

Introduction

1. Peter Galassi, Andreas Gursky, and Museum of Modern Art, *Andreas Gursky* (New York: Museum of Modern Art, 2001), 40–41.
2. David Harvey, *The Condition of Postmodernity* (New York: Blackwell, 1989), 164.
3. These depictions of financial capital can be read as fetishism in the classic, Marxian sense in which the object itself (here immaterial, but no less an object) seemingly imbued with powers to organize human action, obscures the conditions of its own production. But these new critics of capitalism take a very different approach. They do not examine the intricate relations of production. Instead, their analysis focuses on the feelings and confusion that the movement of capital generates. This positions capitalism as a producer of affect as much as a producer of goods.
4. Jean Comaroff, "Occult Economies and the Violence of Abstraction: Notes from the South African Postcolony," *American Ethnologist* 26, no. 2 (1999): 279–303; Jean Comaroff and John Comaroff, "Millennial Capitalism: First Thoughts on a Second Coming," *Public Culture* 12, no. 2 (2000): 291–343.
5. Harrison White, "Where Do Markets Come From?" *American Journal of Sociology* 87 (1981): 517–47; Neil Fligstein, *The Architecture of Markets: An Economic Sociology of Twenty-first-Century Capitalist Societies* (Princeton, NJ: Princeton University Press, 2001); Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91, no. 3 (1985): 481–510; Mitchell Abolafia, *Making Markets: Opportunism and Restraint on Wall Street* (Cambridge, MA: Harvard University Press, 1996); Michel Callon, "Introduction: The Embeddedness of Economic Markets in Economics," in *The Laws of the Markets*, ed. Michel Callon, 1–57 (Malden, MA: Blackwell, 1998); Donald MacKenzie, "Physics and Finance: S-Terms and Modern Finance as a Topic for Science Studies," *Science, Technology and Human Values* 26, no. 2 (2001): 115–44.
6. For clear explanations of financial markets and instruments, see Doug Henwood, *Wall Street* (New York: Verso, 1997); Burton Gordon Malkiel, *A Random Walk Down Wall Street* (New York: W. W. Norton, 1996); and Roy Smith and Walter Ingo, *Global Banking* (New York: Oxford University Press, 2003).
7. Benjamin Lee and Edward LiPuma, "Cultures of Circulation: The Imaginations of Modernity," *Public Culture* 14, no. 1 (2002): 191–213.

8. Ash Amin and Nigel Thrift, "Introduction," in *Cultural Economy Reader*, ed. Ash Amin and Nigel Thrift (New York: Blackwell, 2004), xiv.

9. Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. T. Parsons (New York: Routledge, 1992); Georg Simmel, *The Philosophy of Money* (New York: Routledge, 1990), and "Domination," in *Georg Simmel on Individuality and Social Forms*, ed. D. Levine (Chicago: University of Chicago Press, 1971).

10. Stephen Gudeman, *The Anthropology of Economy* (New York: Blackwell, 2001); Bill Maurer, "Complex Subjects: Offshore Finance, Complexity Theory, and the Dispersion of the Modern," *Socialist Review* 25, nos. 3-4 (2005): 113-45; Daniel Miller, "Conclusion: A Theory of Virtualism," in *Virtualism: A New Political Economy*, ed. J. G. Carrier and D. Miller (New York: Berg, 1998), 187-217; Hirokazu Miyazaki, "The Temporalities of the Market," *American Anthropologist* 105, no. 2 (2004): 255-65; Annelies Riles, "Property as Legal Knowledge: Means and Ends," *Journal of the Royal Anthropological Institute* 10, no. 4 (2004): 755-976.

11. James G. Frazier, preface to Bronislaw Malinowski, *The Argonauts of the Western Pacific* (1922; repr., Prospect Heights, IL: Waveland Press, 1984), vii-xiv.

12. Clifford Geertz, "Suq: The Bazaar Economy in Sefrou," in *Meaning and Order in Moroccan Society*, ed. C. Geertz, H. Geertz, and L. Rosen (New York: Cambridge University Press, 1979), 123-313. Geertz saw his essay as working with the then-recent economic theories (e.g., those of Kenneth Arrow and George Akerlof) that stressed the roles of information, communication, and knowledge.

13. Marshall Sahlins, *Stone Age Economics* (Chicago: Aldine Atherton, 1972), xii. Today, economists like Gary Becker have taken up problems of economy and culture, claiming that processes considered to be cultural are, in fact, economic. For instance, by describing even family relationships and romantic love in terms of rational-choice theory he overcomes the dichotomy between economics and culture by obliterating culture. His analysis assumes that individuals always maximize welfare. Although he challenges economists by expanding the range of human motivations, the individual and his or her desire to maximize are at the core of his method. See Gary Becker, "Nobel Lecture: The Economic Way of Looking at Behavior," *Journal of Political Economy* 101, no. 3 (1993): 385-409. This approach takes economic logic to its extreme conclusion, but it should also hold a warning for anthropologists. Economy cannot be reduced to culture, nor can culture be reduced to economy. This position challenges us to hold economy and culture both together and apart as we redraw the object of inquiry to overcome such analytic dichotomies.

14. Anthropologists have pursued a different trajectory, focusing on the problem of exchange, questions of value, and the chains of commodity production that link distant locations in equations of production and consumption. Together these have led to a burgeoning and productive interest in "cultures of circulation" (see Lee and LiPuma, "Cultures of Circulation"; and Greg Urban, *Metaculture: How Culture Moves Through the World* [Minneapolis: University of Minnesota Press, 2001]). But the current neglect of Mauss's other mission, analyzing the cultural nature of economics and offering alternatives, is mysterious.

15. Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* (Chicago: University of Chicago Press, 1995); James Holston, *The Modernist City: An Anthropological Critique of Brasilia* (Chicago: University of Chicago Press, 1989).

16. Clifford Geertz, *Available Light: Anthropological Reflections on Philosophical Topics* (Princeton, NJ: Princeton University Press, 2000), 110.

17. Michael M. Fischer, *Emergent Forms of Life and the Anthropological Voice* (Durham, NC: Duke University Press, 2003); Douglas R. Holmes and George E. Marcus, "Cultures of Expertise and the Management of Globalization: The Refunctioning of Ethnography," in *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, ed. A. Ong and S. Collier (New York: Blackwell, 2005), 235-52; Aiwa Ong, *Buddha Is Hiding: Refugees, Citizenship, the New America* (Berkeley and Los Angeles: University of California Press, 2003); Paul Rabinow, "Midst Anthropology's Problems," *Cultural Anthropology* 17, no. 2 (2002): 135-50.

Chapter One

1. Upton Sinclair, *The Jungle* (New York: Penguin, 1985), 32-33.

2. William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991), 230.

3. David A. Hounshell, *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States* (Baltimore, MD: Johns Hopkins University Press, 1984).

4. Cronon, *Nature's Metropolis*, 250.

5. The CBOT leaders translated the abstract ideals of the market into the physical and social forms of the marketplace. These "specific intellectuals" worked with the space of the city and architects to build and experiment with how the market could and should work. Their approach to finding practical ways to overcome impediments to economic circulation and competition is similar to the work of modernist urban planners that Paul Rabinow examines in *French Modern: Norms and Forms of the Social Environment* (Chicago: University of Chicago Press, 1995). Both groups used the newest technologies to shape both human behavior and the environment. However, their projects differed in two key respects. First, the CBOT was concerned with creating a marketplace and conditions in which traders could flourish; "society" was not their object. Another key distinction is in the role of experts. The member-managers of the CBOT did not draw on formalized knowledge in the way that Rabinow's designers did. Their approach to markets included unarticulated assumptions that were far from the measured certainties of science, and they did not use their organization as a case that would augment scientific discourse. Their goal was practical in both ends and means: to create a working market in which its members could profit.

6. James Carrier notes that separating marketplaces from the general life of the city is a "practical abstraction" supporting the notion that markets operate with their own sphere and with their own laws ("Abstraction in Western Economic Practice," in *Virtualism: A New Political Economy*, ed. J. G. Carrier and D. Miller [New York: Berg, 1998]). However, in Chicago, the whole city was material for the practical abstraction of the market. City and market rose together and supported the idea that economic arrangements undergird the social life of the city.

7. Creating an autonomous, "disembedded" market depended, paradoxically, on building infrastructure for smooth circulation. The work of Richard Sennett and Carl Schorske on key urban streets shows how the values of movement take form in

the city. In *Flesh and Stone* (Boston: Faber and Faber, 1994), Richard Sennett argues that an individual's ability to move freely is a key condition of the capitalist city. The free circulation of bodies in the city parallels the circulation of the individual within the specialized marketplace for labor. Without attachments, economic man could move, selling his skills where and when the market offered a price. One effect of this free movement, epitomized by the circular that bends around Regent Park in London, is a diminished sensory awareness. I agree that sensory awareness is a key to urban space devoted to trade and exchange. To bring the city in line with the dominant value of circulation, Sennett depicts an urban space of flat affect and rapid, smooth movement. But the infrastructure of city streets and sewer systems *channels* those senses and affects, rather than deadening them. In both the bleak scenes of meatpacking and the brutish competition of the financial exchanges, another use of affect in the service of circulation operates. There, disgust, greed, and, surprisingly, self-abnegation play key roles in supporting smooth circulation. Chapters 5 and 6 elaborate these themes.

Carl Schorske analyzes Vienna's Ringstrasse as a key architectural element of the value of circulation. On the Ringstrasse, "The public buildings float unorganized in a spatial medium whose only stabilizing element is an artery of men in motion" (*Fin-de-siècle Vienna: Politics and Culture* [New York: Vintage Books, 1981], 36). The key difference between Schorske's Vienna and Sennett's London and Chicago is the medium in which the planners work. The Ringstrasse and Regent's Park circular each smooth the physical movement of human bodies. In Chicago, planners worked specifically to move commodity goods and financial products through the city. The CBOT employs individuals to create that motion. They are not its subject.

8. Information about the founders comes from William D. Faloon, *Market Maker: A Sesquicentennial Look at the Chicago Board of Trade* (Chicago: Board of Trade of the City of Chicago, 1998).

9. The futures markets allowed not only easy circulation but also fixity. The grain did not have to travel to market to gain a price. The physical absence of the grain allowed futures contracts to circulate freely, creating value separate from the exchange of physical goods. In Annette Weiner's explanation, value is based in part on objects that are withheld from circulation; see her "Inalienable Wealth," *American Ethnologist* 12, no. 2 (1985): 210-27. The value of these inalienable goods arises from the object's ability to bring past time into the present, allowing for histories of ancestors to become part of contemporary identity. Futures contracts also keep objects out of circulation and create value by manipulating time. They bring the future under the control of present planning and also link the present and the future by giving value to things not yet in existence.

10. Mary Poovey calls the remaining connection between abstract tokens of value, such as futures contracts, and their material underpinnings "residual materialities," showing both the financial world's constant push to extend value through abstraction and the impossibility of completely separating value from the material world ("Residual Materialities," unpublished ms., 2004).

11. Charles Henry Taylor, *History of the Board of Trade of the City of Chicago* (Chicago: Robert O. Law, 1917), 167.

12. *Ibid.*, 161.

13. Donald L. Miller, *City of the Century: The Epic of Chicago and the Making of America* (New York: Touchstone, 1996), 91.

14. Cronon, *Nature's Metropolis*, 295-309.

15. A. T. Andreas, *History of Chicago: From the Earliest Period to the Present Time* (Chicago: A. T. Andreas, 1884), 263.

16. *Ibid.*, 582.

17. *Ibid.*, 583.

18. James Carey describes how the telegraph enabled a "redefinition from physical or geographic markets to spiritual ones. In a sense they were made more mysterious; they became everywhere markets and every time markets and thus less apprehensible at the very moment they become more powerful." See his "Technology and Ideology: The Case of the Telegraph," in *Communication as Culture: Essays on Media and Society* (New York: Routledge, 1992), 220.

19. Andreas, *History of Chicago*, 585.

20. *Ibid.*, 583.

21. The inspiration for this section on standardization and much of the specific detail about the early grain market comes from William Cronon's chapter "Pricing the Future: Grain" in *Nature's Metropolis*.

22. A redefined "bushel" of winter wheat weighed sixty pounds; a bushel of oats, thirty-two pounds (Taylor, *History of the Board of Trade*, 189).

23. Cronon, *Nature's Metropolis*, 416.

24. Taylor, *History of the Board of Trade*, 189-90.

25. The architectural form does not foster the experiments with use and meaning that surround the development of consumer technologies. Pinch and Bijker's example of the bicycle shows the flexibility involved in designing such an artifact; see Trevor Pinch and Wiebe E. Bijker, "The Social Construction of Facts and Artifacts; or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Wiebe Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge, MA: MIT Press, 1989). The design of markets is less flexible because of the capital investment involved in trying out new physical forms.

26. Designers consciously assessed what kinds of human behaviors the market required and arranged the trading floor to encourage open competition between individuals. From this perspective, we can see buildings as tools that "configure users"; see Steve Woolgar, "Configuring the User: The Case of Usability Trials," in *A Sociology of Monsters: Essays on Power, Technology and Domination*, ed. J. Law (1902: repr., New York: Routledge, 1991), 58-97.

27. The CBOT buildings are technological artifacts that give "structures to social institutions, durability to social networks, persistence to behavior patterns," as Thomas Gieryn has argued in "What Buildings Do," *Theory and Society* 31, no. 1 (2002): 35-74.

