Where the Action Is: Internet Stock Trading as Edgework

Detlev Zwick

Department of Marketing
York University

This article puts forth the argument that with the transfer of stock trading from what could be called an analog world of phone calls, faxes, and trips to the local bank, to the computer-mediated environment of the computer screen, the market becomes the site for new types of individual experiences and practices that cannot be predicted, captured, or understood with existing economic and finance theories. Specifically, by giving the stock market an interactionally or response-present face-in-action (Knorr, Cetina & Bruegger, 2002b), the computer screen alters investors’ conventional relationship with, and perception of, the market. It is suggested that the market-on-the-screen gives birth to the market as a place for edgeworking (Lyng, 1990), or experiencing risk as an end in itself. A prerequisite for edgework is a real sense of agency, afforded to the individual investor, for the first time in history, by the computer.

doi:10.1111/j.1083-6101.2006.00002.x

Introduction

When the investment boom of the late 1990s came to a grinding halt in the spring of 2000, online brokerages like Ameritrade and e*Trade felt the direct impact of the market downturn. Trading volume and thus commissions declined sharply in the immediate aftermath and kept falling for the next 18 months. The pervasive optimism so characteristic of the new online investor class that had formed at the intersection of technological innovation, neoliberalist economic expansion, enterprise culture, and the progressive individualization of society (e.g., Beck & Beck-Gernsheim, 2002; Castells, 1996; Gagnier, 1997; Heelas, Lash, & Morris, 1996; Sassen, 1999) was precipitously replaced by a more sober sense of capitalist promise and personal vulnerability. The arguably irrational exuberance (for a different view see Castells, 2001; Mandel, 2000; Shiller, 2000) of the end of the millennium, the excitement of millions of small investors trying to hit the jackpot, the raging trading activity they displayed, and the sizeable profits they generated for online brokerages may not return for years to come. Lately, however, the buying and selling of stocks is making a comeback, as evidenced by rising trading volumes and increasing profits.
for brokerage firms. In 2003, the previously battered stocks of Ameritrade Holding Corporation and e\textregistered;Trade saw their share prices triple. Three years after the bubble burst, it may be concluded that the benefits of the digital format have established the practice of online trading as a successful and enduring online business model.

As significant as, and related to, the transformation of the practice of personal investment into a seemingly trivial, consumerist act of “online shopping for stocks,” is the change in the phenomenological condition of investors’ apperception of stocks and the stock market. In the process of continuous and unlimited unfolding of new communication and information technologies on the field of global financial flows and exchanges, the virtual qualities of a visual representation governed by the computer screen have come to dominate the relationship between the investor and the market. The screen brings a geographically dispersed and invisible market close to the participants as a virtual representation (Knorr Cetina & Bruegger, 2002b). Drawing on Virilio’s concept of virtual theatricalization (e.g., Virilio, 1989, 1991, 1994), I argue that the representational work of the screen alters the perception of the market, giving birth to the market as a site for experiencing risk as an end in itself. The perceptual disruption caused by the market-on-the-screen is a function of three distinct yet interrelated processes: aesthetization, virtualization, and derealization (Virilio, 2000b).

\textit{Aesthetization} refers to the transformation of the stock market into a symbolic space on the screen. The aesthetics of the screen constitute the stock market as interactionally or response-present object of consumption (see Knorr Cetina & Bruegger, 2000). Hence the screen fundamentally alters how investors can relate to and experience the market. \textit{Virtualization} denotes the process of substituting reality with virtual representations via instantaneous communication. Progressive virtualization of its key components only permits mediated perception, which turns the investing experience into a theatrical and unreal spectacle. Illuminating this perceptual transformation is critical for our understanding of the experience of online investing because it is only after the phenomenon has been derealized in the mind of the investor that it emerges as site par excellence for voluntary high risk-taking behavior. Put differently, an aestheticized, virtualized, and derealized market-on-the-screen is where, to paraphrase Goffman (1967), the action is.

The rest of this article is divided into three parts. First, I explain what is meant by the aesthetization of the stock market. The goal is to show that the computer screen recodes and repackages the stock market as consumption object while enabling the individual online investor to gain a sense of (consumer) agency and self-actualization. A sense of agency, of being able to interact with, and act on, the market, is a prerequisite for experiencing risk as an end in itself, a concept Lyng (1990) calls \textit{edgework}. Second, I introduce edgework, contrast it with the more familiar concepts of flow and gambling, and then apply it to interview data to show how my informants “use” the stock market to experience thrill by getting “close to the edge.” Third, I suggest a model in which the agency of the investor delivered by the screen is enacted before a background of altered terms of perception of the
environment, producing a theater of action characterized by a distance from reality (derealization). The sense of agency in a derealized virtual world is a recipe for transforming the market into a space where the experience of risk becomes an end in itself.

