way to understand new economic devices, especially the devices of the market, is to account for their performativity as devices. On the other side stand thinkers like Mauss and Weber (but also Franz Boas; Joseph A. Schumpeter [2008 (1942)]; and Albert O. Hirschman [1977]) whose contributions dispose me to think that there is something akin to a Gödel-type problem in inducing the spirit that animates a particular set of mechanisms from within the properties of the device itself. The rest of this essay is an extension of this “animistic” argument and its relevance to modern financial markets.

The Spirit in Weber

Weber’s use of the word *spirit* (*Geist*), most famously in his work *The Protestant Ethic and the Spirit of Capitalism*, has nowhere clearly been analyzed. It belongs to a family of Weberian terms, which include *ethic*, *ethos*, and *habitus*. This last word, most often seen as part of our debt to Pierre Bourdieu, has been noticed by Jean-Pierre Grossein (1996), whose translations into French of some of Weber’s important writings might be one key to the relationship between Weber and the work of Bourdieu and his collaborator Jean-Claude Passeron. The other (discussed later in this essay) is Bourdieu’s explicit debt to Mauss, who was the first modern user of the term *habitus*.

Weber's discussion of the "spirit" of capitalism in chapter 2 of his famous essay demands a close rereading. "Spirit" in Weber's usage is most often read as belonging to the nineteenth-century sense of the German word *Geist* and is thus assumed to refer to the worldview of an epoch or historical age. This assumption is not wholly wrong, and Weber's own use of the word *ethos*, which is related to his use of the word *spirit*, refers to a cultural sensibility associated with a group, class, profession, or sect and is more diffuse than a mere ideology or doctrine in that it conveys a sense of a bodily disposition, a sensibility, a moral style, and elements of a cultural psychology. In this sense, when Weber speaks of the spirit of capitalism, he does not mean its explicit doctrines, or its ideology, or even less specific technical orientations to market, profit, and calculation. He means something less formal, more dispositional, and moral, something that also makes sense of its crystallization in a particular "ethic."

As Weber, in *The Protestant Ethic*, sets out to describe the spirit of capitalism, he embarks on an interesting methodological exercise, in which the key elements of the "spirit" of capitalism lie outside its technical or professional expressions and speak to a disposition that is somehow anterior (both logically and historically) to its concrete calculative expressions in nineteenth-century capitalist behavior. This anterior "ethos" begins to anticipate Bourdieu's use of the term *habitus*. Various scholars have touched on the links among the ideas of style, deportment, disposition, and spirit in Weber's corpus.

If we look at spirit in this way, as a matter of disposition rather than of worldview, it comes closer to an embodied moral sensibility, which precedes action or organization and amounts to a collective psycho-moral disposition. In this sense, the "spirit" of capitalism, in Weber's argument, is external to and prior to any and all of its distinctive devices, both technological and institutional. The content of this spirit is what will lead us back to Mauss's thoughts on the gift.

Animating Modern Capitalism

After a close reading of a series of extracts from two famous works of Benjamin Franklin, Weber (2009 [1920], 53) notes that "in fact, the *summum bonum* of this ethic, the earning of more and more money, combined with the strict avoidance of all spontaneous enjoyment of life, is above all completely devoid of any *eudaemonistic*, not to say, hedonistic, admixture." Weber goes on to suggest that all varieties of avarice, of adventurism, of reckless pursuit of profit, are not part of the Franklin ethos. He goes on to say that the most plausible answer (before his own) to what inspired true capitalist discipline (if it was not simple greed) was

that of Werner Sombart, who argued that the spirit of modern capitalism lay in the gradual emergence of rationalization.

Weber gives Sombart much credit but argues, in a few closely reasoned pages (2009 [1920], 75–78), that rationalization is by itself an inadequate source for the modern spirit of systematic, even ascetical, commitment to moneymaking. In fact, he suggests that the spirit of modern capitalism actually has something “irrational” about it that requires historical sourcing and that this irrationality is in fact expressed in the hostility of the Franklin ethic to the eudaemonistic motive for moneymaking. This irrational component is what leads Weber to the Protestant conception of the “calling” as the key to the modern spirit of capitalism. In chapter 3 of *The Protestant Ethic*, he does a close reading of Martin Luther’s conception of *Beruf* (calling) and shows that it is in fact too traditionalistic to be the source of the spirit of Franklin; that is, it was still an attitude to worldly activity that was cautious and qualified, because of Luther’s antipathy to any disposition that might lead back to the doctrine of “salvation through works.” This step leads Weber to argue that to truly find the source of Franklin’s irrational restraint about moneymaking we must turn to Calvin and his ideas about election, proof, and salvation.

Weber’s reading of Calvin, which is the pivot of *The Protestant Ethic*, is contained in chapter 4, “The Religious Foundations of This-Worldly Asceticism.” Every line of this chapter has been read and debated, both in Weber’s own lifetime and up to the present day. So I will note just one critical element of what Weber found in Calvin, what he thought distinguished Calvin from Luther and was the key to Weber’s argument about the “spirit” of modern capitalism. This is the spirit of “methodicality.” Chapter 4 of *The Protestant Ethic* is virtually a thriller, a heart-stopping effort to trace a key distinction, to get to the heart of a mystery, to catch a great idea in its germinal form. It has a breathtaking urgency about it, a breakneck attention to the trail, and a remarkable lateral attention to possible alternative paths that need to be rejected or avoided.