28. Frank Norris, *The Pit: A Story of Chicago* (New York: Doubleday Page, 1994), 39.

29. Norris gave his novel about the dangers of speculation and the passions of trade the subtitle *A Story of Chicago*. For Norris, Chicago and the speculation at the CBOT are one.

30. Thomas Bender and William Taylor argue that the vertical and horizontal symbolisms of architecture align them with commercial and civic purposes respectively (“Culture and Architecture: Some Aesthetic Tensions in the Shaping of Modern New York City,” in *Visions of the Modern City: Essays in History, Art, and Literature*, ed. W. Sharpe and L. Wallock [Baltimore: Johns Hopkins University Press, 1987], 189–219). They also note that skyscrapers’ horizontal cornices and creation of “business blocks” lent a civic significance to New York’s early tall buildings. Chicago’s urban project of greatness through commerce complicates the opposition of civic concern and profit-driven motives in architecture. Since its founding, the CBOT has been dedicated to both the city’s development and the profits of its members. The collective civic ideal that Bender and Taylor describe in New York architecture did not have the same power in Chicago, where a monument to profit could be also a monument to the city’s civic life.

31. Carol Willis argues in *Form Follows Finance* (New York: Princeton Architectural Press, 1995) that the imperative to generate rents dominates the architectural form of the skyscraper. The CBOT saw its building as a place in which to lease office space as well as to create markets in financial instruments, but this did not deprive architects of flexibility in shaping the symbolism of the building.

32. Granger to Building Committee, August 25, 1925. Richard J. Daley Special Collections, Chicago Board of Trade Archive, University of Illinois at Chicago. Hereafter referred to as CBOT Archive.

33. The contract for the building was originally given to Holabird and Roche. The firm changed its name in 1929, and all correspondence between the CBOT and the architects after that date was addressed to Holabird and Root. I follow the convention of using the name Holabird and Root for the architects for the 1930 building.

34. The skyscraper as an architectural form highlights the project of the CBOT, linking the design values of the “clean tower” to functionalism, efficiency, speed, and the “iron reason” of the modern age (Cecelia Tichi, *Shifting Gears: Technology, Literature, Culture in Modernist America* [Chapel Hill: University of North Carolina Press, 1987], 289–93).

35. In Marilyn Strathern’s formulation, the building is a place where the network is cut; see “Cutting the Network,” *Journal of the Royal Anthropological Institute* 2, no. 3 (1996): 517–35. The relationships between an organization like the CBOT, its individual constituents, and the firms that seek to influence it seem to multiply endlessly. The concept of actor-networks, developed in science and technology studies, amplifies the quality of the limitless extension of networks. Strathern turns our attention to how nodes in a network can *stop* (as well as carry) flows. The CBOT building is just such a site: certain relationships are continued, others are established, and still others are discarded as the network is given a solid form in architecture.

36. This established the building as a “black box” of network connections; see Bruno Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge, MA: Harvard University Press, 1987).

37. Rumsey to Dennis & Co., November 25, 1927, CBOT Archive.

38. Rumsey to E. P. Peck of the Omaha Grain Exchange, November 25, 1927, CBOT Archive.

39. Holabird and Root to Rumsey, October 31, 1927, CBOT Archive.

40. Ithiel de Sola Pool, ed., *The Social Impact of the Telephone* (Cambridge, MA: MIT Press, 1977), 140–41.

41. Christopher Paschen to Rumsey, March 15, 1929, CBOT Archive.

42. Rumsey to Clutton, April 19, 1930, CBOT Archive.

43. This “heterogeneous design” process resolves conflicts among competing interests—builders, managers, and city planners—at the same time that it creates a building (Gieryn, “What Buildings Do”). See Michel Callon, “Introduction: The Embeddedness of Economic Markets in Economics,” in *The Laws of the Markets*, ed. Michel Callon (Malden, MA: Blackwell, 1998), 1–57; and John Law, “Technology and Heterogeneous Engineering: The Case of Portuguese Expansion,” in Bijker, Hughes, and Pinch, eds., *Social Construction of Technological Systems*, among others, for further discussion.

44. Building Committee to CBOT Directors, April 5, 1930, quoting a 1927 memo from Holabird and Root. CBOT Archive.

45. Holabird and Root to Rumsey, October 4, 1928, CBOT Archive.

46. John Holabird from the Secretary of the New Building Committee, Dean Rankin Feb 15, 1929, CBOT Archive.

47. *Ibid.*

48. Arthur Lindley to John Bunnell, January 5, 1926; Rumsey to Lindley, January 18, 1926, CBOT Archive.

49. Rumsey to the President of the Board of Directors, April 5, 1930, CBOT Archive.

50. *Ibid.*

51. *Chicago Daily Times*, November 13, 1931.

52. John Fisher to Rumsey, December 3, 1927, CBOT Archive.

53. Karin Knorr Cetina has argued that scientific practice is built on a “detachment of objects” from their natural environment; see *Epistemic Cultures: How the Sciences Make Knowledge* (Cambridge, MA: Harvard University Press, 1999). The laboratory creates a space of science apart from nature in a way similar to the way the CBOT buildings and trading floors create a purified market environment. Once inside laboratories, objects gain the ability to circulate among laboratories. Likewise, the creation of a market space distinct and apart from the locations of commercial transactions (where actual grain is inspected and changes hands) detaches the market from the space of physical transaction.

54. The CBOT’s addition in the 1980s corresponded with a “particularly important period of landscape reconstruction” in the City, London’s financial district. As Linda McDowell points out, the revolution in communications technology supported a reorganization of financial trading. Open-plan trading rooms replaced the small, individual offices of older buildings and often required banks and exchanges to construct completely new buildings, filling in the existing urban space with contemporary constructions that lent new meaning to the city’s space. The same clash of financial forms, made concrete in architecture, constitutes the contemporary significance of the CBOT buildings for Chicago’s landscape; see Linda McDowell, *Capital Culture: Gender at Work in the City* (Malden, MA: Blackwell, 1997), 57.

55. Anthony Giddens associates “disembedding” with the expansion of “symbolic tokens” and “expert systems,” and futures markets include both of these elements

(*The Consequences of Modernity* [Stanford, CA: Stanford University Press, 1991]). Giddens's concepts of disembedding and time-space "distanciation" obscure the manipulation of the physical and urban environment to achieve these effects. The CBOT's involvement in shaping the city of Chicago and its manipulation of its trading environment show how "disembedding" is not simply a negation of an older relationship of time and space but rests on creating a new set of physical relations that may create the appearance of disembedding for symbolic purposes.

56. Blair Kamin, "A New Fortress for Financial Wars," *Chicago Tribune*, February 19, 1997.

57. Mike Davis writes of the fortress architecture of contemporary Los Angeles that "the privatization of the architectural public realm . . . is shadowed by parallel restructurings of electronic space" (*City of Quartz: Excavating the Future in Los Angeles* [New York: Verso, 1990], 226). The 1997 trading floor combines these designs—the CBOT employed fortress architecture to produce and contain the human infrastructure and electronic information of financial space. Unlike the 1930 building's integration of Chicago and the region's agricultural economy, the new stone pod walls off financial space from its urban surroundings, physically cordoning off a section of the city for producing financial circulation.

Chapter Two

1. The pit shapes traders' actions at the same time that traders' practices over time configure the norms of economic competition within the space of the pit. The interaction of the defined physical space and the conventions of trading work together to define the norms of the pit. Only certain kinds of problems can be considered and solved in the pit; others must be left at the trading room door.

2. The modern has always had such elements; the conflict at the CBOT simply exposed these repressed aspects.

3. Of course personal relationships can facilitate as well as hinder criminal activity, as David Greising and Laurie Morse describe in detail in *Brokers, Bagmen, and Moles: Fraud and Corruption in the Chicago Futures Markets* (New York: Wiley, 1991).

4. Michel Foucault, quoted in Paul Rabinow, *Anthropos Today: Reflections on Modern Equipment* (Princeton, NJ: Princeton University Press, 2003), 47.

5. Janet Abu-Lughod, *New York, Chicago, Los Angeles: America's Global Cities* (Minneapolis: University of Minnesota Press, 1999); Saskia Sassen, *The Global City* (Princeton, NJ: Princeton University Press, 2001).

6. The CBOT's struggle with technology was fought on a very public stage. This chapter combines fieldwork with an analysis of the official documents and professional reports that the exchange members used to substantiate their positions. The upheavals in the futures industry were frequently covered in the *Wall Street Journal* and *Financial Times* as well as in industry magazines and the city's newspapers. These records demonstrate both the content of the arguments for and against new technologies and the public nature of these disputes.

7. Sassen argues that "[u]nderstanding the actual work that needs to be executed in Chicago captures the specialized functions of the city's markets" (*Global City*, 161).

8. The analysis presented here owes obvious debts to Thomas Hughes's approach to the study of technical systems. He stresses the importance of relationships between organizations, technological artifacts, and political maneuvering. See his *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore, MD: Johns Hopkins University Press, 1983), and "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. W. Bijker, T. P. Hughes, and T. Pinch (Cambridge: MIT Press, 1989), 51-82. Hughes directs us to look at technologies as "problem-solving systems," an approach that lends itself to teleological thinking, as John Law has recently pointed out. Law prefers thinking of technical objects in terms of "fractional coherence," avoiding the idea of a technological march toward problem solving (*Aircraft Stories: Decentering the Object in Technoscience* [Durham, NC: Duke University Press, 2002]). Instead of beginning with the technological object, I raise the question, How does the form of exchange within one organization shape the reaction to new technologies and their development? How do the debates over the methods of economics mold arguments about technological systems? The object of the analysis is not technology itself but the fertile interaction between technologies and economic life that directs the arguments and decisions of the CBOT members and directors. Their actions in turn define the course for one of Chicago's key global organizations by directing their problem-solving efforts.

9. The CBOT has recently stopped using the term *open outcry* in favor of the term *open auction*. The new phrase abandons the role of voice in the dealing process. Losing this mark of the shouting trader reframes the trading-floor auction as indistinct from online markets. The phrase *open auction* marks the discursive triumph of online exchange.

10. William Faloon, *Market Maker: A Sesquicentennial Look at the Chicago Board of Trade* (Chicago: Board of Trade of the City of Chicago, 1998).

11. Traders cannot legally use inside information to "front run" the customers. But occasionally a broker may illegally expose his deck, doling out coveted information to a favored trader. Social loyalties and exchange of favors exist alongside brokers' responsibilities to act as the agents of outside buyers and sellers. The market is not simply a meeting place of outside forces but a social world of its own where relations take shape and are cultivated. The pit is not only a place of trade but also a realm of social interactions and exchanges.

12. The founders of the CBOT often had commercial stakes in the grain business as well as the ability to profit from price changes. The traders who work in the open outcry pits for financial futures do not have this same dual interest. Most are speculators who trade in and out of the market for profit. In the market's own terms, these speculators provide liquidity, the ability for any number of contracts to trade at any time. They are the switchmen of the exchange, and the market comes alive in their bodies and voices.

13. In contrast to the usually white and male runners who have connections in the pits, there is also a coterie of "career" runners, whose minimum-wage and outsider status mean that they navigate the packed channels between the pits with no possibility of moving into the pits as traders.

14. Paul Solman, "Chicago May Consider End to Open Outcry," *Financial Times*, June 20, 1998.

15. At that time there were 573 Project A workstations in use, including 18 in London and 42 in New York.

Chapter Three

1. In the language of Daniel Beunza and David Stark, the managers set out to engineer "an ecology of evaluative principles" ("Tools of the Trade: The Socio-technology of Arbitrage in a Wall Street Trading Room," *Industrial and Corporate Change* 13, no. 2 [2004]: 369-400).

2. David Kynaston *LIFFE: A Market and Its Makers* (Cambridge: Grant Editions, 1997).

3. Michael Useem "Business and Politics in the United States and the United Kingdom," in *Structures of Capital*, ed. S. Skin and P. DiMaggio (New York: Cambridge University Press, 1989); Linda McDowell, *Capital Culture: Gender at Work in the City* (Malden, MA: Blackwell, 1997); Will Hutton, *The State We're In* (London: Vintage, 1996).

4. Hutton, *State We're In*.

5. John Edwards, quoted in Kynaston, *LIFFE*, 10.

6. Kynaston, *LIFFE*, 72.

7. *Ibid.*, 94. By stating that the new City brokers did not have "an O-level to [their name[s]," the *Mail on Sunday* was suggesting that they had completed only a very low level of education and had dropped out of school before the ordinary level exams were administered (at around age sixteen).

8. Nick Leeson, *Rogue Trader* (London: Little, Brown, 1996).

9. M. Pryke, "An International City Going 'Global': Spatial Change in the City of London," *Environment and Planning D: Society and Space* 9 (1991): 197.

10. Micaela di Leonardo has described how class becomes ethnicized for whites; see "White Ethnicities, Identity Politics and Baby Bear's Chair," *Social Text* 41 (1994): 165-89. In the case of Essex Man, the class distinction, embodied in consumption styles, is inscribed on an evolutionary scale of difference. Essex Man is distinguished not on the basis of race but by allusion to earlier forms of humans—although race differences are easily coded in this way as well.

11. In *The Accursed Share*, vol. 1 (New York: Zone Books, 1989), Georges Bataille developed an idea of economy whose organizing principle was the consumption of wealth. This idea shifts the perspective on the spending habits of traders. Instead of seeing spending habits as a moral failure, it reframes them as necessary expenditures of energy.