For this article, I draw judiciously from interviews I conducted with 25 small online investors in Germany, Denmark, and the United States between the summer of 2000 and the fall of 2002. The majority of the informants entered the investment game when the Internet suddenly afforded them direct access to the market. Because of the nature of the research site, this study provides unique insights into the effect of computer-mediated communication (CMC) on human action in general and economic behavior in particular. The dominant approach of finance and economic theory to new media is functionalist. These fields theorize investment activities as actions taken to maximize risk-adjusted returns in the market. The more information is available to each market actor, the more efficient are market exchanges. Put differently, new information and communication technology create more transparent markets, thus simply enabling otherwise fundamentally unchanged economic exchange processes and encouraging rational investor choice (see Bakos, 1997, 1998; Shapiro & Varian, 1999; Varian, 2000; for a different view, see Barber & Odean, 2001). From this perspective, the Internet allows access to more and timelier information about prices, firms, current events, and other topics that might affect decision-making in the market. Therefore, consumers and investors can be expected to be better informed about the quality and value of market offers, which leads to better decisions regarding how to increase profits while minimizing risk exposure.

However, with its emphasis on a decontextualized concept of information flow rather than a contextual concept of meaning, economic theory remains blind to the perceptual transformations wrought by the new vision machine. Behavioral economists recognize the importance of context, or what they refer to as the framing of the problem, and draw on psychological theories to explore investor behavior (Shefrin, 2000; Statman, 1999). They are therefore better equipped to look for systematic deviations from what is conventionally considered rational behavior. Prominent studies by two behavioral economists (Barber & Odean, 2000; Odean, 1999) show that customers of discount brokerages trade more than other investors, and that of those discount customers the ones that use the Internet trade the most of all. Yet explanations for this seemingly irrational behavior do not include any effort to account for the nature of the trading medium.

By contrast, the cultural and visual approaches taken in this article aim at addressing both the medium’s facility to alter familiar patterns of human perception and the effects of altered perceptions on user behavior in general and economic action in particular. Specifically, and contrary to conventional theories of investing, I argue that the computer screen encourages both an investor subject as frequent trader and investing as edgework, where risk is not sought to be minimized but experienced as an end itself (Lyng, 1990).
Method

The study is based on an analysis of textual data from verbatim transcripts of lengthy, in-depth oral interviews (McCracken, 1988) as well as data gathered during follow-up email exchanges with some of the informants. Participants were recruited through personal contacts and referrals. At the time of the interviews in 2000, informants typically had somewhere between 18 to 24 months of online investing experience. Except for two, all were first-time and do-it-yourself investors who entered the investment game only because of the Internet’s promise to disintermediate banks and other financial institutions. Typically, interviews took place in front of a computer, often while logged on to the informants’ online trading accounts, and lasted between 60 and 120 minutes.

All together, 25 interviews were conducted, recorded, and transcribed. Fourteen participants were of German nationality and 11 were American. All participants were males, except for three American informants. All of the informants can be characterized as frequent traders in that they executed at least one transaction per month. Typical transactions consisted of the purchase or sale of a few shares, ranging in total value from less than one hundred to several thousand dollars per deal. Absolute and relative amounts invested differed significantly from informant to informant. In general, however, individuals with low levels of total wealth and income were more likely to have a high percentage of their available funds invested in stocks.

Follow-up interviews were conducted with eight informants for the purpose of clarification, elaboration, and revision of key issues. Some informants remained active participants for about 24 months after the initial interviews as part of an ongoing unstructured email correspondence. All informants were assured of their anonymity and given the opportunity to read the transcripts of their interviews and to remove or disguise any information that might reveal their identities.

Interviews began with a grand-tour question (McCracken, 1988) aimed at elucidating participants’ backgrounds and the circumstances that led to their involvement in stock trading. Conversations then turned to more specific questions about their experiences of online investing and the nature of the stock market. Throughout, participants were given broad leeway to comment on issues concerning their online investing, ranging from the physical and psychological effects of experiencing the intensity of volatile market situations to the larger impact of the stock market on their lives, business, and society. Finally, I analyzed the data according to the conventions of qualitative social science by implementing an iterative process of reading, interpreting, discussing, and theoretically integrating the textual data (Creswell, 1998). Taken collectively, the interviewees’ stories create a rich tapestry of what it means to invest online. Researching, selling, and buying stocks, getting “a feel for the game” (Bourdieu, 1998, p. 80) of the stock market, which includes gaining familiarity with the language game played by financial analysts, the media, and online investing friends—these are all aspects that make up the experience of online investing.
The interview method has several limitations. For example, because the interview takes place in a confined space and place and without the presence of others, it is not very suitable for exploring the relationships between online and offline sources of information, which are contextual, dynamic, and often social. For this study, I therefore chose to ignore the potential effect of offline media and nonmediated information networks on the experience of online investing, even though such interactions and relationships may be important and interesting to study. This decision is unlikely to impact significantly the results of this particular study because my informants almost exclusively rely on the Internet (and some television) for trading and research.