We see here a series of careful efforts by Weber, mainly to distinguish Calvin’s views on grace, works, election, and proof, both from earlier Catholic views and from Luther’s views, which come close to the later Calvinist position and then retreat from it. The drift here is toward taking the ascetical (monastic) model of systematic ethical action and moving it into a model for the systematic ethical organization of the totality of a man’s life. Weber points out that the plight of Calvin’s believer is that as a consequence of his belief in God’s power, grace, and foreordained plan for man’s salvation, there is no way whatsoever for man to intercede (whether by prayer, by confession, or by works) in God’s decision about

who is saved and who is not. Furthermore, there is no way to *distinguish* by their behavior or by any other sign those who are saved from those who are not. This produces an immense form of loneliness (here Weber is very much in the line of Søren Kierkegaard), and the systematic and methodical dedication of one's life to the accumulation of wealth is only as a sign to oneself of a life that resembles the sort of life that can enhance God's glory, regardless of whether one is one of the elect. This pattern of life is not intended as an effort to influence God in any way (for that is absurd in Calvin's theology), nor is it a sign of inner certainty about one's own status. It is in fact a *gamble on God's grace*. But it is a special sort of gamble. It is not a gamble on an outcome. It is a *derivative gamble*; that is, it is a gamble on a gamble. The primary gamble is a gamble on the possibility that one is one of the elect (already predetermined but absolutely unknowable); the second is the gamble that in performing as if one were one of the elect, one is likely to be acting to enhance the glory of God (felicitously, one might say in J. L. Austen's terms, rather than infelicitously, that is, as one who is not one of the elect but is nevertheless performing as if one were saved).

One could make a cruder reading of Weber's interpretation of Calvin to the following effect: I can never know if I am one of the elect. This makes me feel lonely and anxious. So I will act as if I were one of the elect, by dedicating my *worldly* life to a methodical ethical plan. This will change nothing. But it will make me feel better because, at the very least, I am acting to celebrate God's grace in my own way. A more nuanced reading would be that the Calvinist approach to profit making in this world—absent any possibility of certainty about one's status as saved or damned—is as a derivative gamble in the face of radical uncertainty, about the disposition of God's grace. That is, Calvinist economic methodicality in the pursuit of worldly wealth (ascetical rationality) is a gamble on the felicity of a performative.

Risk and Grace in Weber

The stage is now set to discuss the biggest puzzle in looking at Weber's work on the entrepreneurial ethic and indeed his work on economic history more generally: it contains virtually no references to the problem of "risk," except in some brief asides on medieval shopping and commerce in his famous essay on "general economic history" (Weber 1981). This is a bit surprising, since Weber's ideas about the emergence of modern capitalism remain among the major arguments about the "entrepreneurial" spirit in the nineteenth and twentieth centuries.

A close reading of *The Protestant Ethic* and Weber's other writings on what he

often called “ascetical capitalism” reveals two things that cast light on this puzzle. The first is that Weber’s primary ideas about uncertainty were expressed in his account of Calvin’s ideas about grace, election, and salvation and the profound uncertainty (hence the loneliness) of the Calvinist believer, who could never look into the black box of divine providence to ascertain whether he was one of the saved. This radical uncertainty, which leads to the doctrine of *certitudo salutis* (the certainty of grace), was at the very heart of Weber’s account of the Calvinist ethos. When it comes to modern capitalism and its spirit, Weber puts his entire stress on the linked ideas of methodicality, rationalization, calculation, and sober business practice. Nowhere in his account of ascetical capitalism is risk mentioned, even when he focuses on profit as the critical driver of double-entry book-keeping and capital accounting in modern commercial organizations. Weber’s quintessential Calvinist is not a risk taker. Or, more precisely, it was not the risk-taking side of modern business enterprises that most interested Weber.

Prima facie, this fact seems to disqualify Weber from being invoked in any discussion of the contemporary financialization of capitalism, since this process has risk at its very heart. What then can we take from Weber, given his complete disinterest in risk as a feature of the modern entrepreneurial enterprise? To answer this question, we must take a page out of Weber’s own book and note that he said that the Calvinist spirit was crucial not to the ongoing, routinized evolution of capitalism but only to its originary moment (that moment which he identified more in the eighteenth than in the nineteenth century). After that moment, capitalism becomes a self-propelling machine that no longer requires the ascetical spirit of capitalism for its key players to be animated and motivated. The Calvinist spirit, in this later phase, has been fully incorporated into the capitalist machine. This methodological division between the founding moment and later moments is a distinction I will return to make again in regard to risk.

I would argue that the period since the early 1970s, which might be seen as the beginning of the thoroughgoing financialization of capitalism (especially and initially in the United States), is not in fact a moment of unbridled risk taking, as so many analysts and media observers have been prone to say, especially in the wake of the 2008 global meltdown. I would suggest rather that it is a period when the *spirit of uncertainty* has been reawakened in relation to the unprecedented formalization/abstraction/commercialization of the machinery of risk itself.

