Reading the Market

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The adoption of the stock ticker by the New York Stock Exchange in the late 1860s created both an impediment to and an opportunity for would-be observers of the stock market. Because the members of the Regular Board were keen to maintain their monopoly on the prices that they claimed to actively produce, they now closed the floor to nonmembers, meaning that the only way to access those prices was via a licensed stock ticker service. In theory, it was still possible for nonmembers to follow the activity of the stock market from the visitors’ gallery (and this indeed became an increasingly popular pastime for tourists), but from that vantage point, the lay observer was only able to gain a general impression of market movements, rather than any detailed knowledge of individual transactions. The floor of the stock exchanges and the pits of the commodity exchanges seemed to offer a graphic materialization of the abstract and impersonal forces at play in the sublime vastness of the national and global economy. More often than not, however, casual visitors to the NYSE were struck by the illegibility of the spectacle of turmoil on the floor, most obviously in times of panic: “Chairs are abandoned, men rush pell-mell into the cock-pit, and crowd, jostle, push, and trample on one another. . . . They speak all at once, yelling and screaming like hyenas. . . . Several hundred men . . . stamping, yelling, screaming, jumping, sweating, gesticulating, violently shaking their fists in each other’s faces, talking in a tongue not spoken at Pentecost.”

As we saw in chapter 2, the stock ticker also created a new vantage point on the market, a bird’s-eye view (in Richard Wyckoff’s opinion) of all the transactions taking place on the floor of the New York Stock Exchange, even for those nonmembers at a remove from the heat of the action. The ticker tape afforded not merely a better way of observing the stock market; it changed what counted as the market. Yet in doing so, it presented a new dilemma: if the stock ticker
now provided the best view of the market, what did that market look like? Was it possible to provide a visual analogue for the increasingly placeless interactions of the global financescape that dealt not in actual material products, but in immaterial derivatives? And if the stock market itself was a sensitive register, what, exactly, did its prices represent? Financial markets have often been perceived as elusive and mysterious, since they deal primarily in abstractions that complicate and resist figurative representation. As we saw in the introduction, financial capitalism itself creates recurrent crises of representation, when the faith that is necessary to maintain belief in the value of the numerous fictive substitutes and abstractions of “real” value (paper money, credit instruments, futures contracts, and so on) periodically begins to crumble. This process unsurprisingly quickened pace when the market became abstracted from the particular locations and people of actual open-cry exchanges, as, quite simply, there is less to see. Finding representational analogues for financial capitalism became more difficult in the last decades of the nineteenth century, as the market shifted from the physical location, personalities, and embodied dramas on the floor of the New York Stock Exchange or the Chicago Board of Trade to the vast, globally interconnected circuits of supply and demand depicted in the fluctuating stock prices printed on the stock ticker.

This chapter examines the ways in which the market was visualized in different media in the late nineteenth and early twentieth centuries, during the crucial moment of the emergence of the deterritorialized and disembodied financial marketplace, enabled by the proliferation of ticker services in brokerages throughout New York, the nation, and, with the advent of transatlantic cables, the world. It will begin by sketching out the broad history of genres that attempted to picture and embody the market (such as paintings, cartoons, guidebooks, photographs, and architecture) before going on to consider the way illustrations in popular magazines during the Gilded Age and the Progressive Era grappled with the conundrum of portraying a market that was becoming increasingly unrepresentable. The solution, in many cases, was to personify the abstractions. The final part of this chapter will discuss new technologies of visualization, such as the charts produced by technical analysts, and the hydraulic machines built by economists to model the national system of supply and demand. Chapter 5 continues the discussion with an analysis of a diagram of interlocking corporate directorships produced for the U.S. House of Representatives in the Pujo Committee’s investigation, an illustration that combines elements of both the anthropomorphizations that were the mainstay of muckraking cartoons and the abstractions of the market that were elaborated by the early chartists. The argument of this
chapter is twofold. First, emerging technologies did not merely create new ways of visualizing the stock market, but also helped reconfigure and rationalize the very idea of the market as a coherent, predictable, self-sustaining entity. Second, many of these representations worked by simultaneously abstracting and personalizing the problems of finance.

**Allegories of Finance**

The full history of how finance has been represented in the visual arts has yet to be written, but the basic trajectory is from figurative or allegorical depictions in Britain in the eighteenth century to today’s high-art engagements with the thoroughgoing dematerialization of financial capitalism. In brief, the modes of representation of finance move from allegory through satire, realism, naturalism, modernism, and on to postmodernism, shadowing the changing nature of financial capitalism itself. Within this longer trajectory, the period of the late nineteenth and early twentieth centuries in the United States looks back to earlier iconographic traditions, while also anticipating new concerns with the idea of the financial sublime.

Despite these changing modes of representation, it is worth emphasizing that a number of themes and images tend to recur. Visual portrayals of the financial marketplace frequently utilize a register that is either natural (storms, floods, bulls, and bears) or providential (gambling wheels, Lady Luck, and other feminizations of finance). Many of these images both endorse and critique the overwhelming power of the market, while making evident its ineluctable dynamism and the importance of circulation and movement. This alternating impulse to either conquer or be conquered by the market is also apparent in the desire to interpret or construct its size, density, and complexity. Many visual images of the market are thus girded by different kinds of geometrical arrangements, and their structures—sometimes hierarchical and sometimes rhizomatic—are suggestive of particular interpretations of the possibility that individuals can influentially act within the market. Likewise, as the present chapter demonstrates, even images that have attempted to make sense of the processes of the market by personalizing them have given in to its abstractions, reinforcing the overwhelming power of the market by anthropomorphically depicting it as a kind of sentient being, one quite beyond the comprehension of individual human actors.

In the eighteenth century, allegorical cartoons that appealed to both literate and nonliterate readers attacked the emerging realm of finance as no better than gambling. The satirical focus of their allegories was quite specific. *The Bubblers Medley; or, A Sketch of the Times; Being Europes Memorial for the Year 1720*, for
example, locates the disordered crush of bodies precisely in ‘Change Alley in London and in rue Quinquempoix in Paris, both streets where stocks and shares were openly sold. In these images, the libidinous irrationality of the unregulated crowd is frequently symbolized by a gambling motif, indicated by the playing cards in the *Bubblers Medley* and by the coin game and the demonic wheel of fortune in Hogarth’s *An Emblematic Print on the South Sea*. The presence of a carousel, familiar in other representations from that period, such as the Dutch *Het Groote Tafereel der Dwaasheid* (“The Great Mirror of Folly”), emphasizes the visceral pleasures of gambling while still condemning the folly of betting on risky ventures.

Yet these images also suggest an analysis that is more complex than a critique of the moral dangers of a gambling mania. The South Sea Company at the center of the speculative boom of 1720 was a trading company that had assumed responsibility for managing the debt that the British government had accrued during its war with Spain. The company was formed as a Tory alternative to the Whig-controlled Bank of England, and both its rise and fall reveal the social and political implications of that nation’s financial revolution in the eighteenth century, which involved not only the introduction of paper money and the emergence of the concept of national debt, but a set of new—and often largely anonymous—financial relationships, opportunities, and threats made possible by a secondary market in shares and credit.6 It is hardly surprising, then, that at the time of the South Sea bubble, an allegorical, typological, or emblematic mode predominated, reflecting a sense that financial exchange substituted strange, imaginary, fantastical entities for “real,” tangible things.

This figurative mode also anticipates concerns about the possibilities of representation itself. The trompe l’oeil form of the *Bubblers Medley* points toward an awareness of the implicit duplicity of representation itself, to the widespread anxiety about “trickery, artifice, and the kind of fictions that lay at the heart of stockjobbing” that the crash laid open.7 The implications of the *Bubblers Medley*’s ability to so artlessly reproduce the texts that it apparently mocks have become central and recurring concerns of “money artists” from the eighteenth century to the present. Much financial imagery in nineteenth-century America responded to a similar problem of representation as that which the emergence of paper money and a credit-based economy created in eighteenth-century Britain. With over 3,000 banks issuing paper notes, it became virtually impossible to distinguish real from illegitimate money, to the extent that even the counterfeit detectors published by banks to aid the public in recognizing false notes were themselves sometimes counterfeited. The banks were confronted with both the logistical problem of how to integrate anticounterfeiting measures into their
banknote design, and the iconographic question of what adornments were suitable to enact performatively a sense of dignity, reliability, and solidity to these representational proxies for value—a proxy that in some cases was a fraud, since the issuing banks were not always able to make good on their promise to exchange the paper bills for specie. Many Americans therefore became accustomed to the practice of discounting bills from distant, unknown banks, in effect learning to adopt a hermeneutic of suspicion in their reading of these publically circulating symbols.