12. Paul E. Willis, *Learning to Labor: How Working-Class Kids Get Working-Class Jobs* (New York: Columbia University Press, 1981); Robert W. Connell, *Masculinities* (Berkeley and Los Angeles: University of California Press, 1995).

13. In *Family and Kinship in East London* (1957; repr., Berkeley and Los Angeles: University of California Press, 1992), sociologists Michael Young and Peter Willmott state the stereotypes that they intended to fight. "Manual workers are said to be shiftless, lazy, improvident, rascally, uncultured, acting for themselves alone." They assert with earnest indignation, "We could not, on the basis of what we found, subscribe to any such condemnation." In fact, they claim, the way of life in London's East End neighborhood, Bethnal Green, "could in some respects be regarded as a

model for those who were (and still are) doing the denigrating" (xv). In their mid-century text, Young and Willmott struggled against the stereotypes of East Enders. By the time Perkins Silver began recruiting, London traders had appropriated pieces of these stereotypes for their own use as they constructed roguish personae that fit the autonomous and competitive economic man of foreign exchange and futures markets.

14. Under the leadership of Brian Williamson, LIFFE "demutualized" in 1998, switching from being a membership organization like the CBOT to a corporate structure, citing the demands for swift action required under an electronic regime.

15. Andrew Leyshon and Nigel Thrift, *Money/Space* (New York: Routledge, 1997), 147.

16. Fat fingering was a critical mistake not only because of its economic consequences, but for the trader's engagement with the market. It precluded the trader's plans and disrupted his immersion in the market's fluctuations, throwing him out of the screen-world and back into the physical environment of the trading room and his own noncompliant body. The games would, the managers believed, train our bodies to operate as uninterrupted conduits between the dealing room and the online world, allowing our fingers to become seamless extensions of our economic intentions. Fat fingering, the failure of this training, showed that the body could not be trained to be a perfect instrument as it, at times, impeded the smooth transfer of strategy to economic action. At the same time, fat fingering severed the space of the dealing room from the space of the market by shattering the trader's absorption, a key element of his profit-making abilities. The managers prescribed the arbitrage and video games not only to discipline attention and action, but also to train the body to become an "intention extension," to maintain the union of physical and online action, and provide a medium for economic reason. In the fast-paced work of futures trading, such an alignment could not be taken for granted.

17. Linda McDowell, "Body Work: Heterosexual Gender Performances in City Workplaces," in *Mapping Desire*, ed. D. Bell and G. Valentine, 77. London: Routledge, 1995.

18. James G. Carrier and Daniel Miller, eds. *Virtualism: A New Political Economy* (New York: Berg, 1998).

19. In *The Stranger* (in *Individuality and Social Forms*, ed. D. N. Levine [Chicago: University of Chicago Press, 1971], 143-49), Georg Simmel states that the synthesis of nearness and remoteness "is to be found in the objectivity of the stranger. Because he is not bound by roots to the particular constituents and partisan dispositions of the group, he confronts all of these with a distinctly 'objective' attitude . . . a distinct structure composed of remoteness and nearness, indifference and involvement" (145). The power of electronic trading and the possibilities of export placed the Perkins Silver managers in the position of the stranger with regard to their own practices. Chapter 1 described the problems of the CBOT members in finding this balance of nearness and remoteness in relation to their constituencies and their partisan dispositions with regard to technology and their norms of economic action.

20. I agree with James Clifford's understanding that "practices of displacement" are "constitutive of cultural meanings" and are not "simple transfer or extension."

See his *Routes: Travel and Translation in the Late Twentieth Century* (Cambridge, MA: Harvard University Press, 1997), 3.

Chapter Four

1. Both historical policy debates and contemporary social theory have drawn analogies between financial markets and casinos in their orientations to risk; see, for example, Susan Strange, *Casino Capitalism* (New York: Manchester University Press, 1984); David Harvey, *The Condition of Postmodernity* (New York: Blackwell, 1993); and Frederic Jameson, "Culture and Finance Capital," *Critical Inquiry* 24 (1997): 246-65. In the nineteenth century Chicago futures exchanges worked to distinguish themselves from "bucket shops," establishments typically close to the exchanges that offered betting on the direction of futures prices. The exchanges established their legitimacy by denying the resemblance between trading and gambling. They claimed that their contracts could be used in the service of production as "hedging" tools; see William D. Faloan, *Market Maker: A Sesquicentennial Look at the Chicago Board of Trade* (Chicago: Board of Trade of the City of Chicago, 1998); and Cedric B. Cowing, *Populists, Plungers, and Progressives: A Social History of Stock and Commodity Speculation, 1890-1936* (Princeton, NJ: Princeton University Press, 1965). The analogy points to the critical role of risk and risk-taking in financial markets, but this obscures the specificities of risk-taking in financial markets and the special relationship between financial markets and capitalism. The suggestion of illegitimacy denies us a more nuanced understanding of the significance of risk and risk-taking in this high-modernist institution.

2. Sociocultural examinations of risk have focused on two major themes. The first is the theme of anticipation and avoidance of loss. Risk is most often examined in the ways that groups or organizations classify, mobilize, and intervene against the threat of loss or vulnerability to loss; see Ulrich Beck, *Risk Society: Towards a New Modernity* (London: Sage, 1992); Robert Castel, "From Dangerousness to Risk," in *The Foucault Effect: Studies in Governmentality*, ed. Graham Burchell, Colin Gordon, and Peter Miller (Chicago: University of Chicago Press, 1991), 281-98; Mary Douglas and Aaron Wildavsky, *Risk and Culture* (Berkeley and Los Angeles: University of California Press, 1982); Ron Levy, "The Mutuality of Risk and Community: The Adjudication of Community Notification Statutes," *Economy and Society* 29, no. 4 (2000): 578-601; Pat O'Malley, "Risk and Responsibility," in *Foucault and Political Reason*, ed. Andrew Barry, Thomas Osborne, and Nikolas S. Rose (London: University of Chicago Press, 1996), 189-209. The focus on ecological and technological peril to exemplify the concept of risk in the two most widely cited theories, those of Ulrich Beck (*Risk Society*) and Mary Douglas and Aaron Wildavsky (*Risk and Culture*), narrows their sense of the concept. Particularly for Douglas and Wildavsky, risk is synonymous with danger, a focus that fits their concern with the socio-cultural selection of risks. Although, unlike Beck, Douglas and Wildavsky do not see risk itself as a particularly modern problem, their claim that the concern with technological hazards is a modern trait fits with Ulrich Beck's definition of a "risk society" that poses reflexivity as a central contemporary problem. Both of these studies closely associate risk with the potential for loss and, even more specifically, the potential for physical harm.

3. From this perspective, futures contracts and markets work as a type of insurance—technologies for distributing risk. This focus on the distribution of risk unites Schumpeter's figure of the entrepreneur (who takes voluntary risks for economic profit) with recent writing on governmentality. Connecting risk and the political rationality of neoliberalism, work on governmentality identifies several manifestations of risk, focusing especially on risk-avoidance rationalities and self-governance as critical parts of neoliberal subjectivities; see Andrew Barry, Thomas Osborne, and Nikolas S. Rose, *Foucault and Political Reason: Liberalism, Neo-liberalism and Rationalities of Government* (London: University of Chicago Press, 1996). Drawing the analysis into the economic sphere, François Ewald argues that insurance is a way to protect financial well-being that encourages individuals to conduct their lives in market terms; see "Insurance and Risk," in *Foucault Effect* (see note 2). The existing literature, however, focuses less on *generating* wealth, even though wealth is a critical to satisfying needs. In the economic arena, the creation and conservation of economic goods must be considered together.

One important distinction between insurance and financial trading is the widely different contexts engaged by each. Insurance bridges the gap between social and economic domains, importing a logic of risk and financial calculation into spheres less fully penetrated by market logic. The neoliberal subjects forged under these conditions project the odds of harm and financial compensation far into the future, even potentially to the end of their own existence in the case of life insurance.

4. See Niklas Luhmann, *Risk, a Sociological Theory* (New York: A. de Gruyter, 1993), and "Describing the Future," in *Observations on Modernity* (Stanford, CA: Stanford University Press, 1998), 63-74; and Anthony Giddens, *The Consequences of Modernity* (Stanford, CA: Stanford University Press, 1991). Niklas Luhmann's work moves a step closer to a concept that illuminates voluntary risk. He understands risk as a condition of decisions, and places the responsibility for the loss (or gain) in the act of anticipating a future that is still undetermined (see Luhmann, *Risk*). Risk is, therefore, a problem of acting at the limit of knowledge. In the work of speculation, traders make hundreds of predictive decisions in a day, placing a stake on the future direction of the market. Luhmann focuses attention on the problem of making decisions at the border between present and future, a problem central to economic action. Even though Luhmann's conceptual approach does not incorporate the work of risk-taking, his framework can help us to understand the practices of risk.

5. See Stephen Lyng, "Edgework: A Social Psychological Analysis of Voluntary Risk Taking," *American Journal of Sociology* 95, no. 4 (1990): 851-86; Richard G. Mitchell, *Mountain Experience: The Psychology and Sociology of Adventure* (Chicago: University of Chicago Press, 1983); Catherine Palmer, "'Shit Happens': The Selling of Risk in Extreme Sports," *Australian Journal of Anthropology* 13, no. 3 (2000): 323-36; and Jonathan Simon, "Taking Risks: Extreme Sports and the Embrace of Risk in Advanced Liberal Societies," in *Embracing Risk: The Changing Culture of Insurance and Responsibility*, ed. Tom Baker and Jonathan Simon (Chicago: University of Chicago Press, 2002), 177-207.

6. I use the concept of productivity here to describe the formation of risk-taking selves and active marketplaces. The concept of market productivity usually refers to the manufacture of objects. However, in an economy based on the circulation of signs, the concept of productivity and the importance of work are still central.

7. We can apply an analysis of risk as a productive force equally to Douglas and Wildavsky's (*Risk and Culture*) and Beck's (*Risk Society*) arguments and also to the work on risk as a component of governmentality (e.g., O'Malley, "Risk and Responsibility"). The negative side of risk in all three of these perspectives emphasizes protection rather than productivity.

8. In recent decades risk has emerged as a key concept across the social sciences, particularly in studies of contemporary modes of governance, self-formation, political responsibility, and reflexivity; see Beck, *Risk Society*; Graham Burchell, "Liberal Government and Techniques of the Self," in Barry, Osborne, and Rose, *Foucault and Political Reason*, 19–36; Douglas and Wildavsky, *Risk and Culture*; Anthony Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age* (Cambridge: Polity Press, 1991); Colin Gordon, "Governmental Rationality: An Introduction," in *Foucault Effect*, 1–54 (see note 2); O'Malley, "Risk and Responsibility"). I agree with Asa Boholm and Pat Caplan that the metatheories of Beck and Giddens and the individualized, choice-based perspectives of psychology and economics leave the anthropological arena of risk untouched; see Asa Boholm, "The Cultural Nature of Risk: Can There Be an Anthropology of Uncertainty?" *Ethnos* 68, no. 2 (2003): 159–78; and Pat Caplan, "Introduction: Risk Revisited," in *Risk Revisited*, ed. P. Caplan (London: Pluto Press, 2000), 1–28. Explorations of active, intentional engagements with risk are particularly underdeveloped, and here anthropology can intervene productively; see David Garland, "Rise of Risk," in *Risk and Morality*, ed. R. Ericson and A. Doyle (Toronto: University of Toronto Press, 2003), 48–86; and Deborah Lupton, *Risk* (New York: Routledge, 1999). A close investigation of the way financial speculators work can yield new perspectives on both the concept of risk and the relationship between markets and risk-takers. Economics has long recognized the importance of taking risks in making profits, both for individuals and for the dynamism of capitalism; see Joseph Schumpeter, *Capitalism, Socialism and Democracy* (New York: Harper and Row, 1950). Drawing on the foundational work of Frank Knight (*Risk, Uncertainty and Profit* [Chicago: University of Chicago Press, 1971]), economics maintains a rigid distinction between the probabilities of risk and the haze of uncertainty, the domain of profit for the entrepreneur. As Pat O'Malley has observed, the positive human sciences have sought to subjugate the creative role of risk to rationally calculable plans. Weberian analyses of rationalization have also banished activities that have uncertainty at their center; see Pat O'Malley, "Moral Uncertainties: Contract Law and Distinctions between Speculation, Gambling and Insurance," in *Risk and Morality*, ed. R. V. Ericson and A. Doyle (Toronto: University of Toronto Press, 2003), 231–57. However, speculation is now receiving the kind of attention that it lost at the end of the nineteenth century. The analytic distinction between risk and uncertainty does not hold up when we consider the practice of speculation. Yet anthropology and the other human sciences, where competition is a subject of keen attention, have largely neglected to account for the actions and potentials of risk-taking that are most visible in the economic sphere.