So here is the proposition I think is worthy of careful further development and critique. In the course of the past forty years, the machinery for measuring, modeling, managing, predicting, commoditizing, and exploiting risk has become the central diacritic of modern capitalism. Financial markets lead and shape other

markets, financial capital vastly outstrips manufacturing or industrial capital, financial policy makers dominate global economic policy, and major economic crises are produced and prolonged by the runaway growth of risk instruments, markets, and creative legal and accounting devices. The careful sociological analysis of these devices is the greatest accomplishment of the major scholars working on the sociology of finance (Callon, MacKenzie, and Stark and their numerous colleagues and collaborators). The bulk of this work, and corresponding technical work within the finance field itself, comes out of the pathbreaking essay by Frank H. Knight on “risk and uncertainty” (1921). Knight was the first to make a fundamental distinction between risk and uncertainty, arguing that situations with risk were those where decision making was made faced with unknown outcomes but known ex-ante probability distributions. In Knight’s view, these situations, where decision-making rules such as maximizing expected utility can be applied, differ in a deep way from those where the probability distribution of a random outcome is unknown. Although there is some emerging work in economics on “Knightian uncertainty,” it is not yet easily available or widely discussed in the literature on the sociology of finance, which is largely preoccupied with risk-based measures and practices.¹ I look forward to an emerging future dialogue in which work on Knightian uncertainty (as opposed to risk) can provide a new platform for conversations among sociologists, economists, and anthropologists concerned with modern finance.

Meanwhile, it is interesting to note that Knight, the father of all subsequent work on the economics of risk, was also a major American translator and mediator of Weber and that he saw much to commend in Weber’s work in economic history. Absent any explicit discussion (of which I am aware) by Knight of Weber’s views of the capitalist spirit, I propose the following argument.

Risk is now part and parcel of the machinery of contemporary capitalism, and the “devices” that measure, model, and forecast risks are central to the finan-

1. An interesting exception is Daniel Beunza and Raghu Garud’s 2007 paper on “frame-making.” In this paper the authors seek to make a strong argument about the importance of calculative “frame-making” as the key to analysts’ valuations of companies in conditions of Knightian uncertainty. They are critical of Bayesian approaches (which dominate the financial literature) and the “imitation” approach, which dominates behavioral economics. The frame-making approach of Beunza and Garud, derived from Erving Goffman’s analysis of “frames,” is reasonable and adequate for analyzing the rhetoric, diversity, and differential uptake of analysts’ reports, but it leaves open the question of what more general intuitions about the economy determine large-scale decisions by major institutional players, such as short sellers and hedge-fund managers, who are more direct reflections of decisions in the face of Knightian uncertainty. This latter group is of primary relevance to my argument in this essay.

cialization of modern capitalism. What has happened to Knightian uncertainty (apart from the famous Rumsfeldian formulation about “knowing what we don’t know”)? We might say that while some actors in the field of finance do know what they don’t know, and perhaps also what they would like to know, they certainly have no good way to measure what they don’t know, and even more, they do not know how to measure it probabilistically. Thus uncertainty remains outside all financial devices and models. So what do we, as analysts, do about uncertainty in the current financial world? I suggest that a set of attitudes, dispositions, and intuitions, in short an ethos (or what we might today call an imaginary), about uncertainty is certainly discernible, and it cannot be directly deduced from any social or technical study of practices in which risk devices are embedded. In what does this imaginary consist?

The Uncertainty Imaginary

Weber found the ethos of rational capitalist action in the Calvinist mind-set, in a specific set of ideas about God’s grace, human salvation, the nature of proof about election to the company of the saved, and the bourgeois virtues that this set of ideas engendered, which he labeled “ascetical capitalism.” Plainly, when we look at the heroes and (demons) of the past forty years in global finance, especially in the United States (individuals such as Michael Milken, Ivan Boesky, and Bernard Madoff), we cannot see in them much of the spirit of the ascetical Calvinist businessman, who was deeply opposed to greed, excess, exuberance, and worldly pleasure in almost any form. Rather, the typical “master” of the financial universe is not a dull or nerdy accountant or lawyer but a gaudy, adventurous, reckless, amoral type, who embodies just the sort of avarice, adventurism, and charismatic self-motivation that Weber saw as the absolute enemy of systematic capitalist profit making.

It is not hard to see, especially in the past year or two, when we look at the extraordinary incomes, extravagant lifestyles, and swashbuckling heroics of the major bankers, hedge-fund managers, arbitrageurs, swappers, insurers, and their imitative juniors, that we are in the presence not of sober risk managers but of individuals who have chosen to define, without any models, methods, or measurements to guide them, the space of financial uncertainty as such. In this regard, these heroes of the financial imaginary are precisely not about the taming of the “passions” by the “interests” (in Hirschman’s famous formulation) but rather are about the animation of the interests by the passions.

That is, the world of financial risk, and its numerous emerging instruments and

devices, is in fact nothing other than an enormous set of tools, a technology, for the mapping and measuring of risk, not to manage it but rather to *exploit* it. However, the exploitation of risk, by definition, cannot be animated within the boundaries of the information provided to any player by his devices alone. It is of course clear that financial players also use information gathered from their peers, their social networks, the media, and, not least, their prior worldly experiences. But the availability of such extra-technical information is a truism. What is important is the ethos, the spirit, the imaginary through which the world of the screen, the floor, the office, and even the invisible collegial network is valued, assessed, and shaped. Markets may be about efficiency, but financial actors are not. Nor will individualistic psychological theories of expectation, preference, and utility (which constitute 99 percent of the foundation of behavioral economics) take us any further, if we are interested in collective orientations and dispositions.