In addition to the daily, practical problems of an unreliable paper currency, the larger philosophical question about the nature of money was a recurrent flashpoint in the power struggles between farmers, industrial workers, and capitalists in the nineteenth century. The troubling chronic crises, caused in part by the lack of specie in a monetary system officially underwritten by the gold standard, led to a political climax in the presidential election of 1896. Agrarian Populists, representing the interests of debtors, favored the expansionist and inflationary possibilities of a bimetallic standard; sound-money conservatives continued to insist that only gold could provide the proper foundation for an economy; and the greenbackers represented a minority view, where only a paper currency, backed by government fiat and a faith in the nation’s future, could provide a democratic form of money that could expand to match economic growth. Against a background of the practical problem of counterfeiting, coupled with a metaphysical anxiety about the nature of value, satirical cartoonists, such as Thomas Nash, and trompe l’oeil painters, such as William Harnett, returned repeatedly to the representation of money itself, both as a symbol of larger anxieties about a speculative economy and as an immediate, pragmatic, representational problem in its own right.

The allegorical approach to depicting finance in satirical cartoons that accompanied the financial revolution in eighteenth-century Britain continued into the nineteenth century and was adopted in a transformed mode in the United States, not least in response to the recurrent and increasingly globally interconnected panics that punctuated economic life on both sides of the Atlantic. Crashes were explained in cartoons partly through references to familiar visual tropes of natural catastrophes, drawing on biblical images of floods and plagues. But many cartoons in antebellum America also drew on traditional explanations of individual moral responsibility for financial ruin, in the absence of larger, systemic explanations: bankrupts were not victims of an impersonal economic system, but were foolhardy profligates who had brought misfortune on themselves. If the drawings did seek wider explanations, they did so through the moralized lens of
political economy, in which the trials and tribulations of finance were portrayed as the result of specific policies or manipulation.\textsuperscript{11}

**Market Types**

In the Gilded Age and the Progressive Era, an individual—sometimes heroic, at other times villainous—was often made to stand in visually for the vast confusion of the entire market, representing the animating spirit that operates the economic machinery and makes it tick. As we will see below, in some cases the depictions focused on a particular, identifiable, charismatic individual, but in others the desire was to portray a generic social type or to personify a particular characteristic of market society. There is a long tradition of embodying the complexity of the market in an individual, from satirical prints of the archetype of the deceptive stockjobber in the eighteenth century, to lionizing portraits of the Napoleons of Wall Street in the late nineteenth century, to the current return of representations of evil and greedy “banksters” in works such as Molly Crabapple’s 2011 series of cartoonish paintings that were a response to the Occupy Movement.\textsuperscript{12} For example, *Het groote Tafereel der Dwaasheid* (“The Great Mirror of Folly”), a Dutch collection of satirical prints and writings published as an immediate response to the financial crises that spread across Europe in 1720 as a result of the collapse of the South Sea bubble, included cartoons such as *Wind-Kraamer en Grossier* (“The Wholesale Wind-Peddler’s Fair”). A speculator, seated on a cloud, with a heavenly head blowing hot air that emerges as if out of his posterior, is accompanied by a man using a pair of bellows to send aloft a cat floating from four balloons. In contrast, a French cartoon from 1784 instead depicts the type of the “Spéculateur” as a wretched specimen who has fallen on hard times, presumably as a result of being seduced into unwise financial dealings. When not a buffoon or a degenerate, the figure of the speculator in the eighteenth century—as a stand-in for the market as a whole—was seen as a dangerous threat to the social order. The possibility of a sudden reversal of the natural hierarchy through the sudden creation or panicked loss of great fortunes was equated with the immoral risks of gambling, and, more often than not, the speculator was simply depicted as an outsider (as Dutch or French in British illustrations in the eighteenth century, for example).\textsuperscript{13} In the American painter Francis Edmonds’s *The Speculator* (1852), a simple country couple are distracted from their humble productive labor of shucking corn into a handwoven basket by a foppish city slicker, who had entered this sentimental space to tempt them with real-estate speculation (the paper he unfurls before the couple and the viewer of the painting offers “1000 Valuable Lots on Rail Road Ave.”).\textsuperscript{14} During the course of the nineteenth century, the image
of the stockbroker slowly became more respectable, as speculation in the market was rhetorically distinguished from gambling. The idea of the stock market as a legitimate space of economic endeavor was, in part, created by those who wanted to think of themselves as financial professionals, able to perceive opportunities and shoulder risk, and who were to be distinguished from reckless amateurs taking a flyer. The image these stock market insiders wanted to present to the public was one of prudence, efficiency, and moral rectitude, downplaying the traditional archetype of the stockjobbing villain.

Although many cartoons in the Gilded Age and the Progressive Era fixated on a particular, identifiable market manipulator of enormous reach, others featured generic types or specific traits as monstrous personifications of financial corruption. One well-known Joseph Keppler cartoon in *Puck* magazine in 1889, for example, depicted the monopoly power of corporate trusts as monstrously bloated capitalists looming over the diminished and unaware representatives of the people in the U.S. Senate. In this kind of imagery, the corpulent captains of industry appear not so much as specific individuals as generic types, abstractions endowed with human characteristics. Impersonal entities take on the mantle of people, while, conversely, persons become things. Another illustration depicted the figure of Standard Oil—already a personification of the corporate entity in the body of John D. Rockefeller—morphing into an oil barrel. Often the cartoons featured literalizations of figurative understandings, in addition to the personifications of abstractions.  

The Financial Bestiary

One of the most common modes of allegorizing the market in the Gilded Age and the Progressive Era was through anthropomorphization: individuals, generic types, or even abstract traits appearing in the guise of animals. Many nineteenth-century depictions of financial panics, for example, focus on the animalistic, herdlike behavior of market crowds, in which the violence of the struggle for financial survival on the floor of the exchange resembles the Darwinian jungle. These muckraking attacks on high finance referenced a long tradition of characterizing the market in bestial terms; indeed, the *Oxford English Dictionary* dates the first emergence of the term “bear” in relation to stock markets to the 1710s (the association of the term with short selling was apparently based on the proverb “to sell the bear’s skin before one has caught the bear”). More generally, in eighteenth- and nineteenth-century political cartoons, animal imagery featured regularly as a visual shorthand, harking back to the classical tradition of animal fables, with political and financial actors taking on the roles and ap-
pearance of foxes, wolves, lambs, and other emblematic creatures, such as the English bulldog, the American eagle, or the Republican Party elephant.¹⁶

The most notable portrayal of bestial finance is undoubtedly William Holbrook Beard’s painting, *The Bulls and Bears in the Market* (1879). Beard’s painting also marked a new departure, however, not least because it wedds the visual allegory of political cartoons to the dramatic narrative and realism of late nineteenth-century high art. Beard had already made a name for himself as an accomplished painter of humorous, anthropomorphic scenes, including several involving gatherings of rapacious and Bacchanalian bears in the woods.¹⁷ Although the bears in those earlier images referred obliquely to professional speculators, in *The Bulls and Bears in the Market* there is no doubting that the subject is Wall Street: the stampeding herd of bulls and bears, tearing the flesh from one another, rush past the clearly designated classical portico of (an imagined version of) the New York Stock Exchange, threatening to overwhelm the viewer (fig. 3.1). If the cause of the devastating panic of 1873 is to be found anywhere, this painting suggests, it is not in the moral failings of ordinary citizens, or even in the political machinations of those in the nation’s capital, but in the heart of Manhattan’s financial district. The canvas combines a melodramatic panorama of the chaotic struggle between the bulls and bears, with realistic attention to the details of horns, fangs, and hooves. It also couples animal brutality with recognizably human expressions, poses, and actions, such as the bear trying to lasso a bull (in the background on the right-hand side). Beard thus reliteralizes the metaphor of social Darwinism: here in lower Manhattan, the law of the jungle reigns, with the bulls and bears personifying those “animal spirits” of greed, fear, panic, and exuberance deemed to be ruling the market, and familiar from the era’s other exposés into the “men and mysteries of Wall Street.”¹⁸

By the turn of the twentieth century, many of the depictions of a financial bestiary had become ritualized. For example, W. A. Rogers’s cartoon, *Great Activity in Wall Street*, features anthropomorphized bulls, bears, and lambs (i.e., naive investors, ready to be “fleeced”), dressed up in the latest fashions and all following one another in a merry dance. The suggestion is that what looks to the outsider like “great activity in Wall Street” is merely an endless and highly regimented circle of buying and selling, governed by the fixed behavior of the different market “beasts.”¹⁹ In a neat double metaphor, a *Puck* cover from 1903 has market bulls and bears dressed as Roman gladiators (fig. 3.2).

Although bull and bear imagery was the most common, as ordinary Americans tried to make sense of the profound economic changes in the last decades of the nineteenth century, other animal metaphors were deployed, the most prom-
inent of which was the octopus. With the role of Wall Street, and the vast corporate conglomerations its syndicates organized, becoming more central to the life of the nation around the turn of the twentieth century, a range of cartoons proliferated that rendered corporations and financial combinations as a malevolent octopus. As chapter 5 explains in more detail, the image of the octopus conjoined a notion of evil, individual intentionality with a suggestion that corporate malfeasance was part of a complex, many-armed system. These images of corporations as a monstrous cephalopod also captured antimonopolist fears that the new industrial combinations, and the financial apparatus that created them, threatened republican virtues of individual enterprise and self-sufficiency because of their unprecedented size and reach. The octopus is scary because it can insert its tentacles into the entire business sphere and politics of the nation, and even the globe (fig. 3.3).