The Aesthetics of the Market

The market run-up of the 1990s captured the imagination of many people in affluent parts of the world and permanently transformed the way individuals in the U.S. and Europe know and interact with the stock market. It is difficult to understate the significance of having an entire generation of first-time investors be socialized into the world of global finance and stock exchanges through the technological environments of the Internet and entertainment-driven 24-hour business television. To this group of investors it now seems completely natural that decentralized, highly interdependent, and internationally operating financial markets are “entirely exteriorized and embodied on computer screens” (Knorr Cetina & Bruegger, 2002b, p. 162). The symbolic space generated by the screen assembles, contextualizes, and materializes “the market” as a place. “Finding the market,” a traditional barrier of entry for masses of potential small investors, is no longer difficult, as the screen aggregates spatially dispersed and distanced information flows. But as the screen becomes the gateway for investors to “enter” the market, new kinds of perceptual horizons and forms of apperception emerge.2

In the 21st century, the landscape of modern financial markets is largely determined by electronic communication technologies. With these technologies, new codes and specific aesthetic techniques have emerged, representing the latest stage of the rise of abstraction. On the screen, aisthesis, the sensory experience of perception (Eagleton, 1990), is reduced to seeing, excluding the largest part of corporeal sensorium: taste, smell, touch, and hearing. In its original meaning, aesthetics referred to all the senses that mediate between the inner and the outer world, between reality (not art) and the body (not cognition). Of course, the senses can be trained (Rousseau, 1993), and the promise of their civilization and education as moral sensibility, refined “taste,” and an understanding of beauty has triggered and retained modern philosophers’ interest in aesthetics (Buck-Morss, 1992; Eagleton, 1990). However, while art and culture have become the object of aesthetics only recently, the dramatic change of the technological conditions of production of art (photography, film, Internet) during the 20th century has shifted the emphasis almost completely to visual perception (Benjamin, 1968; Schroeder, 2002; Virilio, 1992).
The progressive visualization of culture through the introduction of new visual machines requires new tools of interpretation (MacFarquar, 1994; Schroeder & Borgerson, 1998). And the change in the process of production of images affects their consumption. When photography emerged, it brought to light the tiniest authentic fragment of daily life, preserving in space that which is transient in time. Because it slows to zero the speed of movement that exercises its fugitive effect on human perception, and because it makes visible and persistent the intricacies, complexities, and details of everyday life that slip through the coarse grid of human visual capacity (Benjamin, 1979), individuals were suddenly confronted with a new capacity for voyeurism and a blunt form of objectivity. A general “interpretation mania” (Virilio, 1991) is thus imposed on the modern subject who is confronted with new techniques of representation. In the case of the stock market, the computer screen has become the appresentational device (Knorr Cetina & Bruegger, 2002a) that transforms the market into a surface phenomenon, mapped onto a screen as a scale-less space made up by the accumulation of pixels. Such a representation of a globally dispersed geography was anticipated in literary terms by William Gibson (1984) in his novel *Neuromancer*. Inventing the term “cyberspace” to describe the topography of the future, he envisions space as made up of information:

Program a map to display frequency of data exchange, every thousand megabytes a single pixel on a very large screen. Manhattan and Atlanta burn solid white. Then they start to pulse, the rate of traffic threatening to overload your simulation. Your map is about to go nova. Cool it down. Up your scale. Each pixel a million megabytes. At a hundred million megabytes per second, you begin to make out certain blocks in Midtown Manhattan, outlines of hundred-year-old industrial park ringing the old core of Atlanta. (p. 43)

In Gibson’s account, our sense of geographic space has been altered. Distance between places has been replaced by the intensity of data streams. In a more general sense, the perception of objects has been recoded as the exposure to data. Our entire way of seeing has been transformed as we are now looking for density of information instead of physical borders and landmarks, an “in front” or “behind” (Thomas, 2002).