I propose that the primary feature of the ethos of financial players in the past few decades, those who have both played and shaped the financial game, is to be found in a working (though not consciously theorized or articulated) disposition toward exploiting uncertainty as a legitimate principle for managing risk. In other words, those players who define the strategies through which financial devices are developed and operated (as opposed to those who simply react or comply with these strategies) use their own intuitions, experiences, and sense of the moment to outplay other players who might be excessively dominated by their tools for handling risk alone. In short, these key players (the contemporary incarnations of, say, Franklin and John Baxter, in Weber's argument) are those who are not just bold enough and wealthy enough to "sell short" (for example), like John Paulson and George Soros, but also those who are in one way or another skeptical of the reliability of devices. This group includes, but is not confined to, short sellers.

The ethic of these key players in today's financial world is not yet easy to glean, even with the plethora of narrative accounts of the great players and dramas in the financial markets of recent years (viz., William D. Cohan [2010]; Michael Lewis [2010]; Charles R. Morris [2009]; Andrew Ross Sorkin [2009]; Gillian Tett [2009]; David Wessel [2009]). Still, we can suggest some possibilities for characterizing this type of actor. First, they are not afraid to be pessimistic about the possibilities of certain markets, economies, and even nations. Second, they are "contrarian" in their approach to most general opinions about investment and stock appreciation. Third, they are willing to take large bets on their pessimistic assessment of weak corporations, bad underwriting, and current credit-rating consensus. The common structural property of each of these dispositions is simple: their sense of the environment of relevant uncertainties inclines them to be

more confident about their reading of downside rather than of upside risks. If it is true that whatever rises must fall, and that whatever falls must rise (virtually the founding axiom of the financial markets), the short-sell ethic or imaginary is more comfortable with the inevitability of fall. This might be described as the core of the contrarian imaginary of uncertainty. We might suggest that those financial players who are inclined to sell short, owing to a sort of structural pessimism, are more confident about downside than about upside risk. This is clearly tied to the major feature that distinguishes short sellers who make money (even fortunes) rather than lose money: their confidence in their capacity to be right about the *timing* of the downturn, which is the key to large profits on the short sell. Thus these are players who are not only contrarians but are also actors willing to infuse their reading of uncertainties (doubtless hard to quantify) into their reading of the timing of the downturn as measured on the screens that reflect risk.²

Here I am not trying to privilege “bears” over “bulls” or pessimists over optimists in the financial markets. I am interested in those who are willing to recognize that the main brute fact about uncertainty is that it might not favor you in the management of risk. Their pessimism is at least as exemplary of the imaginary of uncertainty as the ethos of those who consistently bet on short- or long-term upswings in any financial market. Contrarians define a tendency to wager on uncertainty rather than on risk as such. This hypothesis about the spirit of those actors that defines the financialization of contemporary capitalism requires a closer look at the relations among uncertainty, calculation, and market analysis in this ethos and is the subject of the following two sections.

Uncertainty and Calculation

As I have already suggested, the idea of uncertainty has been almost completely forgotten both by practitioners and by analysts who study contemporary capitalism. Hence we need to look more closely at the process, which is simultaneously discursive, technical, institutional, and ideological, by which risk has pushed uncertainty out of the picture, but not entirely successfully. Here Weber can once again come to our assistance.

2. I owe to my son, Alok Appadurai, the refinement that just timing is not what sets the short sellers apart from those on the “long” side. It is actually their awareness that the downturn has much greater velocity than the uptick, the latter being usually a more gradual and cumulative process. Both short sellers and long sellers must be attuned to timing, but short sellers have much more to fear from the sheer velocity of the decisive downturn on which they have wagered. This also sets these contrarians apart from the bulk of those who “hedge” their investments, since the latter are always trying to balance incompatible expectations about the timing of downturns.

Weber's entire corpus, especially in those writings concerned with the comparative history of capitalism, turned on his particular understanding of the idea of "magic." For Weber, magic was the main obstacle to the birth of Protestant capitalism, the capitalism of methodicality, sobriety, thrift, and discipline. In his lifelong efforts to study why other major world religions, such as Hinduism, ancient Judaism, Confucianism, and Taoism, did not have the ethical ingredients to kick-start modern capitalism, the culprit for Weber is "magicality." There have been few thorough efforts to examine how Weber used the word *magic*, but my own preliminary study suggests that magic for Weber meant some sort of irrational reliance on any sort of technical procedure, in the effort to handle the problems of evil, justice, and salvation. Magic is a kind of coercive proceduralism. Weber, of course, was a great believer in the importance of procedure and associated formalisms in the emergence of modern law, politics, and bureaucracy. But proceduralism in the realm of salvation or ethics was for him a vestige of magical thinking and an obstacle to ethical rationality and methodicality. It is true that Weber did not have a chance to study Catholicism and Islam carefully in his magnificent tour through the world religions, but his passing observations on these cases confirm that he also regarded them as failures in the elimination of magical thinking and the achievement of the clean ethical slate on which Calvinist methodicality might have taken shape.