While some of these octopus cartoons presented either a particular corporation or the entire corporate system as a beast with a will and a mind of its own.
(in effect literalizing the legal fiction of corporate personality), others identified the octopus with particular robber barons, giving a name and a face to this anthropomorphic rendition of corporate will. This way of thinking about massive corporations and market manipulations as simultaneously the result of animal passions and the will of a single individual was reflected in many of the satirical
Picturing the Market

cartoons of the period, which portrayed robber barons as beasts with identifiable human features. For example, a Puck cartoon from 1901 depicted J. P. Morgan as a bullish figure, blowing worthless soap bubbles of “inflated value” that were eagerly chased by the diverse crowd. Another Puck cover, from 1913, featured Morgan (complete with a bulbous, purple nose) as a monstrous spider, representing “flim flam finance” at the center of the web of Wall Street (fig. 3.4). In this case, however, the caption informs us that “the flies got wise,” with the public keeping clear of the web.

Personifying Finance

These anthropomorphic renditions of recognizable captains of industry were in keeping with other popular depictions of the period, which also identified the market, as a whole, with particular individuals. Despite efforts by Wall Street practitioners in the late nineteenth and early twentieth centuries to redefine the popular image of finance as professional and impersonal, the American public continued to focus on prominent individuals as embodying the stock market.
Visual and verbal portraits of robber barons, such as Daniel Drew, Jim Fisk, Cornelius Vanderbilt, and Jay Gould in the 1870s and 1880s and John D. Rockefeller and J. P. Morgan in the 1890s and 1900s, dominated the public imagination of the market as giants that loomed over Wall Street, in the view of a satirical cartoon from 1903, for example. In the same way that many newspaper accounts of
corporate corruption focused on the scandalous antics of individual Wall Street speculators, so, too, did visual representations of the brave new world of financial capitalism latch onto corporate leaders as larger-than-life embodiments of economic processes, even after the original founders of the great combinations had supposedly become obsolete as they were overtaken by the bureaucratic procedures of the very corporations they had created.24

The cartoons repeatedly concentrated on the personal power of particular Wall Street titans, sometimes as an all-powerful colossus, but at other times as sinister monsters or puppet masters, controlling the fate of mere mortals. In a *Puck* cartoon from 1902, for example, Morgan is a goliath, single-handedly carrying the cornucopia of the nation’s industrial bounty, as “commercial might” dwarfs the now-insignificant “divine right” of old European monarchies.25 In another *Puck* cartoon from 1910 (after Morgan had fallen out of favor in the aftermath of the panic of 1907), a huge figure of Morgan jealously gathers in a number of banking institutions in a “billion dollar bank merger,” providing an answer to the question, posed by the cartoon, of why the United States had no need for a central bank.26 In a less-reverential earlier image, Cornelius Vanderbilt is shown as “The Modern Colossus of (Rail) Roads,” a giant astride different rail lines, holding onto the reins not only of two toy-sized locomotives, but also the diminutive figures of Cyrus Field and Jay Gould, whose puppet strings Vanderbilt is seen to manipulate (fig. 3.5). Or, in “A Design for Union Station,” the cars of the “United States Harriman Railroads” disappear ominously into the cavernous mouth of a monumental depiction of Harriman’s head, emphasizing the literal figurehead of this railroad empire, but also creating a macabre image of Harriman as a monstrous entity that swallows railroads whole.27 Another Keppler cartoon from *Puck* features J. P. Morgan, James J. Hill, John D. Rockefeller, Henry T. Oxnard, and Jay Gould as thuggish giants who loom over Wall Street (Morgan, for instance, wields the club of “high finance”). They are gangling up on the tiny figure of Teddy Roosevelt, who rests on the sword of “public service,” making the reader wonder whether this humble Jack will indeed be able to slay the assembled giants.28

**The Visible Hand**

From the 1870s into the first decades of the twentieth century, large-scale corporations continued to be viewed in the popular imagination as extensions of the sinister will of individual owners, even after that was no longer entirely accurate. These ways of representing corporations through anthropomorphization or personification were appealing, because they made sense of the complex new forms
Figure 3.5 Joseph Keppler, “The Modern Colossus of (Rail) Roads,” *Puck* 6, no. 144 (10 December 1879): 650–651. Keppler Sr. mocks the divine pretensions of the robber baron Cornelius Vanderbilt, who is shown manipulating the reins of the various railroads he controlled, with Jay Gould and Cyrus Field as mere puppets. Prints & Photographs Division, Library of Congress, LC-DIG-ds-05068.
of capitalist organization through more-familiar modes of understanding, many of which (as chapter 5 will document) verged on the melodramatic or conspiratorial. The personification of abstractions was one thing, but equally important to many critical commentators was the problem of identifying who was really behind some of the new industrial combinations. This vexed Henry Adams, for instance, who remarked of the “new man” behind the great trusts: “The longer one watched, the less could be seen of him.” The difficulty of ascribing individual agency to collective entities continued to trouble writers at the turn of the twentieth century. For example, the novelist Harold Frederic, preparing to write *The Market-Place* (1899), his foray into financial fiction, encountered the problem of the inscrutability of business, compared with the more easily intelligible realm of politics. “Business! Business!” Frederic notes in exasperation. “You can read in histories, memoirs, state papers, every conceivable detail of how such a war was waged, such a revolution created; everything in political and social history can be investigated. But in financial history, the great capitalists who [are the] true rulers of the world work in impenetrable mystery.” Critics continued to insist on holding individuals to account, even if, legally, no individual per se could be held responsible in cases of corporate malfeasance or negligence. If corporations endeavored to hide behind the legal protection of limited liability and collective identity, muckrakers, in the legal terminology of the age, wanted to “pierce the corporate veil” and expose to the harsh light of criticism the individuals they felt were to blame for corporate wrongdoing, who, they suspected, were hiding behind the legal fiction of corporate personality. Thus in 1910, a cartoon in *Puck* tellingly insisted that antitrust campaigners should “get after the substance and not the shadow” by identifying the powerful individuals hiding behind the legal protection that the laws of incorporation permitted. At the same time, however, an obsessive focus on the might of particular individual corporate titans ended up fetishizing their power, turning them into bogeymen that haunted the popular imagination and made it hard to think of the complexities of financial capitalism in any other way.

When the public were not evoking the inscrutable mysteries of Providence, popular explanations for sudden market movements that created or wiped out fortunes tended, from the eighteenth century onward, to rely on the idea of plotting and scheming behind the scenes by powerful insiders, seeing the conspiring agency of a hidden hand in place of the abstract convergence of aggregate supply and demand that constituted the invisible hand of more orthodox economic theory. It comes as little surprise, therefore, that images of finance focus—as the very word suggests—on the controlling hand of the manipulator. For example,
there is a fixation on the hand in a famous Edward Steichen photograph of the notoriously camera-shy J. P. Morgan. In 1903, the painter Fedor Encke commissioned Steichen to take some photographs of Morgan as an aid to Encke’s portrait, as Morgan was always too busy to sit for the painter. The atmospheric lighting carefully orchestrated by Steichen, in a sitting lasting just three minutes, resulted in a photo that shaped the public’s view of Morgan for generations to come. Not only do Morgan’s eyes stare fiercely out of the gloom, but the light falling on the arm of the chair, gripped by the subject’s hand, looks uncannily as if Morgan is brandishing a dagger at the viewer.34

When the nation’s industrial and financial leaders were not, like Morgan, trying to hide from public display or sink into anonymity behind the façade of their corporate identity, they sought to portray themselves as dignified and professional. Jay Gould, for example, had himself painted as a respectable and kindly bourgeois businessmen by the German-British royal academician Sir Hubert von Herkomer (ironically best known now as the painter of Hard Times, a searing portrayal of rural poverty). The public, however, thought of the notorious stock market operator as the “Mephistopheles of Wall Street,” a cold and calculating devil manipulating the market with sublime ease. A satirical illustration from Judge magazine in 1886, for example, calls to account the outrageous claim made by Gould that he never speculated.35 The cartoon shows a caricatured version of Gould seated in the bell jar of a gigantic ticker machine, where, unseen by the frenzied stock market players beneath, he dictates market prices directly onto the ticker tape itself. Gould is thus rendered as both himself and the very personification of market manipulation. The cartoon suggests that stock prices are moved not by the invisible hand of supply and demand, but by the visible hand of the Mephistopheles of Wall Street. (The cartoon thus ironically confirms Gould’s scandalous denial: he would have no need to engage in risky speculations if he were able to accurately predict price movements by creating them himself.)