9. Michael Burawoy and Leslie Salzinger have shown how social games work in the service of manufacturing; see Michael Burawoy, *Manufacturing Consent: Changes in the Labor Process under Monopoly Capitalism* (Chicago: University of Chicago Press, 1979); and Leslie Salzinger, *Genders in Production: Making Workers in Mexico's Global Factories* (Berkeley and Los Angeles: University of California

Press, 2003). These games are equally important in the postindustrial economy, where the circulation of information and the exchange of signs is crucial. At the CBOT, the circulation of financial commodities fosters the daily re-creation of risk-taking subjects. In this sense the trading pit is an important example of a culture of circulation where norms of evaluation, constraint, and action develop around the act of exchange (Benjamin Lee and Edward LiPuma, "Cultures of Circulation: The Imaginations of Modernity," *Public Culture* 14, no. 1 [2002]: 191–213). Like the rivalry of the cockfight, the wagering of the self and status that takes place in the pit is central to the action (Clifford Geertz, "Deep Play: Notes on the Balinese Cockfight," in *Interpretation of Cultures* [New York: Basic Books, 1973], 412–53). At the CBOT, the action is simultaneously the creation of a market and the constitution of a social field and the individuals that comprise it.

10. See Goffman, *Where the Action Is*, 237, for a discussion of the wagering of the self under conditions of "action."

11. In *Where the Action Is*, Goffman describes how in moments of action, "The individual . . . display[s] to himself and sometimes to others his style of conduct when the chips are down. . . . To display or express character, weak or strong, is to generate character. The self, in brief, can be voluntarily subjected to re-creation" (237).

12. The practice of trading is strikingly similar to Goffman's moments of meaningful action and Foucault's idea of the "limit experience," performances that transcend the subject and create something new. For Foucault, playing beyond the limits of reason is a powerful way to remake the self. In economic action, the future is that site of unreason. We can imagine and plan for possible futures, but we can never know them. This territory at the edge of the present is both fertile and potentially destructive for the financial managers and traders who make up capital markets. The traders at the CBOT are financial specialists whose labor is handling the risk and uncertainty generated by the transactions of others. Yet they are not the rational, scientific classifiers who define and discipline objects of unreason. Traders manipulate social situations, tacit knowledge, and corporeal strategies, all of which they do to extract profit from the market. Their forms of reason, as Pierre Bourdieu would say, are practical, not scholastic (*Practical Reason* [Cambridge: Polity Press, 1998]). Profit and loss figures are the measures of successful action—not institutions or theories.

13. Michel Foucault, "A Preface to Transgression," in *Foucault: Aesthetics, Method, and Epistemology*, ed. J. Faubion (New York: New Press, 1998), 241.

14. Futures contracts are examples of the way that "the future is continually drawn into the present by means of reflexive organization of knowledge environments" (Giddens, *Consequences of Modernity*, 3).

15. As with the work of Niklas Luhmann, Ulrich Beck, and Anthony Giddens, the work on governmentality argues that efforts to manage risk and control uncertainty are central to modernist projects.

16. Understood this way, financial exchanges are hubs in "the market for security" (Ewald, "Insurance and Risk," 198).

17. Bruce Carruthers and Arthur L. Stinchcombe ("The Social Structure of Liquidity: Flexibility, Markets, and States," *Theory and Society* 28 [1999]: 353–82), William Cronon (*Nature's Metropolis: Chicago and the Great West* [New York:

W. W. Norton, 1991]), and Wendy Espeland and Mitchell L. Stevens ("Commensuration as a Social Process" *Annual Review of Sociology* 24 [1998]: 313-43) have all shown the importance and complexity of creating common measurements and the "necessary fiction" (Cronon, *Nature's Metropolis*) of homogeneity within products for commercial circulation. These processes establish tradable commodities, the necessary first step for creating liquid markets. Economists claim that liquidity mitigates risk. If traders or managers doubt their positions in the market, a liquid market allows them to close out the positions quickly rather than spending time (and thus incurring additional risk) searching for buyers.

18. Ira O. Glick, "A Social Psychological Study of Futures Trading," PhD diss., Department of Sociology, University of Chicago, 1957.

19. In this sense, futures markets are exemplary sites of "cultivated risk" for speculators (Giddens, *Modernity and Self-Identity*, 133).

20. Looking at risk as part of the traders' self-presentation in the market draws on Avner Offner's essay on economic life as the pursuit of regard and Harrison White's observation that producers' scrutiny of their competitors constitutes markets; see Avner Offner, "Between the Gift and the Market: The Economy of Regard," *Economic History Review* 50 (1997): 450-76. What Harrison White claims for the level of the firm is also true for individual traders in the pit. He claims that "what a firm does in a market is to watch the competition in terms of observables" ("Where Do Markets Come From?" *American Journal of Sociology* 87 [1981]: 518). What traders watch are their competitors' patterns of buying, selling, and risk-taking. This mutual observation, imitation, and judgment of risk-taking is a fundamental way that market makers learn successful techniques of trading and self-display and contribute to the structuring of market transactions; see Christina Garsten and Anna Hasselstrom, "Risky Business: Discourses of Risk and (Ir)responsibility in Globalizing Markets," *Ethnos* 68, no. 2 (2003): 249-70; and Donald MacKenzie, "Social Connectivities in Global Financial Markets," *Environment and Planning D: Society and Space* 22 (2004): 83-101.

21. The gendered aspects of the pit deserve a full-length treatment of their own. I thank Ann Anagnost for reminding me of Bourdieu's essay, "The Sense of Honor" (in *Algeria 1960* [New York: Cambridge University Press, 1979], 93-123), that informs this analysis.

22. In addition to structuring the social landscape of the pit, the creation of trading neighborhoods affects the price of CBOT products. The neighborhoods create small markets within the larger market, a fragmentation that exaggerates price volatility; see Wayne Baker, "The Social Structure of a National Securities Market," *American Journal of Sociology* 89, no. 4 (1984): 775-811. The social organization of the pit has a direct impact on the overall market as well as the individual strategies of traders.

23. Risk-taking among traders is not "compensatory" in the way that Richard Mitchell describes for mountaineers who seek risks in the mountains that are absent in the rationalized, controlled workplace (see Mitchell, *Mountain Experience*). This perspective opposes "daily life" and risk-taking, whereas in the futures markets, these are one and the same. For traders, risk-taking is the central activity of their occupation.

24. Risk-taking in futures markets thus resembles Erving Goffman's observation about the affective state central to "the action," where intensity and fatefulness are combined (Goffman, *Where the Action Is*).

25. This state is very similar to the flow experience that Mihaly Csikszentmihalyi describes in *Flow: The Psychology of Optimal Experience* (New York: Harper & Row, 1990).

26. Goffman, *Where the Action Is*, 185.

27. Goffman noted that working with risk differs from playing with risk as a leisure activity. He claims that in occupations where people take risks, a special relationship to the work world emerges—one that makes a virtue out of voluntary engagements with fate (*Where the Action Is*, 188). Goffman's distinction between working and playing with risk is important for seeing speculation as an ethical field rather than as just another expression of gambling. However, his argument reduces the attractions of risk to a necessary evil. Those that work with risk in his description must rationalize their risk-taking. These occupations *reinvent* risk as a virtue. Goffman still begins from the assumption that positions of risk are undesirable—a notion that leads him to underestimate the pleasurable side of risk in work.

28. Goffman, *Where the Action Is*, 185.

29. Bill Buford, *Among the Thugs* (New York: Vintage, 1990), 205. Mobs, violence, and speculation have been associated in social theorizing at least since the time when Gustave Le Bon (*The Crowd: A Study of the Popular Mind* [New York: Penguin Books, 1977]) and Charles Mackay (*Extraordinary Popular Delusions and the Madness of Crowds* [Boston: L. C. Page, 1974]) trained their Victorian eyes on the irrationalities of crowds. Both observed the dangers of succumbing to unreason, especially the loss of individuality and the predisposition of crowds to violence. The unreason of crowds links speculative manias such as the tulip mania in seventeenth-century Holland, when tulip bulbs cost as much as real estate along Amsterdam canals, with the murderous nature of witch-hunts. For in-depth treatment of speculative manias, see Charles Kindleberger, *Manias, Panics and Crashes: A History of Financial Crises* (New York: Basic Books, 1989) and Edward Chancellor, *Devil Take the Hindmost: A History of Financial Speculation* (New York: Plume, 1999).

30. See Nigel Thrift, *Knowing Capitalism* (London: Sage, 2005) for a discussion of the Dionysian qualities of capitalism.

31. In "The Prize Fighter's Three Bodies," (*Ethnos* 63, no. 3 [1998]: 325-52) Loïc Wacquant shows how, for poor African-American men on Chicago's South Side, boxing is more about bodily and spiritual transformation than about the dream of getting rich. Wacquant's skepticism about economic explanations is as applicable in the CBOT pits, where money is central to traders' labor, as it is in the ghetto gymnasium.

32. This quality is not unique to trading, yet it is not the central concern of all jobs. As Gerald Suttles observes, "Most people reach the top of their profession or occupation relatively early in life, and if they are to continue to find interest in what they are doing, they must play with their stratification system. . . . Indeed, one might advance the hypothesis that the person who is a grind, someone who adheres to accepted practice with unflinching devotion, is unlikely to win the long-term acclaim that he is said to be heading for. He will expire of boredom beforehand. Style and

self-esteem, then, are as essential as the incentive of ultimate social acclaim" ("Introduction," in Mitchell, *Mountain Experience*, xi).

33. See, for instance, Joe Simpson, *Touching the Void* (New York: HarperCollins, 1988).

Chapter Five

1. A first look at the trading floor might support Georg Simmel's comments on crowd behavior: "There develops a great nervous excitement at the expense of clear and consistent intellectual activity; it arouses the darkest and most primitive instincts of the individual which are ordinarily under control" ("Domination," in *Georg Simmel on Individuality and Social Forms*, ed. D. Levine, [Chicago: University of Chicago Press, 1971], 112).

2. Albert O. Hirschman, *The Passions and the Interests: Political Arguments for Capitalism before Its Triumph* (Princeton, N.J.: Princeton University Press, 1997), 66.

3. This elaborates Simmel's insights into the passionate potential of economic activity from his essay "The Miser and the Spendthrift," a classic essay about economic affect, even if Simmel did not conceive it that way; see Georg Simmel, *The Philosophy of Money* (New York: Routledge, 1990), 326-31.

4. David Noble has pointed out the connection between celibacy and reason that emerged from medieval European monasteries; see *A World without Women: The Christian Clerical Culture of Western Science* (New York: Oxford University Press, 1993). Traders' use of metaphors of sexual violence to establish dealing rooms as spaces of base instinct is striking.

5. Often, modern forms of trust are understood as situated in systems rather than people; see Anthony Giddens, *The Consequences of Modernity* (Stanford, CA: Stanford University Press, 1991). But at the CBOT, trust in the price-making system relies on the conduct of the human beings that make it up. The organization presents itself as constituted by competitive individuals and assigns itself the role of applying the limited constraints that allow trust in the prices arrived at through competition.

6. Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1994), 17.

7. There is yet another twist to this paradox. In the pits, traders must trust their dealing partners to accurately record and honor the commitment to the agreed price and quantity of a trade. But this essential obligation is the only acknowledged and legal commitment to a social bond. The screen eliminates this piece of the paradox by replacing the human system of honor and trust with a machine, allowing traders to pursue their self-interest more fully, free from the constraints of interpersonal trust.

8. Incorporating this perspective into approaches to economic life requires a critique of some previous approaches. Economic sociologists have approached the problem of economic man by trying to resituate "undersocialized" ideas of action within the "embedded" social world; see Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91, no. 3 (1985): 481-510. This approach engages economists on their theoretical biases. However, if an anthropology of finance is to move beyond reforming the practice of economists, analysis of economic man must move beyond a simple debunking or amending of economists' constructions. Revising the economists' models

can do little to illuminate anthropologists' and sociologists' understandings of economic action because we already assume, as economists themselves do, that their models of economic man are socially impoverished.

Inspired by Michel Callon's introduction to *The Laws of the Markets* (Malden, MA: Blackwell, 1998), social studies of finance have developed a set of inquiries into the sources of rational economic calculations based in the performative logic of economics and framed by calculative technologies. This approach attempts to understand how the ideals of rational economic man enter the calculative apparatus: "He is formatted, framed and equipped with prostheses which help him in his calculations and which are, for the most part, produced by economics" (51). This addresses the operational problem for calculative actors, but obscures the practices and set of affects that create an always emergent figure of economic man. Callon's approach risks reducing traders to the slaves of financial modelers.

9. Traders' claims that they enact a form of "natural" behavior call for investigation of the embodied practices, performances, and emotions that make up this "natural man."

10. This analysis draws on the uses of emotion and affect in service work; see Arlie Russell Hochschild, *Managed Heart: Commercialization of Human Feeling* (Berkeley and Los Angeles: University of California Press, 1983); Robin Leidner, *Fast Food, Fast Talk: Service Work and the Routinization of Everyday Life* (Berkeley and Los Angeles: University of California Press, 1993); Andrew Ross, *No-Collar: The Humane Workplace and Its Hidden Costs* (New York: Basic Books, 2003). Hochschild and Leidner focus on the production and exploitation of emotion in work. Corporate interests exploit the workers' presentation of affect in the production and consumption of service-based labor. Routinized displays of affect distance workers from their own emotions or turn them into a resource for the industry. In the context of finance, Linda McDowell has described how masculinity in investment banks is marked by bodily labor as men shape themselves into service workers to interact with clients ("Body Work: Heterosexual Gender Performances in City Workplaces," in *Mapping Desire*, ed. D. Bell and G. Valentine (London: Routledge, 1995), 75-98. Although the focus on service work in these studies is not suited to an analysis of the labor of traders, the focus on emotion can extend to their context. I combine attention to displays of market affect with Goffman's attention to the presentation of self as located in particular times and spaces, and as dependent on specific social situations. At the same time, the idea that the market elicits the basic instincts of men who act within it forms the normative framework for these specific performances.

11. Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. T. Parsons (1930; repr., New York: Routledge, 1992).

12. Max Weber, *Max Weber on the Methodology of the Social Sciences*, ed. Edward Shils (Glencoe, IL: Free Press, 1949), 99.

13. Norbert Elias describes the historical development of "precepts of conduct regarded as 'civilized'" in *The Civilizing Process* (Oxford: Blackwell, 1978). He examines codes of behavior that make specific ways of controlling affect automatic as well as "regulation and restraint imposed on the expression of desires and impulses" (156). Traders' codes invert the codes of civilized behavior. The codes that govern "socially desirable behavior" on the trading floor emphasize the absence of any such

codes. The “matter of self-control” for traders involves stripping what is civilized from their behavior. Traders craft behavior that matches their ideals. They “make themselves over into living embodiments of their professional morality” (Loïc Wacquant, “The Prizefighter’s Three Bodies,” *Ethnos* 63, no. 3 [1998]: 22).

14. The maverick performances coupled with traders’ risk-taking bravado critique and reject the constraints of bourgeois social life.

15. In his essay “The Mandatory Expression of Sentiments,” Marcel Mauss describes how emotional language and excitement are determined by formal strictures and obligations (unpublished ms., trans. Loïc Wacquant, 1921). Mauss’s observation of the nonspontaneity of feeling applies to feelings that are constructed to convey spontaneity and the individuality of action. It is a reminder to be particularly cautious when claims to the impulsive and the natural are made.

16. Pierre Bourdieu, *Practical Reason* (Cambridge: Polity Press, 1998).

17. Erving Goffman’s approach to the theatrics of social life provides insight on this drama. The asocial performances of the pit and the trading floor are “front-stage,” and the deep and useful networks of trust, reciprocity, and loyalty among traders are “back-stage” actions (see *The Presentation of Self in Everyday Life* [1959; repr., Harmondsworth: Penguin, 1990]). The front-stage performances of an economic self anchor the aesthetics of risk-taking. Trading pits and dealing floors are theaters of capitalism where the action has real consequences for markets around the world.

18. Theater and the marketplace have been always been entangled. Bakhtin’s analysis of grotesque aesthetics is enacted in and contained by marketplaces, and historian Jean–Christophe Agnew has documented the tandem rise of capitalism and the Anglo-American theater (*Worlds Apart: The Market and the Theater in Anglo-American Thought, 1550–1750* [New York: Cambridge University Press, 1986]). Bakhtin’s analysis of the grotesque is particularly useful for the trading floor. The defining principle of grotesque realism according to Bakhtin is degradation, “the lowering of all that is high, spiritual and abstract”; see Mikhail Bakhtin, *Rabelais and His World*, trans. H. Iswolsky (Bloomington: Indiana University Press, 1984), 19.

19. In Bakhtin’s description, marketplace and carnival are linked in grotesque performances. The carnival takes place in the market that offers a space removed from “official culture.” In turn, the grotesque performance defines the space. Similarly, the traders’ maverick aesthetics define the time and space of the market (Bakhtin, *Rabelais*).

20. As Simmel says, “The brutality of a man purely motivated by monetary considerations and acting, to this extent, on the same axiom of greatest advantage and least sacrifice, often does not appear to him at all as a moral delinquency, since he is aware only of a rigorously logical behavior, which draws the objective consequences of the situation.” (Simmel, “Domination,” 110).

21. In the movie *The Full Monty* unemployed steel workers improvise a novel way of making money in the eviscerated economy of northern England. They transform themselves from hardened factory workers to male strippers. In the ladies club, their labor is reduced to parading sheer male flesh. It is all that they have left to sell. They are men whose bodies are the source of their labor and value—a statement of the power of economic forces to strip men to the raw. In the wasteland of northern English industry, capitalism literally strips men bare.

22. Echoing Weber’s notion of modernity founded in the separation of life spheres, Bruno Latour asserts in *We Have Never Been Modern* (trans. C. Porter [Cambridge, MA: Harvard University Press, 1993]) that the belief in the ability to separate spheres is the foundation of modern action.

23. Michael Lewis, *Liar’s Poker* (New York: Penguin, 1989), 119–20.

Chapter Six

1. Karin Knorr Cetina and Urs Bruegger, “The Market as an Object of Attachment: Exploring Post-Social Relations in Financial Markets,” *Canadian Journal of Sociology* 25, no. 2 (2000): 141–68.

2. Futures are traded in auctions markets. According to Charles Smith’s argument in *Auctions: The Social Construction of Value* (New York: Free Press, 1989), auctions thrive where the value of objects is ambiguous or uncertain. Futures contracts are just such objects. They represent an obligation to buy or sell a financial commodity weeks or months in the future. Traders constantly process events that affect national economies and new information about the future health or weakness of stock markets and adjust their assessment of a financial commodity’s value accordingly. This evaluation is reflected in the changing price of the commodity.

3. For Foucault, the art of self-governance involves techniques for “training of oneself by oneself” (Herbert Dreyfus and Paul Rabinow, *Michel Foucault: Beyond Structuralism and Hermeneutics* [Chicago: University of Chicago Press, 1983], 246). Such techniques treat the self as an object to be formed in harmony with a specific end. Traders strive to eliminate nonmarket influences in order to create a person who can be absorbed completely in the rhythms of the market. They work to submit himself to the authority of the market, stripped of their own thoughts, analyses, and desires.

4. Michel Foucault has most famously employed the concept of discipline in *Discipline and Punish: The Birth of the Prison* (1977; repr., New York: Vintage, 1995). Discipline, in this sense, produces individuals, yet Foucault’s concept of ethical work is more relevant to traders’ practices of discipline. Paul Rabinow states that “[t]he task of ethical work for Foucault is to establish the right relationship between intellect and character in the context of practical affairs” (*Ethics: Subjectivity and Truth* [New York: New Press, 1997], 1: xxxiii). Traders forge this relationship of the self to the self in and for the practice of speculation. The process of Foucault’s discipline is inverted. Trading as a performance of discipline sublimates the individual and his particular interiority to the larger market.

5. Traders may also try to reap a profit from the difference between the price bid and the price offered, called the “bid/ask spread.” They buy at the lower price and sell at the higher price (or vice versa), taking advantage of the insider’s “edge.” The spread is the market-makers’ premium, but it is not always easy or available to take.

6. Viviana Zelizer, in *The Social Meaning of Money* (Princeton, NJ: Princeton University Press, 1997), has shown that people create specific uses and meanings around money as they “cope with their multiple social relations.” Her point, against the background of the classical theories of Weber and Simmel, is that people use money to maintain social ties, and these ties mark money. Money cannot simply create “sensualists without spirit” as Weber feared; rather, in Zelizer’s analysis, money is subservient to logics of the family, charity, and gifts. Yet the ability of money to dis-

tance social ties must also be taken as an anthropological subject. If we begin with Zelizer's observation that social connections personalize money, the trader's techniques of separation are all the more surprising. On the trading floor money must be crafted into a technology of social distance; such distance is not a property that inheres in money per se. The trader's reimagining of dollars as ticks shows just how difficult it is to strip money of its power as a social connector.

7. The most profitable traders are the most willing to take losses quickly; see Peter R. Locke and Steven C. Mann, *Do Professional Traders Exhibit Loss Realization Aversion?* (Washington, DC: Commodity Futures Trading Commission, 1999). In the language of behavioral finance, this willingness to take risks with losses that may erode profits further is called "loss realization aversion," a term drawn from the "prospect theory" of Daniel Kahneman and Amos Tversky ("Prospect Theory: An Analysis of Decision under Risk," *Econometrica* 2 [1979]: 263-92.). Locke and Mann claim that critics of behavioral finance will find satisfaction in the fact that the more successful traders demonstrate less loss aversion than those who draw fewer profits, proving that the gainful traders behave "rationally" according to the profit motive. However, the strict economic rationality that the critics laud is not simply a characteristic of successful traders that trumps the "irrational" weaknesses of the others. Both individually and collectively, traders consciously consider the problem of action under uncertainty. The norms and practices of discipline—the culture of the trading floor—encourage traders to reflect on and limit their inclination to gamble with losses. These techniques and models of disciplined behavior make traders appear more like the rational actors of orthodox finance than like the biased and irrational actors of behavioral finance. Culture works to produce traders whose actions confirm the models of rationality; it is not the agent of irrationality, as is so frequently assumed.

8. The bias for the present and the short time increments of market action are not shared by other financial actors. Financial strategists for investment banks or even mortgage brokers who are looking to hedge the risks of simple interest rates work with time frames that can look months into the future. Scalping is a form of speculation particular to the market makers who provide consistent liquidity for futures markets.

9. Richard Sennett has pointed out that "risk-taking . . . lacks the quality of a narrative, in which one event leads to the next"; see *Corrosion of Character: The Personal Consequences of Work in the New Capitalism* (New York: W. W. Norton, 1998), 83.

10. Robert Koppel, *The Tao of Trading: Discovering a Simpler Path to Success* (Chicago: Dearborn Trade, 1998).

11. Their terms hue closely to Csikszentmihalyi's description of optimal experiences; see Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper & Row, 1990).

12. Henri Hubert and Marcel Mauss's work on sacrifice helps to illuminate the problem of actors engaging a divine presence: "Sacrifice is a religious act that can only be carried out in a religious atmosphere and by means of essentially religious agents. But, in general, before the ceremony neither sacrificer nor sacrificer, nor place, instruments or victim possess this to a suitable degree. The first phase of the sacrifice is intended to impart it to them. They are profane; and their condition must be changed. . . . All that touches upon the gods must be divine; the sacrificer is

obliged to become a god himself in order to be capable of acting upon them" (*Sacrifice: Its Nature and Function* [Chicago: University of Chicago Press, 1964], 19-20).

Chapter Seven

1. Nick Leeson, the currency trader who bankrupted the venerable Barings bank in the trading pits of Singapore, is the most infamous of this breed. He has chronicled his exploits from a cell in a Singapore prison; see his *Rogue Trader* (London: Little, Brown, 1996).

2. Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA: MIT Press, 1990).

3. Karin Knorr Cetina and Urs Bruegger, "The Market as an Object of Attachment: Exploring Post-Social Relations in Financial Markets," *Canadian Journal of Sociology* 25, no. 2 (2000): 141-68.

4. The narrative of progressive rationalization is, of course, most familiar to us from the work of Max Weber. In "Science as a Vocation" (in Gerth and Mills, *From Max Weber*), he bluntly states, "The fate of our times is characterized by rationalization and intellectualization" (155), a position still consistent with the work of abstraction in futures. It is important to distinguish between the power of rationalization as an ideal in the financial industry that parallels Weber and Simmel's accounts of progressive rationalization and an anthropological analysis of rationalization that takes this ideal as a social fact.

5. The social context of financial interpretation is evident in the friendships and feverish affect of pit traders. Looking first at the face-to-face context of open outcry markets, where the density of social life is overwhelming, we can observe and become attuned to the social dimensions of online calculations. This sensitivity is especially important where self-conscious rationalization has actively sought to eliminate the social as an element of economic calculations. The problem is not one of a dualistic division between face-to-face and online transactions. Rather, the problem lies in how rationalized technological systems create a specific context for financial calculation.

6. Bruce G. Carruthers and Barry Cohen, "Knowledge of Failure or Failure of Knowledge? Bankruptcy, Credit, and Credit Reporting in the Nineteenth-Century United States," paper presented at the American Sociological Association meetings, Washington, D.C., August 2000.

7. Theodore Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995); Michael Power, *The Audit Society: Rituals of Verification* (New York: Oxford University Press, 1997); and Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago: University of Chicago Press, 1998).

8. Chicago Board of Trade, *Action in the Marketplace* (Chicago: Board of Trade of the City of Chicago, 1997). The difference between the bid and ask is called the "spread." Ideally the trader can make money buying at the bid and selling at the offer, pocketing the difference, but this method is not always available. Bids and offers theoretically represent the totality of supply and demand for a product in a given moment. Market participants must be able to see all the bids and offers in the market to evaluate market conditions accurately.

9. See Paul Rabinow's "Representations Are Social Facts" (in *Essays in the Anthropology of Reason* [Princeton, NJ: Princeton University Press, 1996], 29-58) for a critique of this epistemology in the social sciences. In the case of financial markets, the epistemologies of financial designers become social facts as they direct the construction of technologies in search of "correct representations."

10. The CBOT created the pit structure to solve problems that arose as the market space became overcrowded with eager speculators. Originating in the agricultural trade of the Midwest, the CBOT was established by men trading certificates of grain ownership to be delivered several months down the line from farms in Nebraska, Iowa, or Illinois to the Chicago grain elevators; see William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991). By 1869 trading at the CBOT had become so popular and crowded that the speculators could not see all the bids and offers available. Market reporters complained in the pages of their daily papers that traders in search of better sight lines were climbing onto their desks and obstructing the reporters' vision. After trying out several shapes for a raised structure that would provide better views of the traders in the market, the CBOT introduced the octagonal pits in 1869; see William D. Faloon, *Market Maker: A Sesquicentennial Look at the Chicago Board of Trade* (Chicago: Board of Trade of the City of Chicago, 1998).

11. In this sense Alan Lind and his fellow designers resemble Paul Rabinow's depiction of technicians of general ideas (*French Modern: Norms and Forms of the Social Environment* [Chicago: University of Chicago Press, 1995]): they put into practice normative ideas of economic action. They are self-conscious intellectuals gravitating to and instantiating ideals of rationalization and designing economic abstractions to facilitate practices more closely resembling perfect competition.