Today, however, it is possible to identify a series of magical practices (by which I mean both coercive and divinatory performative procedures) at the heart of global capitalism and, in particular, of the financial sectors. These practices are premised on a general, absolute, and apparently transcendent faith in the market, which appears both in the daily discourses of traders in the financial markets of the United States (as vividly documented recently by Caitlin Zaloom in 2006)³ and in the plaintive wailings of George W. Bush, when he begged us all to remain loyal members of what I called "the faith-based economy." Reversing the Weberian logic that leads from doubts about salvation to ascetical discipline, to ethical methodicality, to thrift, and to rational profit making, the new religion of the market treats the market as the source of certainty, as the reward for dis-

3. Zaloom's work belongs to an important set of recent studies that includes the work of Keith Hart (2000), Karen Ho (2009), Edward LiPuma and Benjamin Lee (2004), Bill Maurer (2002), Hirokazu Miyazaki (2007), and Annelise Riles (2004) and which forms the core of the emerging field of cultural studies of finance. This field is ethnographic, context sensitive, actor oriented, and meaning-driven in its approach to financial practices and stands in clear contrast to the more visible space of the sociology of finance. I do not engage with it at length in this essay, given my rather narrow focus, but it should be clear that I see my work as deeply sympathetic to the cultural approach.

ciplined focus on its messages and rhythms, and as the all-powerful power that rewards its own elect, so long as they obey its ethical demands. The magical practices that flow from this faith cover a range of terrains, including (1) the varieties of what Callon (1998; Callon et al. 2007) and his colleagues call “formatting,” which allow no products to be qualified, classified, and made legitimate without necessarily being visible; (2) the role of “framing” in the practices of securities analysts in the face of Knightian uncertainty (Beunza and Garud 2006); (3) the role of finding “likenesses” or similarities in the efforts of investment banks to provide contact languages of valuation for new financial products among sectors of the bank and between the bank and its clients; (4) the multiplex sociosemantic manipulations involved in the evolution of the large class of financial products called “derivatives,” all of which have in common the sequences of metonym and metaphor identified long ago as primary properties of magical action; and (5) the logic of what has been called financial chartism (Preda 2007) in the technical analysis of financial securities, which explicitly eschews any analysis of fundamentals, that is, of cause-and-effect relationships between prices and other fundamental economic data, and instead relies entirely on financial charts of prior price movements, which are used as the basis for predictions of the future. These detailed charts, which are regarded by others as entirely unscientific, have very good standing in financial markets and are in reality no different from the charts of astrologers, psychics, or tarot card operators or other diagrammatic formats for prognostication. In short, they are mechanical techniques of prediction with no interest in causal or explanatory principles. Such examples of magical thinking could be multiplied and detailed across the financial markets in great variety and detail. Some outcomes of the new magicalities that undergird the global financial system and especially its speculative institutions are discussed below.

The *techniques of calculability* (and hence its domain) have far exceeded the organizations and tools for its management, hence opening a new distance between expert and popular understandings of risk. I believe that this space is the new location of Knightian uncertainty and is therefore a magnet for exotic financial products, whose effects on the bottom lines of financial businesses is virtually impossible to measure.

Probability and *possibility* have become dangerously confused in many popular understandings, thus opening the door to myriad schemes, scams, and distortions based on emergent forms of personal charisma. From the now infamous hard-luck letters from widows of dictators in West Africa to the charismatic confidence game of Madoff and Allen Stanford, it is evident that widespread uncertainty is

leading to wholesale predation by users of numerical strategies on the gullibility of luck- or fortune-oriented thinkers of every variety. The most important space in which to examine the confusion of possibility and probability as ethics, which absorb mass aspirations for change into the space of the official financial sphere, is the burgeoning world of microcredit. I believe that microcredit, in its many global incarnations, can be shown to be a space where small-scale savings among the poor are potentially drawn into large-scale financial profit-making spaces, using the ethicizing discourses of empowerment, trust, and social capital.

The external or transcendent sources of ethics identified by Weber (such as the Calvinist ethic) have been replaced in the corporate world in general, and the financial sector in particular, by various forms of *immanent corporate ethics*, indexed by terms like *transparency*, *accountability*, *corporate social responsibility*, *good governance*, and so forth, thus making the justification of calculative actions immune from broader ethical images and doctrines.

The single best example of the complexities of immanent corporate ethics is the entire doctrine of *conflict of interest*, which is deserving of much closer study by social scientists. This incarnation of older ideas of corruption, nepotism, and misuse of public office, all offshoots of the modern division between personal and professional interest, is fascinating because of the ideas' recursive ethical impossibility. So if you take a close look at Sarbanes-Oxley, the locus classicus of recent legislation calculated to protect individuals and corporations from fraud, you can see that it suffers from the fundamental problem of all ethical voluntarism. It requires self-regulation and self-revelation as guardians against improper business activity and, more specifically, improper profit-making strategies. Close examination of the problems of the doctrine will show that the entire edifice of professional ethics as conceived by Weber and others has been exposed as impossible by the financial professions. This opens up a space for a new sort of debate about moral regulation from outside the professional sphere.