The View from the Visitors’ Gallery

The cartoon of a larger-than-life Gould literally writing the prices on the ticker tape provides an imaginary portrait of what critics feared was really taking place in the stock market. It resembled the view from the visitors’ gallery of the Stock Exchange, but it promised to reveal what could not be seen with the naked eye from that privileged vantage point. The view from the visitors’ gallery—whether real or imagined—was a crucial trope for representing the market in the later nineteenth century. As we saw in chapter 2, from the 1870s on, a number of quasi-anthropological exposés and tourist guidebooks provided an introduction
to the Wall Street scene. A Baedeker travel guide for 1893, for example, recommended that “strangers, who are admitted to a gallery overlooking the hall (entr., 13 Wall St.), should not omit a visit to this strange scene of business, tumult, and excitement, a wilder scene probably than that presented in any European exchange.”36 Like a Baedeker guidebook, James K. Medbery’s *Men and Mysteries of Wall Street* provides an early example of practical advice on how to visit the New York Stock Exchange: “You can reach the Long Room from the antechamber on Broad Street,” while the New Street entrance presents “a better opportunity for the spectator.”37 Before explaining the history and operational mechanisms of the stock market, Medbery walks readers through the spectacle that confronted visitors to the gallery:

The first impression on entering the Stock Exchange is upon the tympanum. A genuine tourist almost inevitably has a dreamy reminiscence of Niagara. The visitor finds himself in the vestibule of a vast chamber, which stretches a furlong deep from Broad to New Street. At the farther end, shut off by successive iron barriers with narrow gateways under watch and ward, is a huge basin-like enclosure, filled with wild human tumult. Peering down through the high-vaulted, dim-lighted space, the eye sees nothing but excited faces, arms flung wildly in air, heads appearing and disappearing—a billowy mob, from which surges up an incessant and confused clamor. The straining ear distinguishes ever and anon an individual voice rising in shriller pitch or heavier volume, only to be drowned out from the abyss.38

The view of the trading floor, one of the indispensable sights for any tourist in the city, is chaotic to both the ears and the eyes of the novice visitor: “New York has no more entertaining place than its Stock Exchange. It is one of the show places of the city. The visitor who for the first time looks down from a gallery upon its members in the act of transacting business, is astonished at the apparent confusion he witnesses. He seems to have entered a madhouse. The idea that the market values of our leading securities should be determined by what appears to him to be a howling mob of incurable lunatics, is incomprehensible.”39 “Intense, blinding, deafening,” the Long Room at first threatens to overwhelm visitors’ senses, unless they are schooled by an expert.40 If the writers of these guidebooks adopted an ethnographic stance toward the seemingly barbaric battles and exotic rituals enacted on the exchange floor, they also characterized the stock market as a sporting contest, or a theatrical spectacle, with the plush, red velvet chairs in the visitors’ gallery completing the latter effect. They note how the audience, at times, becomes caught up in the drama unfolding on the floor of the exchange as panic spreads from speculators to spectators and back again.41
For Medbery’s and other guides to Wall Street, part of the spectacle is the quotation board itself, which records, in abstracted form, the ebb and flow of prices: “The phenomena of the boards depend upon a great number of distinct forces, all acting from without and only disclosing themselves vaguely in the prices of the daily share list. Here on the upper floor the official record has notched the last wave line of each billowing security, but below fresh elements are working, and in the heaving cauldron of the Long Room is a changeful ebb and flow that has neither rule nor limit nor certainty. There least of all should one resort for a key to the mystery of the street.”42 For visitors to Wall Street, the attraction is not merely the manic spectacle of the “heaving cauldron” or the “phenomena of the boards” in themselves, but the fact that the stock exchange in New York is the symbolic epicenter of the seismic financial movements of supply and demand that are felt across the globe. According to Medbery, “if the visitor wishes to master one problem at a time, therefore, he will keep his seat in the chamber and will find abundant room for reflection in the thought that here around him are the men who daily gauge the value of a billion and a half of national debt, whose shouts are the annihilations of millions or a crest-wave of momentary fresh wealth, rippling through bank vaults and the iron chests of the thrifty, east and west along the tremulous wire, to San Francisco at one end and Frankfort at the other.”43 If the wider economy that both reacts to and sends signals back to the Stock Exchange cannot be seen in itself, then the view from the visitors’ gallery promises to provide a concrete embodiment of the panoramic reaches of trade and industry on a global scale. At the same time, however, the vista of the economic sublime that the visitors’ gallery affords is, to the untrained eye, a confusing, overwhelming experience that needs a good deal of interpretation if it is to be seen as the scientific setting of prices, rather than a hellish gambling den.

The Architecture of Finance

Although outsiders to the nation’s stock and commodity exchanges found them a bewildering and bestial spectacle, the image that financial insiders projected of their business was markedly different. In their promotional materials, the architectural style of their buildings, and even the iconography of their paper currency, banks and other financial institutions sought to convey a symbolic sense of solidity, prosperity, and confidence as a counterweight to the insubstantiality and incoherence of an economy floated on speculation. Although, like the guidebooks and sensational exposés, pictorial representations of New York’s Wall Street and Chicago’s La Salle Street in the second half of the nineteenth century increasingly focused on the exhilarating show put on by the “animal spirits” of
speculation, other depictions of finance that were more sympathetic to the insiders’ point of view presented it as a calm and rational endeavor. For example, even though James Cafferty and Charles Rosenberg’s *Wall Street, Half Past Two O’Clock, October 13, 1857*, is meant to depict the epicenter of that year’s panic, it is an oddly static painting, whose only clue to the extraordinary events taking place is in its title.

Despite supposedly encapsulating the dramatic financial events taking place within Wall Street and across the nation, Cafferty and Rosenberg’s picture is not so different in its composition from Hughson Hawley’s, in 1882 (fig. 3.6). The scene in Hawley’s architectural rendering is similarly static and idealized, with groups of top-hatted gentleman idly talking or reading a newspaper, genteel couples strolling by, two black men standing around, and the driver of a horse-drawn omnibus holding a pink parasol. It does not show the usual armies of messenger boys running hither and thither (a lone messenger or newspaper boy is crossing the road, without obvious signs of haste); even the tall telegraph pole outside the exchange itself is shorn of the confusing web of wires that struck actual visitors to that site and show up in more-candid photos from the period. Early and more formal daguerreotypes featuring vistas of Wall Street likewise tend to portray it as a tranquil and sparsely populated thoroughfare, with the photographers technologically unable or ideologically unwilling to include what makes the street of interest in the first place.

Manuals on investment, such as Nelson’s *ABC of Wall Street*, preferred to show Wall Street as a calm zone, with leisurely vistas of Wall Street, Broad Street, and the exterior of the New York Stock Exchange building. In addition, Nelson includes depopulated views of the interior of the Exchange, with its architectural harmony and dignified decoration giving no hint of the frenzied activity that takes place there. Picture books, such as King’s *Views of the New York Stock Exchange*, by Moses King, a publisher of travel guidebooks, likewise contains vistas of Wall Street and its most important buildings that are either devoid of people or have merely a smattering of bourgeois city folk (both men and women) promenading in the vicinity or driving by in carriages. King’s book also contains depictions of the interior of the Stock Exchange, with, for example, austere photographs of the Bond Room and Main Room, cleared of the typical signs of chaotic business that struck most actual visitors to the Exchange.

The only depiction of the trading floor in action that King’s volume does include is not a photograph, but an artist’s rendering, used as the illustration for the lead article, on “The Magnitude and the Necessity of the Institution” (fig. 3.7). Unlike the descriptions of the view from the visitors’ gallery, this fantasy
representation shows an orderly scene, with a cluster of men calmly reading the stock ticker in the foreground and two brokers chatting alone at one of the posts (one of them is even sitting down); only in the distant background are a couple of men hazily shown raising their arms to bid on stocks, but without the sense of frenzy that usually characterizes such happenings. This is unsurprising, because King’s volume was less a guidebook than a promotional tome, designed to be
presented to clients as a gift. Although the lead article begins by announcing that “this simple account of ‘Wall Street’ and the Stock Exchange, with its accompanying illustrations, is intended for the millions of people throughout the country who are deeply interested in the ‘Street,’ and who hardly know what it looks like, what it really is, or who its leaders are at this time,” the frontispiece tellingly includes a panel announcing that it is “Presented with the compliments of . . .”

Although King’s book is not quite as sycophantic as Colonel D’Alton Mann’s projected vanity publication of leading New York figures (discussed in chapter 1), the vast majority of the “1,050 illustrations” proclaimed on the cover are not of Wall Street in general, but are uniform, oval photographic portraits of past presidents, officers, and current members of the New York Stock Exchange, flattering images that, in reality, tell readers more about the mustache fashions of the Gilded Age New York haute bourgeoisie than about the workings of the Exchange and “what it really is.”

**Figure 3.7 King’s Views of the New York Stock Exchange** (New York: Moses King, 1898), 1. Moses King was a publisher of travel guidebooks. This frontispiece is from his guide to the NYSE, which was a promotional volume featuring views of the building, as well as photographic portraits of all its members.
Although King’s guidebook dedicates most of its space to meticulously reproducing portraits of all the Exchange’s membership, like other partisan depictions of Wall Street its main way of illustrating the different operations of finance is to focus on the solidity of the building’s external and interior architecture. For the most part, it is devoid of people, whether the public or professionals. The neat, unpopulated images suggest that the Stock Exchange is a rational and self-regulating machine for allocating money, with its members and officers at a lofty, honorific remove from the thick of the action, which indeed is the view that the Exchange wanted to present of itself. In a similar fashion, in an effort to convey to its readers the modernity and reliability of legitimate brokerage operations, *Ticker* magazine included photos of the various departments of J. S. Bache & Company (all empty of either clerks or clients), along with floor plans and organizational charts emphasizing how each part of the “machine” contributed to the whole. Likewise, a series of articles launched by *Banker’s Magazine* in 1906 aimed to show “Modern Financial Institutions and Their Equipment,” with accompanying photographic illustrations that include the principal officers of a bank, along with the solidity of their buildings, the sobriety of their premises, and even the gleam and heft of the firm’s vault. An advertisement for American National Bank included in its otherwise very dry and factual prospectus a picture of its impressive “nineteen ton vault door,” a visual synecdoche for the institution’s financial security. Unlike nineteenth-century industry, with its potential for publicizing itself by showing scenes of factory work and the manufactured goods themselves, representing the productive work of finance was necessarily less direct and more abstract. The emphasis in these kinds of images is less on the personal probity of the bank or the brokerage officers with whom a customer might build up a relationship (as the text of some of the guidebooks and brochures on speculation tended to stress) than on the orderly relationship between the different parts of the financial machinery itself, as if it were a self-regulating engine.