The theater of trading enacted on trading floors in New York, Frankfurt, and Tokyo disappears behind the screen (Abolafia, 1996; Picot, Bortenlaenger, & Roehrl, 1997). Yet, the screen does not conceal material space as much as it overexposes it in the form of a 24-hour live broadcast, bringing “a geographically dispersed and invisible market close to participants, rendering it interactionally or response-present” (Knorr Cetina & Bruegger, 2002b, p. 163). As “a constellation of technical, visual, and behavioral components packaged together on financial screens that deliver to participants a global world in which they can participate on a common platform, that of their shared computer screens,” the market on the screen differs dramatically from previous forms of market representations, such as telegraph, newspaper, and television, because none of these technologies provides “the vast range of observation, presentation, and interaction capabilities” sustained by the
As a result, the market-on-the-screen is constituted as a “flow market” whose teletechnological mediation, according to Knorr Cetina, cuts its participants off from the prereflexive reality and replaces it with a projected lifeworld. This projection maintains some of the mechanisms we take for granted in a nonmediated lifeworld, for example its “performative possibilities,” and replaces others by specialized processes that feed the screen. As Knorr Cetina (2005, p. 106) puts it, “[T]he technical systems gather up a lifeworld while simultaneously projecting it.”

Phenomenologically, new information, communication, and transportation technologies are taking us out of this world, beyond the limits of space and time, outside of nature and the material world into a new dimension with its own temporality, spatiality, and modes of representation (Kellner, 1998). For example, many contemporary media representations—including on the Internet—of the stock market are the result of a network of panoramic radar installations, each tracking hundreds and thousands of dispersed information flows before aggregating and externalizing them on the computer screen. The single image produced by the screen simulates a translucent world of finance, a plane of total visibility that cuts through darkness, distance, and time barriers to make the individual online investor clairvoyant.

A perfect example of the aesthetics of the screen is the so-called Map of the Market, developed by Martin Wattenberg and launched in 1998 by Smartmoney.com (Figure 1). The Map of the Market is a sophisticated visualization tool that shows the changing stock prices of several hundred publicly-traded companies on a single screen. By communicating large amounts of live data that people care about in a usable format, it has gained wide-spread popularity among individual and professional investors (Dodge, 2001).

On the market map, globally (dis)organized and isolated industries (Urry, 1988) are represented as collectives of squares and rectangles, each representing a company belonging to that industry sector. A simple color code governs the map’s always changing landscape. The geometrical shapes appear either red or green, depending on whether the valuation of the company’s stock at the New York Stock Exchange (NYSE) or the National Association of Securities Dealers Automated Quotation System (NASDAQ) is currently above or below the price noted at that day’s market opening. The market map reduces frantic trading, turbulent money flows, and distanced places of production and consumption to a geometric, mathematical topology of green and red shapes, an abstraction of reality. The aesthetics of the shapes in the market map gives back to observers a reassuring perception of the rationality and the wholeness of the economic order they are confronting. The computer screen gives the market a discernable face-in-action (Knorr Cetina & Bruegger, 2002b), which enhances and routinizes the relationship between the individual and the stock market while counteracting the sense of alienation and distance that characterizes this relationship when mediated by expert system such as banks, investment advisors, and fund managers.
Among my informants, the screen as a technology of visualization is a centerpiece of their daily market encounters. For example, the visual representation of the stock market provides Oliver with a good sense of the current market. (Italicized text indicates the questions of the interviewer.)

You mean the charts and graphs and those tools?

Yes, all these visual forms. I mean for you much is about numbers but you keep producing charts and go to more image-oriented sites.

Right, yes, I do. It’s easier to get a sense of what is going on with your stock or what might be its next direction. Or that’s also true for the market, you know. I’m not going to study the numbers all the time. It’s impossible and also boring. In the morning when I check on the market in Hong Kong and later in the afternoon in New York I always try to get the visual picture first. Like with the NASDAQ you look at the website and you see this wall and it’s a quick look at what is the general trend there. When I see something odd, I might dig deeper. But the overall picture tells you oftentimes all you need to know. (Oliver, 31, male, teacher, German)

While the market map represents a sophisticated form of visual reduction, it is not necessarily a destination for many online investors because it is not “stock-specific” enough, especially for non-American investors. Yet, Oliver’s comment...
underscores the importance of visualization, or rather of visual reduction via screen aesthetics, for individual online investors’ ability to make sense of the space of global financial markets and their own position in it. His reliance on graphs and charts is echoed by almost all the informants.

The aestheticized market is not only ready-to-hand (in the sense that Heidegger (1977) uses the term to designate the immediate cognitive and bodily accessibility and usability of an object) but transparent, like the landscape seen from the perspective of a pilot. Mediated through the screen, the aerial perspective is becoming the dominant way of seeing the market, allowing the eye of the investor to acquire the object of perception from a position of control and authority.