12. In *We Have Never Been Modern* (Cambridge, MA: Harvard University Press, 1993), Bruno Latour discusses "purification," the division of the social from the natural, as a hallmark of modernism. Here, the numerical representation helps to rid the financial arena of social influence. With numbers, the economic sphere is construed as a space of natural competition.

13. In *Plans and Situated Actions* (New York: Cambridge University Press, 1987), Lucy Suchman argues that purposeful action is "fundamentally concrete and embodied." Actions are "taken in the context of particular concrete circumstances." They are "situated" and not the outcome of a process of abstract planning.

14. I use *technological frame* to indicate how technology shapes the content it provides to the user. Wiebe Bijker has used the concept differently. Bijker uses *technological frame* to describe "the ways in which relevant social groups attribute various meanings to an artifact" (Wiebe Bijker, Thomas P. Hughes, and Trevor Pinch, *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* [Cambridge, MA: MIT Press, 1989], 108).

15. Frank Knight in his classic work *Risk, Uncertainty and Profit* defines uncertainty as the condition of judgment and of entrepreneurial profit: "With uncertainty entirely absent, every individual being in possession of perfect knowledge of the situation, there would be no occasion for anything of the nature of responsible management or control of productive activity" (*Risk, Uncertainty and Profit* [Chicago: University of Chicago Press, 1971], 267). Knight's use of uncertainty highlights problems

of economic action where risks are not calculable. I prefer to use *ambiguity* rather than *uncertainty* to underscore the many possible interpretations of a present situation. Traders could be considered *informational entrepreneurs* because they create profit-seeking interpretations of market direction out of this ambiguity. This view follows Pat O'Malley's description of the *uncertain subjects* of neoliberalism rather than appealing to older formulations of entrepreneurship that fit a paradigm of rational modernization. See "Moral Uncertainties: Contract Law and Distinctions between Speculation, Gambling and Insurance," in *Risk and Morality*, ed. R. V. Ericson and A. Doyle, [Toronto: University of Toronto Press, 2003], 231-57.

16. John Murphy, *Technical Analysis of the Financial Markets* (New York: New York Institute of Finance, 1999), 64.

17. Differences in opinions and interpretation yield opposing views. These contrasting outlooks on the future direction of the market allow for every buyer to find a seller and every seller to find a buyer. At the same time, anticipating and acting on the presumed interpretations of other traders in the market is a common profit-making strategy that can create a self-fulfilling prophecy in price action.

18. Murphy, *Financial Markets*, 60.

19. Wayne Baker has shown how, in large pits, traders break up into trading areas within the pit, undermining the ideal of competitiveness. The noise of trading and the potential errors of trading with a physically distant partner encourage traders to focus their attention on the area closest to them; see Wayne E. Baker, "The Social Structure of a National Securities Market," *American Journal of Sociology* 89, no. 4 (1984): 775-811.

20. Chicago Board of Trade, *CBOT Handbook* (Chicago: Board of Trade of the City of Chicago, 1993).

21. Joshua D. Coval and Tyler Shumway, "Is Noise Just Sound?" CBOT Educational Research Foundation Paper, 1998.

22. See Burton Malkiel, *A Random Walk Down Wall Street* (New York: W. W. Norton, 1996), and Peter Bernstein, *Capital Ideas* (New York: Free Press, 1992) for a synopsis of the "random walk" in stock and commodities pricing and its implications for traders, investors, and financial theory. According to Malkiel, "A random walk is one in which future steps or directions cannot be predicted on the basis of past actions. In the stock market, it means that short-run changes in stock prices cannot be predicted" (Malkiel, *Random Walk*, 24).

23. The interface that traders use at Perkins Silver is not the only one available. Members of Eurex have access to the exchange's stock interface, which is also numerically based but visually more rigid than the E-trader model. Earlier interfaces, like those for the now defunct CBOT Project A trading system, tried to replicate the face-to-face environment of the pit by associating names and personal trade histories with each exchange. The precursor to the Eurex exchange, the DTB (Deustcheterminebourse), never operated with a pit system. Its electronic market has always relied strictly on numbers.

24. Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* (Chicago: University of Chicago Press, 1995).

25. Porter, Theodore, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995).

26. The term *disintermediation* came into vogue in the 1980s as a way of describing the development of new instruments, such mortgage-backed assets, that allowed companies to borrow directly from the market rather than going through a commercial lender. The techniques of disintermediation removed institutional ties and drew companies to the “core” processes of the market. The same rationality operates in the logic of reducing the market representation to numbers.

27. John S. Brown, and Paul Duguid, *The Social Life of Information* (Boston: Harvard Business School Press, 2000).

28. I was practicing a technique called “spreading” in ten, five, and two-year German treasury bond futures nicknamed the Bund, Bobl, and Shaz. Spreading is a technique that takes advantage of the difference in volatility between bonds of different durations. The price of a ten-year bond is more volatile than that of a two-year bond because the longer time frame introduces more opportunities for changing economic conditions and greater uncertainties. A spreader takes opposite positions in each of two instruments using the more stable instrument to limit the loss potential of a position in the more volatile contract.

29. This background communication is part of the “ecologies of evaluative principals” of the trading room’ see Daniel Beunza and David Stark, “Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room,” *Industrial and Corporate Change* 13, no. 2 (2004): 369–400.

Conclusion

1. Max Weber, *Economy and Society* (Berkeley and Los Angeles: University of California Press, 1978), 1:636.

2. Donald MacKenzie and Yuval Millo, “Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange,” *American Journal of Sociology* 109, no. 1 (2003): 107–45.

3. Economic sociologists Paul DiMaggio, Walter Powell, and Neil Fligstein have developed Bourdieu’s language of “fields” to understand economic practice. Fields are defined primarily by the distribution of actors in social space. Tracing technological transformations reminds us that social space and the physical materials of connection are interdependent. See Paul DiMaggio and Walter Powell, “The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields,” *American Sociological Review* 48 (1983): 147–60; and Neil Fligstein, *The Architecture of Markets: An Economic Sociology of Twenty-first-Century Capitalist Societies* (Princeton, NJ: Princeton University Press, 2001).

4. Daniel Miller refers to this as “virtualism”; see “Conclusion: A Theory of Virtualism,” in James G. Carrier and Daniel Miller, eds., *Virtualism: A New Political Economy* (New York: Berg, 1998), 187–217.

5. Michel Callon, “Introduction: The Embeddedness of Economic Markets in Economics,” in *The Laws of the Markets*, ed. Michel Callon (Malden, MA: Blackwell, 1998), 1–57; Bill Maurer, *Mutual Life, Ltd: Islamic Banking, Alternative Currencies, Lateral Reason* (Princeton, NJ: Princeton University Press, 2005); Donald MacKenzie, “Social Connectivities in Global Financial Markets,” *Environment and Planning D: Society and Space* 22 (2004): 83–101.

6. Paul Rabinow, in *French Modern: Norms and Forms of the Social Environment* (Chicago: University of Chicago Press, 1995) calls these translators “technicians of general ideas.”

7. These are not the only materials used to rationalize markets. The standardization of contracts, for instance, is a crucial precondition for the operation of futures markets that I describe. However, the daily work of rationalization represents a different order of action, one that requires tweaking and adjustment rather than the construction of systems.

8. Bruce Carruthers, *City of Capital* (Princeton, NJ: Princeton University Press, 1996); David Kynaston, *The City of London* (London: Pimlico, 1988); Andrew Leyshon and Nigel Thrift, *Money/Space* (New York: Routledge, 1997).

9. William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991); Donald L. Miller, *City of the Century: The Epic of Chicago and the Making of America* (New York: Touchstone, 1996).

10. Manuel Castells calls this sharing of connectivity without sharing of territory, “the space of flows”; see *The Rise of the Network Society* (New York: Blackwell, 1996).

11. Arjun Appadurai calls these “technoscapes” and “financescapes,” adding the suffix *-scape* to denote the “fluid irregular shapes . . . that characterize international capital” (*Modernity at Large: Cultural Dimensions of Globalization* [Minneapolis: University of Minnesota Press, 1996], 33).

12. Castells, *Network Society*.

13. Saskia Sassen, *The Global City* (Princeton, NJ: Princeton University Press, 2001).

14. Peter J. Taylor, *World City Network: A Global Urban Analysis* (New York: Routledge, 2004).

15. Andrew Barry, *Political Machines: Governing a Technological Society* (London: Athlone Press, 2001); Wiebe Bijker, Thomas P. Hughes, and Trevor Pinch, *Social Construction of Technological Systems* (Cambridge, MA: MIT Press, 1989).

16. Barry, *Political Machines*.

17. Thomas F. Gieryn, “What Buildings Do,” *Theory and Society* 31, no. 1 (2002): 41.

18. Castells, *Network Society*.

19. This parallels Simmel’s classic argument that money functions to objectify value across both social and geographic distance. It also emphasizes Simmel’s observation that the use of money entails trust in the institutions that produce it. For Simmel, this meant the state; futures contracts, however, require trust in the CBOT, its accounting practices, and its mechanisms for clearing trades; see Georg Simmel, *The Philosophy of Money* (1907; repr., New York: Routledge, 1990).

20. Karin Knorr Cetina and Urs Bruegger, “Global Microstructures: The Virtual Societies of Financial Markets,” *American Journal of Sociology* 107, no. 4 (2002): 905–50.

21. Beunza, Daniel, and David Stark, “Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room,” *Industrial and Corporate Change* 13, no. 2 (2004): 369–400.

22. Niklas Luhmann, "Describing the Future," in *Observations on Modernity* (Stanford, CA: Stanford University Press, 1998), 69-70.

23. In this way, traders form an "epistemic community"; see Karin Knorr Cetina, *Epistemic Cultures: How the Sciences Make Knowledge* (Cambridge, MA: Harvard University Press, 1999).

24. George Lipsitz, *The Possessive Investment in Whiteness* (Philadelphia, PA: Temple University Press, 1998).

25. Mitchell Abolafia (*Making Markets: Opportunism and Restraint on Wall Street* [Cambridge, MA: Harvard University Press, 1996]); Wayne Baker ("The Social Structure of a National Securities Market," *American Journal of Sociology* 89, no. 4 [1984]: 775-811); and Donald MacKenzie, in "Social Connectivities," have shown that these "local aspects" of global connections can affect prices and other basic market operations.

26. Kris Olds and Nigel Thrift identify this location in the present with the management consultants and others who populate the "cultural circuit of capital," noting that it is "meant to produce a kind of dynamic equilibrium in which the brink (the 'edge of chaos') is the place to be" ("Cultures on the Brink: Reengineering the Soul of Capitalism—On a Global Scale," in *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, ed. A. Ong and S. J. Collier [New York: Blackwell, 2005], 274). The confluence of expert and practitioner knowledge is remarkable, and underscores the idea that traders' self-production signals the human possibilities and costs of working in a world that is permanently on the edge of the future.

27. In this way, the new representational modes of the trading screen extend the logic of the ticker tape, an information technology invented in 1867; see Alex Preda, "On Ticks and Tapes: Financial Knowledge, Communicative Practices, and Information Technologies on Nineteenth-Century Financial Markets," paper presented at New York Conference on the Social Studies of Finance, Columbia University, May 3-4, 2002.

28. Roy Smith and Walter Ingo, *Global Banking* (New York: Oxford University Press, 2003).

* BIBLIOGRAPHY

- Abolafia, Mitchell. *Making Markets: Opportunism and Restraint on Wall Street*. Cambridge, MA: Harvard University Press, 1996.
- Abu-Lughod, Janet. *New York, Chicago, Los Angeles: America's Global Cities*. Minneapolis: University of Minnesota Press, 1999.
- Agnew, Jean-Christophe. *Worlds Apart: The Market and the Theater in Anglo-American Thought, 1550-1750*. New York: Cambridge University Press, 1986.
- Amin, Ash, and Nigel Thrift. "Introduction." In *Cultural Economy Reader*, ed. A. Amin and N. Thrift, x-xxx. New York: Blackwell, 2004.
- Andreas, A. T. *History of Chicago. From the Earliest Period to the Present Time*. Chicago: A. T. Andreas, 1884.
- Appadurai, Arjun. *The Social Life of Things*. New York: Cambridge, 1986.
- . *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press, 1996.
- Baker, Tom, and Jonathan Simon. "Embracing Risk." In *Embracing Risk: The Changing Culture of Insurance and Responsibility*, ed. T. Baker and J. Simon, 1-25. Chicago: University of Chicago Press, 2002.
- Baker, Wayne E. "The Social Structure of a National Securities Market." *American Journal of Sociology* 89, no. 4 (1984): 775-811.
- Bakhtin, Mikhail. *Rabelais and His World*. Trans. H. Iswolsky. Bloomington: Indiana University Press, 1984.
- Barry, Andrew. *Political Machines: Governing a Technological Society*. London: Athlone Press, 2001.
- Barry, Andrew, Thomas Osborne, and Nikolas S. Rose. *Foucault and Political Reason: Liberalism, Neo-liberalism and Rationalities of Government*. Chicago: University of Chicago Press, 1996.
- Bataille, Georges. *The Accursed Share*. Vol. 1. New York: Zone Books, 1989. Orig. pub. in 1967.
- Beck, Ulrich. *Risk Society: Towards a New Modernity*. London: Sage, 1992.
- Becker, Gary. "Nobel Lecture: The Economic Way of Looking at Behavior." *Journal of Political Economy* 101, no. 3 (1993): 385-409.
- Bender, Thomas, and William R. Taylor. "Culture and Architecture: Some Aesthetic Tensions in the Shaping of Modern New York City." In *Visions of the Mod-*