The image of “modern” finance in these kinds of promotional illustrations is one in which the objective and impersonal aspects of the business figure far more prominently than the personal ones. The view of Wall Street as a well-run engine room, rather than a gentlemen’s club, was championed not only by the Stock Exchange itself, but also by the emerging fraternity of technical analysts who likewise wanted to portray finance as a rational and predictable endeavor:

A passenger standing on the observation platform in the engine-room of a modern ocean liner will observe great masses of steel, some stationary, some whirling at
terrific speed; he may go down into the boiler-room where is generated the power with which the great ship is driven, but all this will only give him a crude idea of the machinery of propulsion. He must know and be able to grasp all the component parts of that machinery, and their relation to each other, in order to appreciate what a tremendous undertaking it is to move this gigantic mass of men and materials over the watery miles separating two continents. So it is with the machinery of a large banking and brokerage house. . . . Everything is run with clock-like precision. No matter how large a business is being done, there is no confusion, the plant being designed to handle the maximum volume of orders.47

Even Haight & Freese’s friendly guidebook to speculation, intended for the investor of small means, seeks to reassure those potential clients that its brokerage premises are not sleazy gambling dens (as adverse publicity had it), but a modern establishment, with all the accoutrements that a would-be speculator would expect. “It is not from any feeling of egotism,” the brochure explains, “that in addition to the above [the beginner’s guide to speculation] we include authentic illustrations of the interior of our various offices, and maps showing the location of the different roads.”48 Unlike the more restrained promotional efforts of their more white-shoe counterparts who belonged to the august New York Stock Exchange, Haight & Freese’s brochure does show actual people in its illustrations of its premises. Even then, the suggestion is that this is no mere bucket shop, but a thoroughly respectable brokerage, with all the same upscale furniture and sophisticated technology of legitimate, upmarket firms; the crucial difference is that the Everyman speculator could identify with the figures populating Haight & Freese’s images, with their derby and bowler hats instead of the top hats associated with traditional Wall Street offices.

With its appeal to a more democratic audience, Haight & Freese’s brochure does not edit out aspects of the mundane reality of speculation (such as the waste paper from the ticker strewn on the floor), even though it also tries to draw the attention of its aspirational audience of clerks and shopkeepers to the solidity of its architecture and fittings. Banks, insurance firms, and stockbrokers often included images of their own buildings in their promotional literature and (in some cases) on their letterheads. The building thus functioned as not merely the location of the firm’s premises, but the embodiment of its values.49 The architecture of financial institutions in the last quarter of the nineteenth century favored a neoclassical style, with columns, porticos, and friezes calling up notions of both republican honesty and monumental grandeur, although the interiors tended toward neogothic, combining the soaring spaces of a cathedral or a theater in
the trading floor with the sumptuousness of a gentlemen’s club in the smaller public rooms.50

Perhaps the most famous architect of nineteenth-century finance was Chicago-born Louis Sullivan, whose career uncannily paralleled that of the speculative economy itself.51 Sullivan’s first job, as a draftsman in an architectural practice in Philadelphia, ended when the firm downsized in the wake of the economic depression of 1873. He then moved to Chicago to work on the building boom, which was starting to replace structures destroyed in the fire of 1871 (a conflagration that had played a major part in the panic of 1873). Together with his partner Dankmar Adler, Sullivan designed many prominent theater and office buildings in Chicago in the 1880s and 1890s, with the Stock Exchange Building (completed 1894) combining in its vast first-floor trading room those twin elements of theatrical spectacle and commercial pragmatism.52 Together with the Guaranty Building (which opened in 1895), the Chicago Stock Exchange marked the high point of Sullivan’s career. As commissions dried up in the wake of the panic of 1893, his partnership was dissolved, and his work and private life went into terminal decline.53 Sullivan was one of the pioneers of steel-framed high-rise buildings, whose technical innovation relied on a grammar of ornament to articulate their function to an audience that needed instruction in how to read these monumental new urban texts. (Sullivan is credited with the dictum “form ever follows function,” which later became the mantra of modernism in architecture).54 In structures such as the Chicago Stock Exchange and the Guaranty building, Sullivan exaggerated the separate functional components of the buildings by including, for example, a distinct ground-level section, to suggest a solid base; rising vertical ornamentation, to highlight the upward thrust of the main shaft; and heavy cornicing at the roof level, which spoke of commercial pragmatism rather than spiritual aspiration. In his architectural design for these financial institutions, Sullivan thus provided a visual resolution to the potentially dangerous paradoxes of a credit economy that seemed increasingly to lack a solid foundation: in effect, by means of ornamental sleight of hand, the public had to be reassured that, like the credit it symbolized, so tall a structure could rest securely on so slight a footprint, unlike traditional buildings, whose structural integrity was clearly manifest in the weight of the stone walls required to support them.55

Just as Sullivan’s protomodernist commercial architecture did not reject ornamentation, other financial architecture in the late nineteenth and early twentieth centuries relied on decorative elements to provide a fitting interpretation of the work carried out in the building. Murals, stained glass, and statuary in the beaux art style turned to the classical rhetoric of personification to provide a concrete
embodiment of the otherwise abstract work of banking, insurance, real estate, and stockbrokering. The second Chicago Board of Trade building (opened in 1885), for example, was adorned with stained glass windows by John La Farge. Although the building was demolished, similar La Farge windows survive, including one, titled *Fortune and Her Wheel* (1902), in the Frick Building in Pittsburgh. Likewise, Edwin Blashfield’s murals, such as *The Uses of Wealth*, offered an idealized rendition of capitalism. A contemporary critic waxed lyrical about *The Uses of Wealth*, the full title of which is *Capital, Supported by Labor, Offering the Gold Key of Opportunity to Science, Literature, and Art*: “Capital—the sordid and unlovely ‘Capital’ of the demagogues and the statisticians—here appearing as a beautiful feminine vision, gleaming like a new sunshine in the yellows of her own gold coin and hair and robe, key and sword hilt and chased helmet, hundreds of yellow, varying, delicate, complementary colors, setting off, reflecting, and burnishing up each other in a very blaze of affluence.” The abstractions of capitalism are thus presented in the guise of personifications, rather than actual people, and ironically depicted in the shape of sentimental femininity, rather than the hard-nosed reality of the world of masculine business. In a similar fashion, advertisers in the first decades of the twentieth century attempted to humanize the “soulless corporation” by representing it as an idealized woman. In one example, the Bell telephone system endeavored to redescribe the potential sinister reach of its monopoly by representing the company and its networks as a helpful, nation-spanning female telephone operator.

**Pictures of Panic**

The decoration for the palaces of finance often evoked the abstract grammar of classical and religious architecture, or it relied on idealized personifications of capital, industry, and nature. In contrast, illustrations accompanying Wall Street–based fiction in popular magazines tended to focus on the frantically waving arms and panicked faces of actual people on the floor of the stock and produce exchanges. The images were less concerned with depicting specific, recognizable, Wall Street luminaries, however, than representing either generic types of speculators or, more commonly, individuals as merely part of a crowd. These illustrations often highlighted moments of high drama in the accompanying text, turning points when fortunes are won or lost, corners achieved or overthrown. In terms of genre, they have much in common with dime-novel adventure stories, although they take place not on the frontier, but in the heart of New York. They also gave visible form to psychological theories about the mass hysteria of crowds that began to gain currency in the late nineteenth century, thereby extending
Figure 3.8 “The Recent Panic—Scene in the New York Stock Exchange on the Morning of Friday, May 5th,” Frank Leslie’s Illustrated Newspaper (18 May 1893), 322. The phenomenon of financial panic fascinated observers in the late nineteenth century as they struggled to make sense of how the orderly workings of the stock market could be overtaken by animal passions and mass hysteria. This illustration was drawn by Charles Broughton “from sketches on the spot.” Prints & Photographs Division, Library of Congress.
the earlier understandings of animalistic passions encapsulated, for example, in Beard’s painting. The image of hysterical speculators on the floor of the Exchange became a familiar visual and narrative shorthand during this period for the transformative nature—for better or worse—of financial capitalism as a whole.