To put it theoretically, the great mirror of digital technology transforms the randomness and informational anarchy (Virilio, 2000a) characteristic of late modern financial markets (Hutton & Giddens, 2000) into pure form, ordered structures, and mathematical surfaces. Statistics, arithmetic, and calculability produce the smooth face of the market. Volatility, randomness, and the violent speed of money flows are harnessed through their aesthetization (Figure 2).

Because of this type of abstract reduction on the screen, “the market became fully available and identified as a separate entity in its own right for the first time” (Knorr Cetina & Bruegger, 2002b, p. 163). With valuations, volatility, and news items pertaining to the stock all temporarily frozen in time and visually projected on screen, the market is presented as a navigable “whole” and equipped with an interactive and response-present face-in-action. It is ready-to-hand for doing screen work, as epitomized by the neat two-dimensional projections of the NASDAQ (Figure 3). With buying and selling now conducted on touch-screen terminals,

![Figure 2](https://example.com/figure2.png)  
**Figure 2** Data visualization as graph—harnessing movement and speed.
the market has finally been made available as a completely autonomous and individualized mass consumption experience.

Externalized on the screen, the market appears approachable, dissectible, and actionable. Investors find themselves embedded in it and discover that through the screen and the network behind it, they can generate and observe instantaneous effects of their actions. Individual investors gain a sense of agency in the market based on their ability to see, interact with, and act on the market directly. Larry provides an interesting account of the increased sense of agentive power supplied by the computer’s ability to let him act fast:

So when I knew a target was getting close, I would basically call my broker and tell him the target. So if there was an abnormal gain, he puts the trade in and he would probably call me back within an hour or two to confirm the trade with exactly the executed price and the balance in the account. Everything was done within a day. *That sounds quick after all.*

Yeah, it wasn’t too bad but not if you relate it to my recent experience online. I was actually, since the market has been very flaky the last couple of weeks, I’ve been doing some trades and I’d put in an order, I’d execute it and within, maybe within less than 10 seconds it was executed and updated in my account. And I found that just amazing. With the computer you are in the driving seat. The first time with Ameritrade, it was really impressive for me to see, you know, me putting in a trade and it’s gone and all done. And then it was instantly updated into my account, so

---

*Figure 3* The market’s face-in-action—screen work.
you are ready for the next transaction if needed. No waiting around to have the funds cleared by someone somewhere. (Larry, 20, male, student, American)

As Larry’s comment indicates, the computer puts in the hands of the user an intense sense of agency, which manifests itself as a new form of investor consciousness anchored in the investor’s ability to govern and control the speed of market interaction. Because of his ability to act and interact at network speed, the volatility and speed with which money moves in the market entered this investors’ field of perception for the first time. In this way, the computer gives birth to what I call the kinematic investor, who embraces speed “as a kind of drug, an intensifier, an exitant moderne” (Schnapp, 1999, p. 3), because in front of the market-on-the-screen “the investor becomes the author and administrator of his or her speed” (Schnapp, 1999, p. 7, my emphasis). Seeing the market is particularly important to the investor because vision is required to navigate. The agency of the investor is lost without it. In sum, because the computer enables an individualized, interactive, response-present relationship with the market enacted through the screen, individual online investors are now in a position to drive, as it were, their experience of and with the market himself. On the screen, the investor experiences the market as an end in itself.

Risk as End in Itself—Defining Edgework

Following sociologist Stephen Lyng (1990), edgework can be defined as a classifying category for voluntarily taking high risks. Dissatisfied with psychological accounts of risk behavior, Lyng developed a sociological theory of risk-taking to understand why more and more people get involved in activities that bear a high potential for personal injury or death, even as members of Western societies actively strive to reduce threats to individual well-being (Beck, 1992; Cieslik & Pollock, 2002). In this sense, edgework activities have been linked to the “oversocialized” and alienated nature of our existence in (post)industrialized societies. Because routine work and quotidian activities wither our creative and expressive forces, we seek out extraordinary and unique experiences in the leisure activities we pursue and the substances we consume (Goffman, 1967). Thus, in some respects, edgework functions as an antidote to our existence in a disenchanted world (cf. Weber, 1958).

Edgework is inextricably linked to the accident. The potential for calamity validates the existence of the edge. In other words, edgework cannot exist outside the possibility of the accident. There are two distinctly different accidents in edgework; however, only one is considered indicative of the activity’s edge. If the accident is based on the human error of failing to prepare properly for the task at hand (like a novice mountaineer who dies while attempting to climb Mount Everest without oxygen), fellow edgeworkers do not consider the accident as indicative of edgework (Lyng, 1990). On the other hand, if the accident is based on just a little too much risk-taking on the part of the well-trained and experienced edgeworker (like the skydiver who breaks both her/his legs while pushing the length of her/his
free-fall time just over the limit), a genuine attempt was made to "crowd the edge." In the latter case, the accident provides the legitimate definition for the point of absolute chaos and disorder, which one wants to get as close to as possible without stepping over it.