Finally, in spite (or perhaps because) of the growth in highly technicalized models of prediction, forecasting, and risk management in the financial sphere, there has been a steady *hybridization of the ideologies of calculative action*, so that the casino, the racetrack, the lottery, and gambling in general have infused the world of financial calculation and vice versa, thus confusing the spheres of chance and risk as technical features of human life. Such processes of hybridization have also been remarked on in recent studies in the sociology of accounting itself (Miller, Kurunmaki, et al. 2008).

Accounting for Uncertainty

The relationship between accounting practices and uncertainty in the financial markets has not been much analyzed or developed. I believe that a close redeployment of Weber's key ideas could be of much use in this sphere, if we accept that the major bridge between economic theories and economic instruments in the contemporary financial world is in the area of uncertainty. Knightian uncertainty remains the major challenge for both theorists and practitioners in the field of finance and accounts for debates within economics and between theorists in economics departments and in business schools.

To address the importance of accounting practices in a world of Knightian uncertainty, it is important to return to Weber's analysis of the importance of new accounting practices in the emergence of the modern capitalistic enterprise. In particular, we need to revisit Weber's idea of "capital accounting," one of the most lucid expositions of this fundamental innovation in the history of capitalism.

This analysis of the historical role of capital accounting permits us to make a critical link between Weber and Knight, on the matter of uncertainty. Weber's analysis of capital accounting shows that without an innovative accounting device, which permitted capital accounting, there could be an increase in the *wealth* of an actor, but there could be no *profit*. Let me quote Weber (1968: 91) on the idea of profit:

There is a form of monetary accounting which is peculiar to rational economic profit-making; namely, "capital accounting." Capital accounting is the valuation and verification of opportunities for profit and of the success of profit-making activity by means of a valuation of the total assets (goods and money) of the enterprise at the beginning of a profit-making venture, and the comparison of this with a similar valuation of the assets still present and newly acquired, at the end of the process; in the case of a profit-making organization operating continuously, the same is done for an accounting period.

This observation leads Weber (1968: 92) to go on to say that "an economic enterprise [*Unternehmen*] is autonomous action capable of orientation to capital accounting." Furthermore, Weber (1968: 92) observes, in a crucial passage, that in a market economy "every form of rational calculation, especially of capital accounting, is orientated to expectations of prices and their changes," and this form of calculation depends critically on double-entry bookkeeping. Thus accounting is a precondition to the very idea of profit and is very far from a mere method of recording or measuring something that exists prior to the practice of

double-entry bookkeeping. Here Weber has already identified the primary idea behind the entire corpus of MacKenzie and Callon on economic performativity, in spite of their later debates and refinements of this insight.

Nevertheless, as I have already noted, Weber barely paid any attention to risk, and his interest in uncertainty was wholly focused on the salvational uncertainty of the Calvinist Protestant believer. This is where Knight's classic work on "risk and uncertainty" (2009 [1921]) is of social importance. A recent essay by a distinguished economist and financial practitioner is a strong reminder that we will all fail to explain the current financial crisis until we face Knight's brutal observations about uncertainty, to the effect that "profit arises out of the inherent, absolute unpredictability of things, out of the sheer, brute fact that the results of human activity cannot be anticipated and then only in so far as even a probability calculation in regard to them is impossible and meaningless" (Knight, quoted in Janeway 2006).

William H. Janeway (2006) goes on to make a strong argument to the effect that no amount of manipulation of current models and strategies for managing or forecasting risk will solve the problem of Knightian uncertainty and reminds us that Knight was deeply aware that the problem of uncertainty was a product of the fact that the economy was a forward-looking process and that, in the words of Paul Davidson (1994), the economy was a nonergodic system. We also need to notice that Knight was the first major thinker to recognize that uncertainty was the critical site in which profit-making activity found its success or failure, rather than in the sober methodicality of the Weberian businessman.

In a brilliant essay in a volume edited by J. Stan Metcalfe and Ewe Cantner (2003), Maria Brouwer juxtaposes the ideas of Weber, Schumpeter, and Knight on the role of entrepreneurship in economic development and in demonstrating both the dialogue and the differences among these three major thinkers distinguishes the Weberian entrepreneur, Schumpeter's innovator, and Knight's risk-financing capitalist, who is the only one who selects among alternative innovative *ideas in the face of uncertainty*. Brouwer is thus able to show the direct linkage of profits to uncertainty, the brilliance of Knight's insight that it is finance that makes the crucial difference in determining which innovations will actually come to market, and how the capacity of the financier to take risks on specific innovations actually depends on the capacity to face uncertainty, rather than to manage risk. Profit is the reward for facing uncertainty, not for managing risk or, even less, as in Weber's analysis, for methodical business practice.

What Brouwer misses is that if we go back to Weber's ideas about the centrality of capital accounting to profit making, as opposed to his picture of the sober

Puritanical businessman, we can see that Weber did understand the relationship of profit making (as opposed to wealth acquisition) to the instruments of accounting, which were in fact designed to measure the relationship between current and future asset value. In this sense, Weber did see that accounting was a tool for managing expectations. What has confounded many later analysts, including myself, is our tendency to confuse the charismatic confidence of Calvin himself (in his certainty of grace and thus in his endorsement of the organization of all of life to the glory of God, beyond the confinement of the monastic life) with the more systematic, methodical, rationalized profile of his Puritan followers.⁴ The inner certainty, the ecstatic confidence, and the irrational sense of election are all characteristic of Calvin and are what, suitably recontextualized and articulated, is the key to today's short sellers and bears that have no risk-managing devices on which to rely.