As David Zimmerman has argued, writers and artists in the Gilded Age and the Progressive Era frequently invoked financial panics, not only because they were compelling events in their own right that demanded explanation, but also because they pushed to the very limits the capability of the familiar representational genres of realism or melodrama to account for them. With their descent into chaos and fear, panics embodied all that was confounding about speculation in the eyes of this period’s Populist and Progressive critics (fig. 3.8). Like other accounts and illustrations of the Exchange floor, the image in Frank Leslie’s Illustrated Newspaper combines, in the foreground, studies of the physiognomic reactions of individuals to the extreme emotions that possess them with an impressionistic swirl of deindividualized body parts seething together in a mass in the background, recalling descriptions from the guidebooks to Wall Street: “Notebooks, arms, fists, dexter fingers, hats, heads, tossing, swaying, darting hither and thither with nervous eagerness, and suggesting a perpetual explosion of bombshells from below. Now concentrating on a single stock; again breaking out into twenty different markets.” In the Frank Leslie’s scene, the waving arms in particular, and the maelstromlike movement in general, evoke—as in the Niagara references in Medbery’s account quoted above—the recurrent nineteenth-century image of financial panic as a form of individual and collective drowning.

**Scenes of Reading, Scenes of Writing**

Although theatrical scenes from the floor of the stock and commodity exchanges continued to feature regularly in popular representations of the market well past the turn of the twentieth century, it is striking how often the dramas of Wall Street in the Gilded Age and the Progressive Era are illustrated, both visually and verbally, not with noisy scenes of crowds and mass hysteria, but with vignettes of concentrated reading of the ticker machine, which is writing its message on the tape. Again and again, these tales of fortunes won and lost are depicted in their most dramatic moments by scenes of men (and it is nearly always men) poring over the ticker tape that cascades into the wastepaper basket (fig. 3.9).

The ticker machine itself is often at the heart of the action. In some cases, the picture of tape reading captures the moment when an arch-speculator realizes that his villainous scheme to corner the market has been foiled; in others, we
are meant to see the calm concentration of a heroic Napoleon of finance, who is able to apprehend the entire direction of the market from a trancelike study of the tape itself (fig. 3.10). In both cases, however, the depiction of someone reading the tape acts as a representational proxy for the whole of the disembodied and placeless market of similar readers. Thus the trading room of the New York Stock Exchange no longer served as an unambiguous symbol of the origin and endpoint of all the financial energy circulating through the nation’s economy. At the same time, however, the placeless and impersonal market that was beginning to replace this actual marketplace could not be represented directly and realistically.

Figure 3.9 W. R. Leigh, illustration for Edwin Lefèvre, “The Break in Turpentine,” *McClure’s Magazine* (April 1901), 543. Lefèvre’s short stories gave a broadly sympathetic, insider’s view of Wall Street, albeit with a gentle criticism of amateurs and outsiders who got caught up in “ticker fever.” The stock ticker is a constant presence in both the stories and the accompanying illustrations. Harvard College Library.
In this way, the stock ticker and the ticker tape became a visual fetish in all kinds of illustrations. If King’s Views of the New York Stock Exchange presented potential investors with an idealized view of the work of Wall Street through the medium of dignified portraits of its elder statesmen, a privately printed and distributed collection of caricatures of leading Exchange figures in 1904 showed instead how the nation’s financiers pictured themselves when they were not having to appeal to ordinary mortals. The images show the members of the Exchange as hearty fellows, referencing their individual passions for, say, carriage driving, hunting, or yachting, but always with the ticker, the tape, or other symbols of
their occupation woven into the image. The caricature of Alfred M. Judson, for example, shows him riding the stock ticker as if it were a horse (which also resembles a phallus). Likewise, the portrait of Charles E. Knoblauch in the same volume shows him as a cowboy, riding a submissive bull, bear, and lamb simultaneously, with a ticker strapped to his back like a rifle (fig. 3.11).

Although these flattering caricatures portray the NYSE members as using the ticker tape to rein in the market, other illustrations show speculators bound—almost erotically—by the tape. For example, the cover of David Graham Phillips’s novel, *The Deluge*, features an impish Cupid caught up in the tape flowing out of a ticker machine, whereas in Phillips’s novel *The Cost*, the ticker is the melodramatic instrument of death: “In his struggles the tape had wound round and round his legs, his arms, his neck. It lay in a curling, coiling mat, like a serpent’s head, upon his throat, where his hands clutched.”64 In contrast, the illustration accompanying a story in *Ticker*, entitled “Your Own Brains, versus Brains Bought, Begged or Borrowed,” depicts a decadent, dandyish figure louchely smoking a cigarette in a frilled armchair while nonchalantly holding a pet bull and a bear by the reins of the tape, which is flowing in art nouveau coils out of the ticker machine beside the chair.65 The image represents an ambiguous, sexualized fantasy of gaining dominance over the market, rather than being seduced by it. In comparison with the Rough Rider version of masculinity presented in the caricatures of Judson and Knoblauch, the mesmerizing power to control the market makes the speculator a passive, languid, androgynous figure, whose knowing gaze flirts with the imagined reader of *Ticker*.

The tape provides the connective ribbon that unites all the players, creating a visual representation of the abstract information that constitutes the market. It is ubiquitous, fetishized, and yet strangely invisible, not least because so much was produced every day, only to be outdated instantly. With their continual printing of prices, ticker-tape machines produced vast quantities of waste paper. The advent of the ticker-tape parade thus coincided with the proliferation of ticker machines, and it provided a convenient solution to the problem of all the instantly worthless paper produced by the tickers. The first such parade was held in lower Manhattan on 28 October 1886, for the dedication of the Statue of Liberty. Illustrations of ticker-tape parades in the late nineteenth century show how they constituted a carnival of (literal) waste in which paper profits and losses returned to mere paper, more in keeping with Georges Bataille’s notion of the economy of expenditure than with the image of modern, technologically mediated, rational investment depicted in many investment-advice manuals and promotional works for the NYSE. Unlike the images of solitary tape reading, the ticker-tape parades
were collective outpourings of emotion: the account of the first parade suggests that it was a spontaneous prank, rather than a planned and dignified act of commemoration. These events were, in effect, belated reactions to political events, the aggregate responses to which had already been registered and discounted on the very tape that was floating down on the parade.66

As we saw in chapter 2, the ticker enabled readers to follow all the action in the market from a privileged, bird’s-eye viewpoint. Thus they began to see the market in a different way: not as the record of personal struggles between identifiable traders, but as the abstract geography of a global financescape. The view from the visitors’ gallery of the bulls and bears battling it out on the floor of the Exchange is replaced by the vantage point of a lone individual absorbed in reading the abstract procession of numbers coming over the ticker. It was not merely because the trading floor was now closed to the would-be market watcher, but because the tape offered a better lens through which to view the market’s transactions—better even than participant-observer accounts of action on the floor in the newspapers’ market reports and market circulars, which claimed to provide the inside scoop on secret deals and manipulations. For many of the advice manuals promoting tape reading, the ideal market observer would be far removed from the scene of action, precisely in order not to be distracted by the commotion on the floor of the exchange. For example, Richard Wyckoff’s *Studies in Tape Reading* (a digest of advice compiled from *Ticker*) offers a recommendation for the would-be tape reader: “For perfect concentration as a protection from the tips, gossip, and other influences which abound in a broker’s office, he should, if possible, seclude himself. A small room with a ticker, a desk, and private telephone connection with his broker’s office are all the facilities required.” Likewise, Edwin Lefèvre’s novel, *Sampson Rock of Wall Street*, contrasts the tumult that Rock knows must be taking place on the floor of the Exchange with the calm overview of the market he is able to achieve in the inner sanctum of his private office:

In the big marble Board Room the air was filled with the exultant whoops of the bears who were winning, the maddened shrieks of the bulls who were losing and would not lose more—the primal passions made audible in the discordant chorus of the dollar-hunters, made visible about the various “posts” in a sea of heads that broke into a foam of fists clinched and defiant—with, here and there, the quivering, outstretched fingers of a drowning man. And beside the man who had said, “Let there be storm,” out of sight and out of hearing of the money-mad mob, under its protecting glass dome, as though it were a fragile plant, the little ticker in this office was impassively ticking, ticking, ticking!—singing its marvelous song of triumph and defeat in one.

Reading the tape in the quiet of his office, Rock can “see” not only the drama taking place on the trading floor, without actually becoming caught up in it, but even (as we saw in chapter 2) a heroic vision of the unfurling landscape of his transportation empire and the products of industry that it is carrying. Rock must
engage in an intense and imaginative act of reading, however, to make these economic abstractions come to life, but, unlike the spectacle of the trading floor, with its “sea of heads” and “foam of fists,” there is nothing much for an observer to see, other than a man reading the inscrutable symbols mechanically printed on the tape. For all that the ticker represents a technologically modern form of finance, the images of stock market operators engaged in trancelike reading conjure up all the worst fears of the period about the occult nature of speculation, in which fantastical profits and even entire towns are magicked out of thin air, and speculators are mesmerized by sinister market forces.