Despite their desire to push the “experience envelope,” edgeworkers emphasize the importance of excellent preparation and of a gradual increase in risk-taking, what Celsi, Rose, and Leigh (1993) call risk acculturation. As mentioned earlier, trying to work on the edge without proper preparation transforms it into a gamble, which is rejected by serious edgeworkers. In this sense, edgework takes into consideration the need for acquiring skills and pitching them against the “elements.” The adrenaline rush that results form throwing oneself in a high-risk situation that cannot be controlled and influenced by the individual is not what edgeworkers are looking for (Lyng, 1990).

For edgeworkers, voluntary risk-taking is the most fundamental element of the experience. Through the careful and rational calibration of risk and skill, edgeworkers seek to reach a state of just barely acceptable chaos and disorder; the point just before total anarchy sets in and can cause injury and death. For a parachutist, this would mean opening the parachute later and later as her/his skill level increases but just early enough to prevent the accident (Celsi, Rose, & Leigh, 1993). For the experienced and fit mountaineer, this could mean foregoing oxygen tanks for her/his next ascent to extreme heights. Thus, neither senselessly pushing the envelope nor relying on chance is the objective of edgework, but rather judicious and calculated action that is based on the individual’s skill level.

Edgework is inextricably tied to the agency of the risk taker. Activities where success is fundamentally and objectively intertwined with luck, chance, and serendipity—concepts that in effect subvert the role of an actor’s rational decision making, skills, and capabilities—may generate a sense of thrill and suspense, but do not permit edgework (see Figure 4). As do gamblers, edgeworkers chase thrill and suspense, sensations considered elementary products of good edgework. However, edgeworkers differ fundamentally on the role of unpredictability, uncontrollability, and chance in the generation of thrill and suspense. These elements that define gambling run utterly contrary to the goals of edgeworkers who aim to control and predict the context in which they perform.

Although edgeworkers’ efforts to approach “the boundary between order and disorder, form and formlessness” (Lyng, 1990, p. 858) is often tied to corporal action, it is better conceptualized as a psychic experience that does not privilege one bodily sense over another. Thus phenomenologically, the “edge” can be lived and felt even in the absence of the possibility for physical damage. The key for edgework is

---

**Figure 4** Contrasting edgework and gambling.
that the respective activity offers a possibility for experiencing risk substantially (i.e., as an end in itself), regardless of its form (Celsi et al., 1993; Lyng, 1990). Such a “disembodied” theory of edgework lends itself well to an analysis of individual online investing, because buying stocks is a decision about the voluntary assumption of risk.

Edgework, then, by definition, is constituted by and constitutes the search for extreme states of consciousness. “Crowding the edge,” i.e., getting as close as possible to the boundary of losing control without crossing it, is a deliberate attempt to push the experience to the outer limit of psychic tolerability. Similar to the better-known concept of flow (Csikszentmihalyi & Rochberg-Halton, 1981; Hoffman & Novak, 1996), edgework refers to a state of deeply focused attention on a limited number of stimuli, a lost or distorted sense of time, and a merging of the individual with the object of concentration. Flow is generally conceptualized, however, as a conscious experience located in the middle ground between boring sameness at one end and anxiety-producing chaos at the other (see Figure 5).

Investing as Edgework

Based on interviews conducted between the summer of 2000 and the fall of 2002, I propose that edgework is what some online investors do. None of my informants were professional stock brokers and most of them began online trading between 1997 and 1998, when online brokerage firms made trading widely and conveniently available. The absolute money amount invested by each individual informant varied, but was on average relatively low. Yet, in terms of percentage of overall wealth invested, 60% to 70% was common, and some informants had up to 100% of their assets invested in stocks. Because these informants cannot be described as well diversified, they always take considerable risk already. In addition, a certain affinity for investing in high-growth, high-risk industry sectors, such as information and biotechnology, adds another layer of risk.

It should be pointed out, however, that risk (and the willingness of market actors to take it) has always been an integral part of investing, and indeed one of the structuring principles of financial markets (Bernstein, 1996; Mandel, 1996). Therefore, simply buying and holding risky stocks does not make one an edgeworker. Rather, edgeworking occurs when the investor subject actively “misappropriates” the market by replacing its financial rationality with a desire to experience risk as an end

![Image](https://example.com/image.png)

**Figure 5** Contrasting edgework and flow.
in itself. Hence, I make a fundamentally modernist argument: The unique characteristics of the medium turn the stock market on the screen into an “amusement” for the masses and the work of investing into a spectacle of consumption. Online and packaged as a “do-it-yourself” experience, the stock market becomes the latest member of the new species of commodities that reflect the modern fragmentation and mutual displacement of production and consumption, work, and leisure (MacCannell, 1976). In the context of online investing, edgework is therefore not the investor’s ability merely to tolerate higher and higher risk in his or her production of wealth, but the reconfiguration of risk as an extraordinary experience to be consumed. Hence, edgework is not one or the other but necessarily both, the desire to produce wealth and the desire to consume electrifying experiences.