- ern City: Essays in History, Art, and Literature*, ed. W. Sharpe and L. Wallock, 189–219. Baltimore, MD: Johns Hopkins University Press, 1987.
- Bernstein, Peter L. *Capital Ideas: The Improbable Origins of Modern Wall Street*. New York: Free Press, 1992.
- Beunza, Daniel, and David Stark. "Tools of the Trade: The Socio-technology of Arbitrage in a Wall Street Trading Room." *Industrial and Corporate Change* 13, no. 2 (2004): 369–400.
- Bijker, Wiebe, Thomas P. Hughes, and Trevor Pinch. *Social Construction of Technological Systems*. Cambridge, MA: MIT Press, 1989.
- Boholm, Asa. "The Cultural Nature of Risk: Can There Be an Anthropology of Uncertainty?" *Ethnos* 68, no. 2 (2003): 159–78.
- Bourdieu, Pierre. "The Sense of Honor." In *Algeria 1960*, 93–123. New York: Cambridge University Press, 1979.
- . *Practical Reason*. Cambridge: Polity Press, 1998.
- Bourdieu, Pierre, and Loïc J. D. Wacquant. *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press, 1992.
- Brown, John S., and Paul Duguid. *The Social Life of Information*. Boston: Harvard Business School Press, 2000.
- Buford, Bill. *Among the Thugs*. New York: Vintage, 1990.
- Burawoy, Michael. *Manufacturing Consent: Changes in the Labor Process under Monopoly Capitalism*. Chicago: University of Chicago Press, 1979.
- Burchell, Graham. "Liberal Government and Techniques of the Self." In Barry, Osborne, and Rose, *Foucault and Political Reason*, 19–36. Chicago: University of Chicago Press, 1996.
- Burchell, Graham, Colin Gordon, and Peter Miller, eds. *The Foucault Effect: Studies in Governmentality*. Chicago: University of Chicago Press, 1991.
- Callon, Michel. "Introduction: The Embeddedness of Economic Markets in Economics." In *The Laws of the Markets*, ed. Michel Callon, 1–57. Malden, MA: Blackwell, 1998.
- Caplan, Pat. "Introduction: Risk Revisited." In *Risk Revisited*, ed. P. Caplan, 1–28. London: Pluto Press, 2000.
- Carey, James W. "Technology and Ideology: The Case of the Telegraph." In *Communication as Culture: Essays on Media and Society*, 201–29. 1988. Reprint, New York: Routledge, 1992.
- Carrier, James G. "Abstraction in Western Economic Practice." In Carrier and Miller, eds., *Virtualism*.
- Carrier, James G., and Daniel Miller, eds. *Virtualism: A New Political Economy*. New York: Berg, 1998.
- . "From Private Virtue to Public Vice." In *Anthropological Theory Today*, ed. H. Moore, 24–47. Malden, MA: Polity, 1999.
- Carruthers, Bruce. *City of Capital*. Princeton, NJ: Princeton University Press, 1996.
- Carruthers, Bruce G., and Barry Cohen. "Knowledge of Failure or Failure of Knowledge? Bankruptcy, Credit, and Credit Reporting in the Nineteenth-Century United States." Paper presented at the American Sociological Association meetings, Washington, D.C., August 2000.
- Carruthers, Bruce, and Arthur L. Stinchcombe. "The Social Structure of Liquidity: Flexibility, Markets, and States." *Theory and Society* 28 (1999): 353–82.
- Castel, Robert. "From Dangerousness to Risk." In Burchell, Gordon, and Miller, *The Foucault Effect*, 281–98.
- Castells, Manuel. *The Rise of the Network Society*. Malden, MA: Blackwell, 1996.
- Chancellor, Edward. *Devil Take the Hindmost: A History of Financial Speculation*. New York: Plume, 1999.
- Chicago Board of Trade. *CBOT Handbook*. Chicago: Board of Trade of the City of Chicago, 1993.
- . *Action in the Marketplace*. Chicago: Board of Trade of the City of Chicago, 1997.
- Clifford, James. *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, MA: Harvard University Press, 1997.
- Comaroff, Jean. "Occult Economies and the Violence of Abstraction: Notes from the South African Postcolony." *American Ethnologist* 26, no. 2 (1999): 279–303.
- Comaroff, Jean, and John Comaroff. "Millennial Capitalism: First Thoughts on a Second Coming." *Public Culture* 12, no. 2 (2000): 291–343.
- Commission on the Future of Multi-Ethnic Britain. *The Report*. London: Profile Books, 2000.
- Connell, Robert W. *Masculinities*. Berkeley and Los Angeles: University of California Press, 1995.
- Coval, Joshua D., and Tyler Shumway. "Is Noise Just Sound?" CBOT Educational Research Foundation Paper, 1998.
- Cowing, Cedric B. *Populists, Plungers, and Progressives: A Social History of Stock and Commodity Speculation, 1890–1936*. Princeton, NJ: Princeton University Press, 1965.
- Crary, Jonathan. *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*. Cambridge, MA: MIT Press, 1990.
- Cronon, William. *Nature's Metropolis: Chicago and the Great West*. New York: W. W. Norton, 1991.
- Csikszentmihalyi, Mihaly. *Flow: The Psychology of Optimal Experience*. New York: Harper & Row, 1990.
- Davis, Mike. *City of Quartz: Excavating the Future in Los Angeles*. New York: Verso, 1990.
- de Sola Pool, Ithiel, ed. *The Social Impact of the Telephone*. Cambridge, MA: MIT Press, 1977.
- di Leonardo, Micaela. "White Ethnicities, Identity Politics and Baby Bear's Chair." *Social Text* 41 (1994): 165–89.
- DiMaggio, Paul, and Walter Powell. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48 (1983): 147–60.
- Doran, James. "FBI Called as NYSE Merger Turns Ugly." *The Australian*, July, 28, 2005.
- Douglas, Mary, and Aaron Wildavsky. *Risk and Culture*. Berkeley and Los Angeles: University of California Press, 1982.

- Dreyfus, Herbert, and Paul Rabinow. *Michel Foucault: Beyond Structuralism and Hermeneutics*. Chicago: University of Chicago Press, 1983.
- Elias, Norbert. *The Civilizing Process*. Oxford: Blackwell, 1978.
- Espeland, Wendy, and Mitchell L. Stevens. "Commensuration as a Social Process." *Annual Review of Sociology* 24 (1998): 313-43.
- Ewald, Francois. "Insurance and Risk." In Burchell, Gordon, and Miller, *The Foucault Effect*, 197-210.
- Faloon, William D. *Market Maker: A Sesquicentennial Look at the Chicago Board of Trade*. Chicago: Board of Trade of the City of Chicago, 1998.
- Faubion, James, ed. *Foucault: Aesthetics, Method, and Epistemology*. New York: New Press, 1998.
- . "Introduction." In Faubion, *Foucault*, xiii-xlii.
- Ferris, William G. *The Grain Traders: The Story of the Chicago Board of Trade*. East Lansing: Michigan State University Press, 1988.
- Fischer, Claude S. *America Calling: A Social History of the Telephone to 1940*. Berkeley and Los Angeles: University of California Press, 1992.
- Fischer, Michael M. J. *Emergent Forms of Life and the Anthropological Voice*. Durham, NC: Duke University Press, 2003.
- Fligstein, Neil. *The Architecture of Markets: An Economic Sociology of Twenty-first-Century Capitalist Societies*. Princeton, NJ: Princeton University Press, 2001.
- Foucault, Michel. *The History of Sexuality*. Vol. 2. *The Use of Pleasure*. New York: Penguin, 1985.
- . *Discipline and Punish: The Birth of the Prison*. New York: Vintage, 1995. Orig. pub. in 1977.
- . "Polemics, Politics, and Problematizations: An Interview with Michel Foucault." In *Ethics: Subjectivity and Truth*, ed. Paul Rabinow, 111-19. New York: New Press, 1997. Orig. pub. in 1984.
- . "A Preface to Transgression." In Faubion, *Foucault*, 69-87.
- . "The Thought of the Outside." In Faubion, ed. *Foucault*, 147-69.
- Galassi, Peter. *Andreas Gursky*. New York: Museum of Modern Art, 2001.
- Garland, David. "Rise of Risk." In *Risk and Morality*, ed. R. Ericson and A. Doyle, 48-86. Toronto: University of Toronto Press, 2003.
- Garsten, Christina, and Anna Hasselstrom. "Risky Business: Discourses of Risk and (Ir)responsibility in Globalizing Markets." *Ethnos* 68, no. 2 (2003): 249-70.
- Geertz, Clifford. "Deep Play: Notes on the Balinese Cockfight." In *Interpretation of Cultures*, 412-53. New York: Basic Books, 1973.
- . "Suq: The Bazaar Economy in Sefrou." In *Meaning and Order in Moroccan Society*, ed. C. Geertz, H. Geertz, and L. Rosen, 123-313. New York: Cambridge University Press, 1979.
- . *Available Light: Anthropological Reflections on Philosophical Topics*. Princeton, NJ: Princeton University Press, 2000.
- Gerth, H. H., and C. Wright Mills, eds. *From Max Weber*. New York: Oxford University Press, 1946.
- Giddens, Anthony. *The Consequences of Modernity*. Stanford, CA: Stanford University Press, 1991.
- . *Modernity and Self-identity: Self and Society in the Late Modern Age*. Cambridge: Polity Press, 1991.
- Gieryn, Thomas F. "What Buildings Do." *Theory and Society* 31, no. 1 (2002): 35-74.
- Glick, Ira O. "A Social Psychological Study of Futures Trading." PhD diss., Department of Sociology, University of Chicago, 1957.
- Coffman, Erving. "Where the Action Is." In *Interaction Ritual*, 149-270. New York: Pantheon, 1967.
- . *The Presentation of Self in Everyday Life*. Harmondsworth: Penguin, 1990. Orig. pub. in 1959.
- Gordon, Colin. "Governmental Rationality: An Introduction." In Burchell, Gordon, and Miller, *The Foucault Effect*, 1-54.
- Granovetter, Mark. "Economic Action and Social Structure: The Problem of Embeddedness." *American Journal of Sociology* 91, no. 3 (1985): 481-510.
- Greising, David, and Laurie Morse. *Brokers, Bagmen, and Moles: Fraud and Corruption in the Chicago Futures Markets*. New York: John Wiley & Sons, 1991.
- Gudeman, Stephen. *The Anthropology of Economy*. Malden, MA: Blackwell, 2001.
- Harvey, David. *The Urban Experience*. Baltimore, MD: Johns Hopkins University Press, 1989.
- . *The Condition of Postmodernity*. Malden, MA: Blackwell, 1993.
- Henwood, Doug. *Wall Street*. New York: Verso, 1997.
- Hertz, Ellen. *The Trading Crowd: An Ethnography of the Shanghai Stock Market*. New York: Cambridge University Press, 1998.
- Hirschman, Albert O. *The Passions and the Interests: Political Arguments for Capitalism before its Triumph*. Princeton, NJ: Princeton University Press, 1997. Orig. pub. in 1977.
- Hochschild, Arlie Russell. *The Managed Heart: Commercialization of Human Feeling*. Berkeley and Los Angeles: University of California Press, 1983.
- Holmes, Douglas R., and George E. Marcus. "Cultures of Expertise and the Management of Globalization: The Refunctioning of Ethnography." In *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, ed. A. Ong and S. Collier, 235-52. New York: Blackwell, 2005.
- Holston, James. *The Modernist City: An Anthropological Critique of Brasilia*. Chicago: University of Chicago Press, 1989.
- Hounshell, David A. *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States*. Baltimore, MD: Johns Hopkins University Press, 1984.
- Hubert, Henri, and Marcel Mauss. *Sacrifice: Its Nature and Function*. Chicago: University of Chicago Press, 1964.
- Hughes, Thomas P. *Networks of Power: Electrification in Western Society, 1880-1930*. Baltimore, MD: Johns Hopkins University Press, 1983.
- . "The Evolution of Large Technological Systems." In W. Bijker, T. P. Hughes, and T. Pinch, *Social Construction of Technological Systems*, 51-82.
- Hutton, Will. *The State We're In*. London: Vintage, 1996.
- Jameson, Frederic. "Culture and Finance Capital." *Critical Inquiry* 24 (1997): 246-65.