Since the intangible, placeless market cannot be represented directly (or, rather, since the view of the marketplace from the visitors’ gallery no longer provides a privileged vantage), scenes of solitary tape reading thus become a representational proxy for what is not visible directly. As Zimmerman notes in his study of panic fiction, “the stock market offered a thrilling read—literally,” with crowds of investors across the nation poring over market reports and the stock ticker. The market itself, Zimmerman continues, is “constituted and sustained by these acts of reading”; it is “composed of readers who are intensely aware that other investors are reading the same material at the same time and that their collective interpretations and predictions will have an effect on the market.” Speculators try to second-guess not only how the market looks to those other readers, but how they, in turn, picture other speculators’ second-guesses, sudden elations, and panicked reactions, and so on, into the potentially infinite hall of mirrors. In a market in which participants obsessively watch each other, stock prices are not a realistic representation of fundamental corporate value, or even investor sentiment, cashed out via the utilitarian calculus of marginalist economics into hard numbers, but, as John Maynard Keynes famously put it, are a beauty contest in which investors have to guess what average opinion will conclude the average view of the winning photo will be, potentially creating an infinite regress of second-guessing. In the decades around the turn of the twentieth century, explanations for market panics began to draw on psychological theories of crowds, in particular the notion that herd behavior works through a process of hypnotic emulation, in which (as Zimmerman puts it) “the self finds itself given over to mimesis, not only of an other but also the countless others whom this other mimes.” The scenes of tape reading thus provide a visual simulation of a heroic individual’s supposed control of the market, yet the prices on the tape are created not by reason, but are the result of the contagious mimicry of other acts of reading, such that the boundaries of the self succumb to the fluid circulation of desire and fear in a hysterical crowd.
The visual shorthand of a stock operator intensely reading the ticker tape thus left viewers imagining how he saw the drama unfold in his mind’s eye, not just on the exchange floor, but in the vast network of other speculators connected by wires and tape across the nation. Illustrations of tape reading also conjured up a technological and demotic updating of the Habermasian public sphere in the eighteenth century, an imagined community joined, in this case, not by the tape readers’ participation in the virtual “republic of letters,” but by their shared fixation on the printed characters of the ticker tape in brokers’ offices across the city, the nation, and the globe. In a similar fashion to the “consensual hallucination” that brings the Internet into being, the immersive experience of tape reading afforded by the imaginative projection of a sometimes virtuous, sometimes crazed republic of speculators helped concretize the idea of the market as a vast, animated landscape that was not coterminous with the actual marketplaces of the nation’s exchanges and could only be “seen” via the tiny marks on the ticker tape.72

Despite fin-de-siècle manuals and magazine illustrations shifting their focus from panicked crowds to the intensity of a solitary study of the ticker tape, however, speculation was often a communal activity in the Gilded Age and the Progressive Era. “Dealers hover over, and intently watch the ‘ticker’ as it rapidly unwinds the tangled web of financial fate,” George Rutledge Gibson observed in his guide to stock exchanges. 73 Although the New York Stock Exchange endeavored to restrict access to its price information, stock tickers were increasingly to be found in semipublic places (there are many accounts, for instance, of speculators gathering around the ticker machine at Delmonico’s restaurant in Manhattan). The promotional booklet put out by the bucket shop operators Haight & Freese, for example, contains photographic illustrations of some of their brokerages, showing off their well-appointed spaces for clients. In the photos, would-be speculators huddle round the ticker machines or sit and watch the fluctuating prices posted on the quotation board (fig. 3.12).

Drawing on the work of Jonathan Crary on the emergence of a distinctly modern form of visual observation in the nineteenth century, Alex Preda explains how viewing the market by reading the tape required new modes of concentration that, in turn, involved submitting oneself to the rhythms and timetable of the stock ticker.74 As the photo of Haight & Freese’s patrons suggests, viewing the market thus holds similarities with another new, communal viewing technology of the later nineteenth century: moving pictures. As with movie audiences, the experience of watching the market by watching the quotation board meant clients were not merely emotionally invested in the highs and lows of particular
stocks, but were also gripped by the sheer movement of the unfolding spectacle. Like the cinema, it was an experience of isolated, immersive identification with what was represented on the tape, which nevertheless took place within a collective setting. The brokerage was a place in which insider knowledge and camaraderie (but also, perhaps, hysteria) could be shared with fellow viewers—precisely the distractions that tape-reading manuals warned against. Unlike illustrations of the floor of the New York Stock Exchange, which focused on the spectacle of manic activity (even if they also showed the traders not in control of themselves, but in thrall to bestial impulses or hypnotic mimicry), the pictures of the cinematic audiences in bucket shops captured the passivity of the experience—not least because the bucket shop bettors only had the illusion of active participation, since, unlike their counterparts in the legitimate exchanges, their purchases had no power to move the market itself.

**Plotting the Market**

Some advocates of tape reading claimed that it offered an objective and lofty overview of the market as a whole, safely removed from the corrupting passions
or partial vision of floor traders: “A floor trader who stands in one crowd all day is like the buyer for one department—he sees more quickly than anyone else the demand for that class of goods, but has no way of comparing it to that prevailing in other parts of the store... The Tape Reader, on the other hand, from his perch at the ticker, enjoys a bird’s-eye view of the whole field. When serious weakness develops in any quarter, he is quick to note, weigh, and act.” Other commentators, however, warned that the optic provided by the stock ticker was in danger of giving a distorted picture of the market by the way that it created (as Preda puts it) a view from a microscope, rather than a telescope. “The greatest difficulty of the tape-reader,” an article in *Ticker* warned, “is that he becomes so sensitive from working close to the tape, that his judgment is rendered narrow. He endeavors to catch every small fluctuation in the market.” From the 1890s onward, the vanguard of technical analysis began instead to recommend the chart as providing the best perspective on the market. “Charts are simply a bird’s-eye view of market movements,” H. M. Williams declared in *The Key to Wall Street Mysteries*, while the bucket shop operator Lewis Van Riper averred that “in this way one is able to comprehend at a glance every stock movement of importance in the same way that a picture describes to the mind the events which could only be told imperfectly, though requiring hours to relate.” The story that the charts promised to reveal, however, was not simply a record of the trading on a particular day, month, or year, or even the truth about hidden manipulation by market insiders. Read in the right way, their patterns instead promised to reveal trends and forces that operated according to their own logic, far removed from individual intentions, in the same way that Darwin’s theory of evolution, Marx’s theory of history, and Freud’s theory of psychology developed accounts of the deeper processes at work beneath the surface noise of human agency.

The early chartists were keen to promote their special expertise (which could therefore be commodified in the form of investment-analysis services), emphasizing what they believed was their objectivity and statistical rigor. Trained as a statistician at the Massachusetts Institute of Technology, Roger Babson, in particular, adopted the language of Newtonian physics in his production of charts that plotted the cyclical motion of the action and reaction in stock prices, along with indices of various “business conditions.” By dealing with abstract patterns, Babson’s charts were promoted as capturing, with scientific accuracy, the underlying statistical regularities that were not otherwise visible to even the most-experienced of tape readers (fig. 3.13). Babson argued that the aim of drawing the “Normal Line” (now more commonly known as a trend line) was to make immediately manifest the equal and opposite shaded areas above and below
the line, since, according to his theory, the area of a boom matched the area of
the subsequent bust. Yet deciding where to draw this line was presented not as a
matter of mechanically applying statistical laws, but an act of interpretation based
on experience, an art rather than a science. Moreover, if the line could only be
inked in once a cycle had completed, it meant that using such charts to predict
future stock-price movements was impossible, as academic studies of the predic-
tive accuracy of chartism have since demonstrated.79

Other chartists around the turn of the twentieth century, however, claimed to
have discovered more immediately useful, recurrent patterns in the charts. As we
saw in chapter 2, in the same way that securities prices and the stock ticker itself
were repeatedly personified, so, too, in the popular guides to chartism, technical
charts were described in often decidedly human terms, such as the “head and
shoulders” formation. Even when the patterns of abstract data were not read in
directly anthropomorphic ways, the shorthand names and instantly recognizable
shapes lent a homely familiarity to a statistical knowledge that had promised
to reveal the uncanny, inhuman patterns inherent in the aggregated data. Bab-
son’s charts turn the data into now-familiar patterns of mountains and valleys, a sublime landscape of economic highs and lows that simultaneously invites and rejects human identification. As Audrey Jaffe observes in her study of the idea of the statistically “average man” in Victorian culture, the trajectory of the impersonal stock market graph is often “assimilated to a narrative of feeling. . . . Universally apprehended as a picture of emotions—a snapshot of the national (or global) mood—it is understood to swing (for example) between elation and depression, optimism and alarm. Looking to the numbers to see how we feel, we both personalize them—render them a projection of our individual and collective narratives—and depersonalize them, conceding our authority to know ourselves to an abstract system that seems to have captured this knowledge. . . . Is the market a projection of the man, or is the man a projection of the market?” Even in their most abstract, depersonalizing form, then, the graphs of stock market prices tempt readers into an affective identification that is often registered by the insistent personification of financial data.