Well let’s face it. Pretty much all my savings I have thrown into the market at this point. All of the stocks I own are Internet, high-tech, or biotech stocks. And in my tennis club, I am not the only one with this kind of strategy. We all understand that this is not the typical way of investing but things have changed. With the Internet, I can now be much more in control, the market, or my stocks rather are always with me, you see. If something happens I know about it and can react. I would not even want anyone else do it for me. That is the whole fun of it. When things happen, to be there, you understand? That’s why the old way of investing, with the bank and stuff, is dead when now you have it all in front of you and get the kick from investing directly. (Oliver, 31, male, teacher, American)

Oh, sure, there is no doubt that investing for me has taken on a whole new life. The key difference between having a broker and doing it yourself is that you worry about completely different things. With the broker, say you want to buy or sell, you’d call the guy up and he would suggest this or that and it would always come down to making sure you don’t lose any money. It’s all about avoiding risk exposure, you see. That’s what they call it, risk exposure, and they are petrified by that. So initially, when I fired my broker and went online, I kept that in mind and played by the rules. I saw risk as the big threat and tried to avoid it but I realized, slowly though, I realized that risk is actually what I was looking for, more and more, and that the more risky things got, the more fun it became because suddenly your actions make you nervous, the market seems so much more fragile, you become definitely more nervous about your money and that kind of thing. You can’t wait to get back to the computer. (Eric, 43, Ad Designer, male, American)

Comments such as these make it evident that a sense of agency and authorship of one’s actions in the market has an effect on the experience of investing. While making money remains important to the investor, taking risks and having fun become additional elements of the online investing experience when the computer becomes the investor’s kinetic prosthesis (Schnapp, 1999) for acting on, and interacting with, the market.
One of the key characteristics of edgework is the continuous search for ways to artificially increase risk (Celsi et al., 1993; Lyng, 1990). For example, skydivers increase the risk level of the dive by jumping out of the plane under the influence of drugs, mountain climbers ascend without oxygen tanks, and free climbers climb without ropes. Online investors trade options and buy on margins to push the envelope of the risk experience. Artificially increasing risk is in fact a necessity for increasingly refined and accomplished edgeworkers because it is the only way to continuously balance acquired skills (or at least a perceived level of skill) with risk.

To experience risk as an end in itself, a permanent commitment must be made to push the envelope and get as close to the edge as possible without going over it. Therefore, individual online investors “get into” options and margin trading to push the envelope.

My stocks, and most of them are in high-risk sectors, they become less interesting for the time I’m in options. Usually, it’s a three months thing. You can’t do it all the time. I can’t. It’s very intense and takes it out of me, I must say. You need to stay with your options all the time. Also, it takes time to prepare, you know, it takes some serious work before because you don’t want to bet on losers. These things go up and down, sometimes kind of crazy, but what counts is the end. It’s not the classic kind of investing at that point. It’s more complex because you have to figure out the future in three months from now. That’s why some call it speculation. . . . I haven’t got burned yet but came close a few times. You feel that panic coming when you see your value plummeting in front of you and you need to be ready to act at any time to avoid the complete blow-up. Then you can’t believe your luck when you see your value go up. You can hardly contain yourself when you see your money doubled suddenly. It’s these extreme states of mind, really, that I cannot get anywhere else so easily just sitting in front of the computer. I mean you can jump down a bridge on these bungee things, but just sitting home, this is it and it’s probably what gets me to do it all over again a few months later. (Manfred, 37, IT Developer, male, German)

Another major factor that was very major, that really changed my investing behavior was getting a margin facility on my brokerage account. That made a huge difference. I am not a person that lives with debts generally. I do not carry credit card debts, so it was a bit of a stretch for me to leap into the idea of a margin account where you are borrowing on your equity. But I could see the sense to it and that obviously doubled, well doubled plus, my buying power over night. And that actually kicked me into buying and selling the same day in a major way. I felt like I entered a completely new level of trading. It was much more tense because you are playing with fire. It’s an amazing feeling. Your degree of nervousness goes through the roof believe me, at least it did for me. One little mistake becomes really costly when you are trading on margins, so you need to be intensely focused, do good research, before you jump on something. Again, so that was about two years ago. Then, that, . . . it hugely affected my behavior,
because if you can buy enough of the stock now so that you do have 500 or a 1000 shares and if it moves a fairly small amount it is worth it. It’s worth doing a trade that gets you 700 dollars. So, changing that momentum, really. (Eric, 43, Ad Designer, male, American).