So where does this leave a new approach to the relationship among accounting, uncertainty, and the financial market? If the entire apparatus of probabilistic devices for financial forecasting cannot be the final guide to profit making in the face of uncertainty (or wagering on one's own sense of the direction and the timing of the downturn in the case of short sellers), we might need to look again at the innovations on the accounting side of the financial markets as the key devices that have now become guides for the exploitation of uncertainty. This possibility has been touched on in recent studies of the performativity of new accounting protocols.

My own (still to be fully developed) intuition is that the spirit that informs today's heroic, charismatic players at the very high ends of the financial market lies *not* in an as yet undiscovered set of proprietary databases, screens, tools, or models, to which lesser players in the market do not have ready access. Rather, these are players who have a different strategy of divination, of reading the signs, charts, trends, flows, patterns, and shifts in the market, than those who are less willing to take their outsize bets on the certainty and timing of market downturns. The sources of this divinatory confidence might lie—this is a working intuition and not a fully developed hypothesis—in the capacity of some players to link innovations in financial *accounting* to gray areas in financial *accountability*. This intuition needs exploration and debate in the future.

One further question that remains to be asked is what exactly we can currently

4. I am especially grateful to several conversations with Lee, the codirector of the Cultures of Finance Group, for helping me see the importance of splitting the charismatic and supremely confident Calvin from his methodical and anxious Puritan followers.

guess might be the spirit (ethos, ethic) that underpins the ethos of these “bears.” Here I turn to the recent work by Jackson Lears (2003) on the historical tension between the culture of chance and the culture of control in American history. In this brilliant work, Lears documents the deep interconnections between religion, commerce, and leisure in American life, as well as the multiple historical sources of this tension. He suggests that today’s speculators and day traders represent the still powerful yearning among Americans for the undeserved victory, the lucky gamble, which animates parts of the American economy, and argues that this ethos is part of the deep belief in grace, outside of all human efforts, which still animates many Americans.

I see much of merit in Lears’s argument, not least in his readings of Mauss and Weber. However, I propose one significant modification of his account. In my view, the masters of the financial universe, particularly those who have the confidence in their own capacity to be lucky in the timing of the short sell, are not really acting on their faith in the workings of chance to offset the working of systems of control. Rather, they believe in their capacity to channel the workings of chance to win in the games dominated by cultures of control. More precisely, they believe in their capacity to channel the workings of uncertainty to be winners in games of risk. All the instruments of risk that characterize today’s financial markets (most important, the modern derivatives such as over-the-counter derivatives, unregulated by any clearinghouse) are “devices” whose buying and selling are available to anyone with the resources to purchase them. But selling them short requires a deep confidence in the realm of Knightian uncertainty, where there are, by definition, no tools for either modeling or forecasting the timing of the downturn. This confidence, whatever its sources, is the “grace” that the most powerful bears believe they possess.

It is not at all obvious that this sort of belief in the grace that allows one to infuse the machinery of risk with the spirit of chance among today’s leading bears is a matter of religion, culture, or class, in any simple sense. Such individuals come from many religious, cultural, and national backgrounds and indeed do not have even common political values (note the contrast between Soros and Paulson, for example). So it does not make sense to replicate the Weberian answer and identify some sort of religious ethos as the distinctive feature of the disposition of these actors. It remains an important ethnographic challenge to identify the contours of this ethic of grace, which in these players takes the form of a capacity to channel uncertainty so as to tame the machinery of risk.

One possible objection to my proposal needs to be addressed: my approach to

the ethic that animates the machinery of today's financialized capitalism takes as its quintessential players the bears, the contrarians, and the short sellers. Does this not put players who are by definition against the herd at the center of the sociology of finance?⁵ Can outliers be modal social types? My tentative answer is that in a historical moment when the exploitation of risk for the maximization of profit is the central feature of the reigning game, those who are willing to bet against the majority are even better exemplars of the general ethos than those who are fully committed to the general wisdom about growth, upticks, secular improvements, and eternal self-correction in a market that comes closer and closer to complete efficiency. The players who are most revealing of the foundational ethos in such a context are not those who wish to "tame chance" but those who wish to use chance to animate the otherwise deterministic play of risk.

Mauss and the Problem of Return

This long Weberian reading of the ethos of today's financialized capitalism was initiated by some reflections on Mauss. I now return to these reflections. Mauss's key idea—which was intended to explain not just the logic of gifts in archaic and primitive economies but also the spirit of the contract in modern societies—was that the obligation to return was animated by the spirit of the gift, which was in turn produced by the entwinement of giver, gift, and receiver in the spirit of the thing. In Mauss's analysis, one form of this logic was to be found in Polynesia, and the other form, much more competitive, political, and aggressive, was to be found in the potlatch ceremonies of the American Northwest, most richly analyzed by Boas. Mauss's analysis of the North American potlatch viewed it as an intermediate form between the entirely reciprocal, collective, and totalizing spirit of the gift economy and the individualizing, utilitarian, and impersonal ethos of the modern contractual economy. Hence the potlatch tended to revolve around themes of honor and credit, which were less marked in the gift economies of Polynesia. The high-status players in the potlatch were willing to spend, give away, and burn great amounts of property (e.g., blankets, food, and coppers) in efforts to make the reciprocal gift a difficult one and to create temporary-status inferiority