- Kahneman, Daniel, and Amos Tversky. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 2 (1979): 263–92.
- Kamin, Blair. "A New Fortress for Financial Wars." *Chicago Tribune*, February 19, 1997.
- Kindleberger, Charles. *Manias, Panics and Crashes: A History of Financial Crises*. New York: Basic Books, 1989.
- Knight, Frank. *Risk, Uncertainty and Profit*. 1921. Reprint, Chicago: University of Chicago Press, 1971.
- Knorr Cetina, Karin. *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge, MA: Harvard University Press, 1999.
- Knorr Cetina, Karin, and Urs Bruegger. "The Market as an Object of Attachment: Exploring Post-Social Relations in Financial Markets." *Canadian Journal of Sociology* 25, no. 2 (2000): 141–68.
- . "Global Microstructures: The Virtual Societies of Financial Markets." *American Journal of Sociology* 107, no. 4 (2002): 905–50.
- Koppel, Robert. *The Tao of Trading: Discovering a Simpler Path to Success*. Chicago: Dearborn Trade, 1998.
- Kynaston, David. *The City of London*. London: Pimlico, 1988.
- . *LIFFE: A Market and Its Makers*. Cambridge: Granta Editions, 1997.
- Lakoff, Andrew, and Stephen Collier. "Ethics and the Anthropology of Modern Reason." *Anthropological Theory* 4, no. 4 (2004): 419–34.
- Latour, Bruno. *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge, MA: Harvard University Press, 1987.
- . *We Never Been Modern*. Trans. C. Porter. Cambridge, MA: Harvard University Press, 1993.
- Law, John. "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion." In W. Bijker, T. P. Hughes, and T. Pinch, *Social Construction of Technological Systems*, 111–34.
- , ed. *A Sociology of Monsters: Essays on Power, Technology and Domination*. New York: Routledge, 1991.
- . *Aircraft Stories: Decentering the Object in Technoscience*. Durham, NC: Duke University Press, 2002.
- Le Bon, Gustave. *The Crowd: A Study of the Popular Mind*. New York: Penguin Books, 1977.
- Lee, Benjamin, and Edward LiPuma. "Cultures of Circulation: The Imaginations of Modernity." *Public Culture* 14, no. 1 (2002): 191–213.
- Leeson, Nick. *Rogue Trader*. London: Little, Brown, 1996.
- Leidner, Robin. *Fast Food, Fast Talk: Service Work and the Routinization of Everyday Life*. Berkeley and Los Angeles: University of California Press, 1993.
- Levy, Ron. "The Mutuality of Risk and Community: The Adjudication of Community Notification Statutes." *Economy and Society* 29, no. 4 (2000): 578–601.
- Lewis, Michael. *Liar's Poker*. New York: Penguin, 1989.
- Leyshon, Andrew, and Nigel Thrift. *Money/Space*. New York: Routledge, 1997.
- Lipsitz, George. *The Possessive Investment in Whiteness*. Philadelphia, PA: Temple University Press, 1998.

- Locke, Peter R., and Steven C. Mann. *Do Professional Traders Exhibit Loss Realization Aversion?* Washington, DC: Commodity Futures Trading Commission, 1999.
- Luhmann, Niklas. *Risk, a Sociological Theory*. New York: A. de Gruyter, 1993.
- . "Describing the Future." In *Observations on Modernity*, 63–74. Stanford, CA: Stanford University Press, 1998.
- Lupton, Deborah. 1995. "The Embodied Computer/User." *Body and Society* 1, nos. 3–4 (1995): 97–112.
- . *Risk*. New York: Routledge, 1999.
- Lyng, Stephen. "Edgework: A Social Psychological Analysis of Voluntary Risk Taking." *American Journal of Sociology* 95, no. 4 (1990): 851–86.
- Mackay, Charles. *Extraordinary Popular Delusions and the Madness of Crowds*. Boston: L. C. Page, 1974.
- MacKenzie, Donald. "Physics and Finance: S-Terms and Modern Finance as a Topic for Science Studies." *Science, Technology and Human Values* 26, no. 2 (2001): 115–44.
- . "Social Connectivities in Global Financial Markets." *Environment and Planning: Society and Space* 22 (2004): 83–101.
- MacKenzie, Donald, and Yuval Millo. "Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange." *American Journal of Sociology* 109, no. 1 (2003): 107–45.
- Malinowski, Bronislaw. *Argonauts of the Western Pacific*. 1922. Reprint, Prospect Heights, IL: Waveland Press, 1984.
- Malkiel, Burton Gordon. *A Random Walk Down Wall Street*. New York: W. W. Norton, 1996.
- Maurer, Bill. "Complex Subjects: Offshore Finance, Complexity Theory, and the Dispersion of the Modern." *Socialist Review* 25, nos. 3–4 (1994): 113–45.
- . *Mutual Life, Ltd: Islamic Banking, Alternative Currencies, Lateral Reason*. Princeton, NJ: Princeton University Press, 2005.
- Mauss, Marcel. "The Mandatory Expression of Sentiments." Unpublished manuscript. L. Wacquant, ed. and trans. 1921.
- McDowell, Linda. "Body Work: Heterosexual Gender Performances in City Workplaces." In *Mapping Desire*, ed. D. Bell and G. Valentine, 75–98. London: Routledge, 1995.
- . *Capital Culture: Gender at Work in the City*. Malden, MA: Blackwell, 1997.
- Miller, Daniel. 1998. "Conclusion: A Theory of Virtualism." In Carrier and Miller, *Virtualism*, 187–217.
- Miller, Donald L. *City of the Century: The Epic of Chicago and the Making of America*. New York: Touchstone, 1996.
- Mitchell, Richard G. *Mountain Experience: The Psychology and Sociology of Adventure*. Chicago: University of Chicago Press, 1983.
- Miyazaki, Hirokazu. "The Temporalities of the Market." *American Anthropologist* 105, no. 2 (2003): 255–65.
- Murphy, John. *Technical Analysis of the Financial Markets*. New York: New York Institute of Finance, 1999.

- Noble, David F. *A World without Women: The Christian Clerical Culture of Western Science*. New York: Oxford University Press, 1993.
- Norris, Frank. *The Pit: A Story of Chicago*. 1902. Reprint, New York: Doubleday Page, 1994.
- Offner, Avner. "Between the Gift and the Market: The Economy of Regard." *Economic History Review* 50 (1997): 450–76.
- Olds, Kris, and Nigel Thrift. "Cultures on the Brink: Reengineering the Soul of Capitalism—On a Global Scale." In *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, ed. A. Ong and S. J. Collier, 270–90. Malden, MA: Blackwell, 2005.
- O'Malley, Pat. "Risk and Responsibility." In Barry, Osborne, and Rose, *Foucault and Political Reason*, 189–209.
- . "Uncertain Subjects: Risks, Liberalism, and Contract." *Economy and Society* 29 (2000): 460–84.
- . "Moral Uncertainties: Contract Law and Distinctions between Speculation, Gambling and Insurance." In *Risk and Morality*, ed. R. V. Ericson and A. Doyle, 231–257. Toronto: University of Toronto Press, 2003.
- Ong, Aihwa. *Flexible Citizenship: The Cultural Logics of Transnationality*. Durham, NC: Duke University Press, 1999.
- . *Buddha Is Hiding: Refugees, Citizenship, the New America*. Berkeley and Los Angeles: University of California Press, 2003.
- Palmer, Catherine. "Shit Happens': The Selling of Risk in Extreme Sports." *Australian Journal of Anthropology* 13, no. 3 (2000): 323–36.
- Pinch, Trevor, and Wiebe E. Bijker. "The Social Construction of Facts and Artifacts; or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." In W. Bijker, T. P. Hughes, and T. Pinch, *Social Construction of Technological Systems*, 17–49.
- Poovey, Mary. *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society*. Chicago: University of Chicago Press, 1998.
- . "Residual Materialities." Unpublished manuscript. 2004.
- Porter, Theodore. *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*. Princeton, NJ: Princeton University Press, 1995.
- Power, Michael. *The Audit Society: Rituals of Verification*. New York: Oxford University Press, 1997.
- Preda, Alex. "On Ticks and Tapes: Financial Knowledge, Communicative Practices, and Information Technologies on Nineteenth-Century Financial Markets." Paper presented at New York Conference on the Social Studies of Finance, Columbia University, May 3–4, 2002.
- Pryke, M. "An International City Going 'Global': Spatial Change in the City of London." *Environment and Planning D: Society and Space* 9 (1991): 197–222.
- Rabinow, Paul. *French Modern: Norms and Forms of the Social Environment*. Chicago: University of Chicago Press, 1995.
- . "Representations Are Social Facts." In *Essays in the Anthropology of Reason*, 29–58. Princeton, NJ: Princeton University Press, 1996.
- . *Ethics: Subjectivity and Truth*. Vol. 1. New York: New Press, 1997.

- . "Midst Anthropology's Problems." *Cultural Anthropology* 17, no. 2 (2002): 135–50.
- . *Anthropos Today: Reflections on Modern Equipment*. Princeton, NJ: Princeton University Press, 2003.
- Riles, Annelies. "Property as Legal Knowledge: Means and Ends." *Journal of the Royal Anthropological Institute* 10, no. 4 (2004): 755–976.
- Ross, Andrew. *No-Collar: The Humane Workplace and Its Hidden Costs*. New York: Basic Books, 2003.
- Sahlins, Marshall. *Stone Age Economics*. Chicago: Aldine Atherton, 1972.
- Salzinger, Leslie. *Genders in Production: Making Workers in Mexico's Global Factories*. Berkeley and Los Angeles: University of California Press, 2003.
- Sassen, Saskia. *Losing Control? Sovereignty in an Age of Globalization*. New York: Columbia University Press, 1996.
- . *The Global City*. Princeton, NJ: Princeton University Press, 2001.
- Schorke, Carl E. *Fin-de-siècle Vienna: Politics and Culture*. New York: Vintage Books, 1981. Orig. pub. 1961.
- Schumpeter, Joseph. *Capitalism, Socialism and Democracy*. New York: Harper & Row, 1950. Orig. pub. 1942.
- Sennett, Richard. *Flesh and Stone: The Body and the City in Western Civilization*. Boston: Faber and Faber, 1994.
- . *Corrosion of Character: The Personal Consequences of Work in the New Capitalism*. New York: W. W. Norton, 1998.
- Shapin, Steven. *A Social History of Truth: Civility and Science in Seventeenth-Century England*. Chicago: University of Chicago Press, 1994.
- Simmel, Georg. *The Philosophy of Money*. 1907. Reprint, New York: Routledge, 1990.
- . "Domination." In *Georg Simmel on Individuality and Social Forms*, ed. D. N. Levine, 1908. Reprint, Chicago: University of Chicago, 1971.
- . "The Stranger." In *Georg Simmel on Individuality and Social Forms*, ed. D. N. Levine, 143–49. 1908. Reprint, Chicago: University of Chicago Press, 1971.
- Simon, Jonathan. "Taking Risks: Extreme Sports and the Embrace of Risk in Advanced Liberal Societies." In Baker and Simon, *Embracing Risk*, 177–207. Chicago: University of Chicago Press, 2002.
- Simpson, Joe. *Touching the Void*. New York: HarperCollins, 1988.
- Sinclair, Upton. *The Jungle*. 1906. Reprint, New York: Penguin, 1985.
- Smith, Charles W. *Auctions: The Social Construction of Value*. New York: Free Press, 1989.
- Smith, Roy, and Walter Ingo. *Global Banking*. New York: Oxford University Press, 2003.
- Solman, Paul. "Chicago May Consider End to Open Outcry." *Financial Times*, June 20, 1998.
- Strange, Susan. *Casino Capitalism*. New York: Manchester University Press, 1984.
- Strathern, Marilyn. "Cutting the Network." *Journal of the Royal Anthropological Institute* 2, no. 3 (1996): 517–35.

- Suchman, Lucy. *Plans and Situated Actions: The Problem of Human-Machine Communication*. New York: Cambridge University Press, 1987.
- Suttles, Gerald. "Introduction." In Mitchell, *Mountain Experience*, viii–xii.
- Taylor, Charles Henry. *History of the Board of Trade of the City of Chicago*. Chicago: Robert O. Law, 1917.
- Taylor, Peter J. *World City Network: A Global Urban Analysis*. New York: Routledge, 2004.
- Thrift, Nigel. *Knowing Capitalism*. London: Sage, 2005.
- Tichi, Cecelia. *Shifting Gears: Technology, Literature, Culture in Modernist America*. Chapel Hill: University of North Carolina Press, 1987.
- Useem, Michael. "Business and Politics in the United States and the United Kingdom." In *Structures of Capital*, ed. S. Zukin and P. DiMaggio, 263–91. New York: Cambridge University Press, 1989.
- Urban, Greg. *Metaculture: How Culture Moves Through the World*. Minneapolis: University of Minnesota Press, 2001.
- Wacquant, Loïc. 1998. "The Prizefighter's Three Bodies." *Ethnos* 63, no. 3 (1998): 325–52.
- Wall Street Journal*. "Really Big Board." April 22, 2005.
- Weber, Max. "Science as a Vocation." In Gerth and Mills, *From Max Weber*, 129–58. ———. *Economy and Society*. Vol. 1. Berkeley and Los Angeles: University of California Press, 1978. ———. *The Protestant Ethic and the Spirit of Capitalism*. Trans. T. Parsons. New York: Routledge, 1992. Orig. pub. in 1930.
- Weiner, Annette. "Inalienable Wealth." *American Ethnologist* 12, no. 2 (1985): 210–27.
- White, Harrison. "Where Do Markets Come From?" *American Journal of Sociology* 87 (1981): 517–47.
- Willis, Carol. *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago*. New York: Princeton Architectural Press, 1995.
- Willis, Paul E. *Learning to Labor: How Working-Class Kids Get Working-Class Jobs*. New York: Columbia University Press, 1981.
- Woolgar, Steve. "Configuring the User: The Case of Usability Trials." In Law, *Sociology of Monsters*, 58–97.
- Young, Michael, and Peter Willmott. *Family and Kinship in East London*. 1957. Reprint, Berkeley and Los Angeles: University of California Press, 1992.
- Zelizer, Viviana. *The Social Meaning of Money*. Princeton, NJ: Princeton University Press, 1997.

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