Although the work of the early chartists might have been based on mistaken statistical reasoning, it nevertheless contributed to an important reconfiguration of the vernacular epistemology of the market. In addition to their simultaneous appeal to both projection and identification, the charts helped rationalize the market, making speculation seem sensible, because price movements were at least intelligible, if not always entirely predictable. In the eyes of their proponents, the charts seemed to provide instant visual evidence of a profound order to the financial universe, a regularity that could not be seen by those immersed in either the tumult of the trading floor or the ebb and flow of prices on the ticker tape. In effect, chart reading developed a theory about the representational capacity of securities’ prices themselves. The price fluctuations shown on the charts were not the reflection and the result of important political events taking place outside the realm of the market, nor were they representations of the fundamental underlying value of particular corporations or the economy as a whole. Instead, they registered movements that were intrinsic to the market itself. In short, these abstract diagrams of endogenous market events worked not through the genre of realism but instead were, in an important sense, self-referential artifacts, akin to forms of modernist art that were beginning to emerge at the same time.

If the charts did represent something beyond their immediate selves, it was the market in its totality, as an omniscient being with a life and a mind of its own. Indeed, the charts did not so much reflect a preexisting financial universe as help to call the very idea of the market as a coherent entity into being, one that could
be grasped “at a glance.” As Preda notes in a discussion of why chartism has persisted, despite its theories having been disproven by academic economists, the power of technical analysis lies not in its ability to accurately represent financial reality, but in its role as a coping mechanism for would-be investors in the face of market uncertainties. The result of the increasing popularity—but not necessarily the accuracy—of chart theory, Preda argues, is that the market is created in its image: “In the process of using the theory as an uncertainty-processing instrument, new entities are created, corresponding to the theory’s representations.”

It is therefore worth remembering that the chartists drew their inspiration from the work of Charles Dow, whose creation of the Dow Jones Industrial Average (DJIA) likewise contributed to the performative construction of the market during this period. As we saw in chapter 1, in his editorial in the first edition of the Wall Street Journal, Dow declared that the newspaper would “present in its market article, its tables, and its advertisements a faithful picture of the rapidly shifting panorama of the Street.” Although his paper did contain hands-on reporting of the personalities and events of the New York Stock Exchange, its inclusion, from the first edition on, of the Dow average meant that it also attempted to present, through the language of statistical averages, a panoramic overview of “the Street.” Wall Street was now conceived less as a geographically specific place, prone to fraud and the manipulation of insiders, than as a synecdochic shorthand for the entirety of the market, which, crucially, operated through its own impersonal laws that could be discovered by plotting them in tables and charts. The shares picked by Dow (twelve originally, increased to thirty in 1928) were deemed by him to be leaders in their respective fields and were chosen to be representative of the market as a whole, although the relationship between this average and what it represented remained opaque, as Dow did not reveal which stocks the average contained and expressed it in terms of index points, rather than actual prices. For Dow, the average functioned as an impersonal thermometer, taking the temperature of the market as a whole, and it was part of his concerted effort to portray finance as a rational endeavor. Leaving aside the issue of the accuracy of Dow’s average as a recording and representational technology (it has been recalibrated on several occasions, and other indices have joined in the competition to provide the best tracking device), the significance of the DJIA is that it helped consolidate the idea of the market as a vast, self-contained, self-regulating system. It was a performative device that helped create the very object it claimed to represent. As Marieke De Goede has argued, the DJIA “has to be understood as a technology that did not simply represent financial reality but fundamentally transformed the
operation of modern credit practices, making it possible to image the financial market as a coherent entity.\footnote{85}

In their plotting of the market’s fortunes, the Dow average and the charts produced by technical analysts around the turn of the twentieth century also need to be seen in the context of the larger history of efforts to identify and represent the market in particular, and the economy in general, as a whole—as a vast, impersonal machine of intricately interrelated parts that could be analyzed mathematically. Here the marginalist revolution in economics is crucial. The central insight of the marginalists was that the value of an object resulted not from its inherent qualities, or even the labor that had gone into making it, but from its desirability or utility to consumers. If utility could be quantified, then, in theory, the morally and philosophically complex issues of political economy could be boiled down to plotting on a graph the relationship between supply and demand. Marginalism presupposed that there are economic laws that, like natural laws, can be discovered through the accumulation of data. Although explanations for the causal origins of these statistical regularities varied (including Stanley Jevons’s theory, adopted by Charles Dow, that a ten-year business cycle was the result of a recurrent pattern of sun spots), the professionalization of economics in the late nineteenth and early twentieth centuries was predicated on studying economic activity in an apparently scientific fashion.\footnote{86}

In addition to applying mathematical techniques to the mysteries of economic life, economists in the late nineteenth and early twentieth centuries also began to consider this accumulated, abstracted data as part of a larger, integrated, universal system. Where political economy had been concerned, from a moral point of view, with weighing up the competing claims to resources among social classes, the new mathematical economists were eager to discover the underlying economic relations between production and exchange, removed from their immediate social, class, and geographic particulars and put into the purer graphical language of supply-and-demand curves. Indeed, many of these pioneering econometricians were keen to display their data in graphical form, to make immediately apparent the underlying patterns and immutable laws that they believed themselves to be discovering.\footnote{87} For example, the British economist Alfred Marshall (whose textbook on economics became the standard work on both sides of the Atlantic) noted that “the graphical method of statistics, though inferior to the numerical in accuracy of representation, has the advantage of enabling the eye to take in at once a long series of facts.”\footnote{88} What the eye was meant to grasp in a single glance was a picture of a complete and coherent system of interrelated parts, with economists increasingly turning to theories where movements in the
market could be explained entirely by reference to the internal structure of the economic machine itself.89

**Economic Plumbing**

As Philip Mirowski has pointed out, neoclassical economists in the nineteenth century borrowed many of their terms and concepts from physics and engineering, not least the idea that all the individual economic impulses were, in fact, part of a unified force within a larger, coherent, interconnected system. (In the case of the marginalists, “utility” served as the unifying force, which therefore permitted a uniform measurement across varied economic phenomena.)90 For some economists, the physics metaphors were understood literally, with, for example, Irving Fisher, in his pioneering PhD dissertation in 1892 (Yale’s first in economics) setting out detailed plans for a hydraulic model of price fluctuation (fig. 3.14). He built this model for use in his teaching at Yale and had another one made in 1926, when the original prototype wore out. Whatever else it purported to demonstrate, Fisher’s contraption served to make visible and tangible the idea of the economy as a complex but well-ordered system in which prices would find their equilibrium level as naturally as water under the influence of gravity.91 As much as Fisher’s model brought a mathematical objectivity to the representation of economics, it also portrayed the interaction of supply and demand as a quasi-autonomous machine-beast.

Like the other representational technologies examined in this chapter, Fisher’s all-too-solid machine allowed economic activity to be conceived as both an abstraction and a totality. This conceptual revolution involved, first, reframing the myriad data of economic life as abstracted from local particulars, and second, portraying those diverse factors as part of a coordinated system, whose patterns might not necessarily be observable at ground level.92 As with the rhetorical transition from accounts of marketplaces to talk of the market itself, it is important to remember that “the economy” is not a timeless and neutral category. Although it now seems obvious—the economy being the proper object of knowledge in economics—before the twentieth century, “economy,” in the writings of political economists, referred simply to the idea of frugality or economizing, the proper and efficient use of resources. The use of the phrase “the economy”—in the sense of the whole aggregate of statistics regarding production, consumption, inflation, and employment that make up a bounded national entity—only emerged in interwar economic discourse as part of institutional efforts (such as the foundation of the National Bureau of Economic Research in 1920 and the Cowles Commission in 1932) designed to gather statistical information to aid the state’s inter-
Figure 3.14 Irving Fisher, “Mathematical Investigations in the Theory of Value and Prices,” Transactions of the Connecticut Academy 9 (July 1892): 38. Irving Fisher pioneered the introduction of mathematical techniques in economics around the turn of the twentieth century. He was also influenced by approaches developed in physics and engineering. Despite pushing economics in a more abstract direction, he also designed and built hydraulic models for use in teaching, to demonstrate the workings of price fluctuation. Harvard College Library.
vention in and manipulation of national economic life.93 Progressive Era critics originally promoted such fact-gathering institutions as the National Bureau of Economic Research with the hope that they would produce intelligible, graphical representations and statistical overviews of the complex corporate behemoths that emerged rapidly in the years around the turn of the twentieth century, so the U.S. Congress might regulate and tax them based on objective evidence, rather than the patchy and partial information offered up by the corporations themselves. The historical irony, as Mary Poovey points out, is that the information on the valuation of corporations gathered for the National Bureau ended up helping the corporations make better accounting sense of their business and, in the process, improved their profitability.94

Although these early twentieth-century actual and virtual models produced by professional economists were born from very different needs and institutional contexts than those of the early chartists, they, along with the various attempts to picture the market explored in this chapter, share the performative capacity to make the object of their inquiry (at first the market, and then the economy) come alive. At the same time as they produce an abstracting and totalizing view, however, the modes of financial representation we have seen in this chapter also rely on older visual tropes that make the impersonal data more concrete and more familiar, even if it increasingly comes to seem as though it represents nothing other than itself. Chapter 5 explores a diagram produced by the Pujo Committee’s investigation into the so-called money trust, one that presents the totality of financial capitalism as both an abstract network and a quasi-conspiratorial picture of hidden intentions. This diagram marks a startlingly original attempt to create a panorama of high finance, but it also pushes to the limit the representational technologies of the era in combined concrete and abstract visual forms.