5. I should qualify this position by proposing that the "ideal type" of today's financial risk taker may in fact be a composite of several kinds of players. I am in this essay offering the profile of the short seller and, more generally, the bear. Others may include the "proprietary trader," the arbitrageur, and other specialized traders. In this context, the forthcoming work of Robert Wosnitzer on the emergence and significance of proprietary trading in the early 1970s promises to shed important light on this composite social type.

for the recipients of their excess gifts. The ethos of the potlatch is the ethos of the destructively large wager, the aggressively excessive gift. In gambling terms, this is a wager of “everything.” The expectation of return in the potlatch is predicated on a downward spiral of excessive gifts, a kind of mutually assured destruction over time that binds all players in the game.

This form of agonistic giving is also part of the spirit of the large short sellers who bet on the size and timing of major downturns in the market. While such short sellers are often criticized for betting on failure in specific corporations, markets, and even national economies, they are also lauded for doing the diligence that identifies weak assets and overvalued corporations well before the general population. Such short sellers are also taking large bets predicated on a series of downturns, in which their chance of big returns is based on placing big bets on a downward spiral. When Paulson buys insurance on large bundled sets of toxic subprime mortgages (through Goldman Sachs and others), he is betting on the obligation of return to him when the inevitable downturn occurs. Those who buy his bundles of subprime mortgages are also compelled by the obligation to return.

Thus there is a simple way to get from Mauss’s ideas about the potlatch to today’s contrarians and short sellers. The players in the traditional Northwest American potlatch are classical examples of a willingness to bear high risks for high returns. So are their counterparts who specialize in the short sell. The difference is that today’s financial players are able to take advantage of Knight’s work and use their sense of grace (in regard to uncertainty) to animate their manipulation of derivative markets and their risk devices. They too rely on being successful beneficiaries of the power of the devices they operate to guarantee returns that are quite disproportionate to the amounts they wager to begin with. Especially in the world of today’s hedge funds, what is at stake, exactly as Mauss pointed out for the potlatch, is the interlinked nature of honor and credit.

The Ghost in the Machine

It remains now to explain the title of this essay. A serious effort to look at various critical breaks, shifts, or innovations (such as double-entry bookkeeping, subprime mortgages, or credit default swaps, among others) presents evidence for the hypothesis, directly derived from Weber, that the “spirit” of capitalism can exist without any clear institutional, technical, or organizational expression for it and that, conversely, practical forms of capitalism can be identified absent the “spirit” of capitalism, as Weber described it (see 2009 [1920], especially

chap. 2).⁶ Relaxed somewhat, this line of thinking suggests that the multitude of today's market devices (in Callon's sense) can be hypermethodical (quantified, monitor-able, external, impersonal, etc.), while the spirit of their operators can be avaricious, adventurous, exuberant, possessed, charismatic, excessive, or reckless in the manner that Weber argued was exactly *not* the spirit of modern capitalism. In other words, if "spirit" and "system" change over time but often without reference to each other, today's financial world might be a moment of maximum disjuncture (or torque) between hypercharismatic leaders and hypermethodical devices. There are, of course, other less simple combinations and conjunctures, but to explore any of them requires us to admit the gap between the "ghost" and the "machine," each of which might change relatively independently but which together define the nature of the "system" as an empirical complex at any given place/time.

In a sense, this hypothesis opens an internal tension in that tradition of science and technology studies that was massively shaped by Latour and Callon and evolved into the general form of actor-network theory (ANT). This powerful theory itself contains two contradictory impulses. One is brilliantly formulated by Latour (2005) in his book on the dynamic role of "assemblages" in the constitution of the social. The other is expressed in many of Callon's important writings on the nature and sociology of devices (viz., Callon et al. 2007). If we are to seriously consider the complex process through which the contingent, emergent, and unpredictable associational logics of certain assemblages emerge, this process must involve something of a habitus, disposition, ethic, or spirit that infuses *some* associational forms and precipitates into actual existing crystallizations of the social. This is exactly how I see the spirit of the "bear" entering into the devices (instruments) of the financial market. Absent such a proposal, the world of the device, so brilliantly portrayed by Callon and his colleagues and interlocutors, can seem to be a self-animating device, a static crystallization of just the sort that Latour urges us not to assume as constituting the social a priori. In proposing that my Weberian approach to the spirit of capitalism might allow us to account for how the Latourian assemblage comes to animate the Callonian device, I am, in one sense, doing no more than to recover an idea that first occurred to me (albeit in a highly primitive form) when I wrote the introduction to *The Social Life of Things* (Appadurai 1986).

6. I must note here why I do not directly engage the important work by Luc Boltanski and Eve Chiapello (2007) on the "spirit of capitalism," which also owes a great deal to Weber. I do not engage it directly because it focuses on management rather than on finance and is not much interested in the problem of tools, machines, or devices. In this sense my problematic shares more with Callon and Latour than with Boltanski, though I am deeply sympathetic to his efforts to restore Weberian approaches to the contemporary economic world.

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