Clearly, margin trading and options denote a qualitative change in the investment experience of risk. Both techniques increase tension and anxiety and the investors are lucidly aware that they are always on the verge of “going over the edge.” To be sure, these edgeworkers are also investors, so they value making money. Yet, in addition they are chasing the sensation of risk as a benefit in itself. They make reference to the high level of preparation and research it takes to succeed in this world of high-intensity investing. In their eyes, options and margin trading are demanding and complex investing formats that should only be risked by investors with advanced investing skills.

To reiterate, the transfer of the investing activity into the computer-mediated realm of cyberspace gives the market a face-in-action that is interactive and response-present. In addition, the computer as kinetic prosthesis gives birth to the kinematic investor, who is characterized by a heightened sense of agency in the market. Together, the market-on-screen and the kinematic investor reconfigure the stock market as a site for edgework.

Occasionally, the desire to experience extreme emotional states, typically expressed by my informants as thrill and suspense, appears to be more important than the normative objective of investments, which is to maximize risk-adjusted returns. Perhaps this challenge to the dominance of the economic model should not surprise us, because once the whole notion of risk has been redefined, the conventional economic formula no longer fully captures the perceptual and cognitive horizon on which individual online investors operate.

Further undermining of conventional assumptions of investor behavior is evidenced in comments that show investors devising techniques—uniquely supported by the computer-mediated environment in which investing takes place—which allow them to increase risk while alleviating the pain from these extreme emotional states caused by their actions. I term the most common technique for trivializing extreme risk-taking behavior virtualization, which refers to the investor’s attempt to create a certain kind of distance from the conventional reality of the stock market. As Eric’s and Eberhard’s comments below indicate, the virtuality of the online environment creates a perceptual plane in which an abstraction (Eric) or separation (Eberhard) from the “real” can be enacted.

First of all, first of all, it’s extremely abstract. I was aware of that once I got into individual stocks. Once I got into doing these first day trades. You’d filled in a few blacks, you’d done a few clicks, you had done nothing technically and you were a few hundred bucks better off, basically. You contributed nothing, you had no sweat particularly, or no labor, particularly. It’s very abstract in that sense. (Eric, 43, Ad Designer, male, American)
To come back to that [software] company in Israel [that we talked about earlier. It’s a small company with a promising product for quality control in industrial manufacturing]. If you choose to invest in such a company, would that be a reason to learn more about the country, culture, people, or the city where this company is located?

No. These are two separate worlds for me. Somehow, all this is not real. I’m not interested in the buildings, the workers or people there, what religion they have, not even that the company is in Israel. That really doesn’t interest me at all. These are two different worlds. In one of them, this one here [points to the room we are in], I’m a living creature, a human being and I have political opinions and interests, etc. The other only exists in the computer, and in there I exist as risk-loving investor, nothing else. (Eberhard, 37, Journalist, male, German)

Abstracted and separated from conventional reality, the stock market-on-the-screen emerges as a world that is enclosed in itself and shaped by the representational and communicational logic of the computer-mediated environment, a virtual world. In this universe, akin to the imagined worlds of video games, traditional rules no longer apply. In a world characterized by unpredictable fluctuations, where moments of relative quiet and stability alternate with moments of rapidly disintegrating order and high volatility, strategies are called for to ease the cognitive distress of speed. In particular, the experience of rapidly accumulating and evaporating money forces new perceptual strategies.

And the proceeds of it to some extent are digits. The digits went up, great. There is something different about it. A different sense of feeling in terms of how it was earned. I mean it’s there somehow, you can go and buy something with it but until you do, and particularly when you keep trading and particularly when you have lost a lot, you see, that, I mean, that the creation and dissipation of wealth that’s intangible. You gotta get it out. You have to do something with it or else it goes down. It’s not real until you get it out. It’s money you made and it’s money now that has gone away, there is a sense of loss. It’s a strong feeling but it’s not like what I would feel had I lost real money, do you see? I think the reason why I’m doing what I’m doing, I mean this risky kind of trading, I can do it because I know that I do not feel the same sense of loss if it goes down bad. It has gone, that money has just gone. It was there and now it’s gone. It’s incredible when the market does a huge, what has been so far, a huge rupture. The whole amount of money everyone had talked about is just suddenly diminished. It did not go anywhere. It just evaporated. It’s different from real money. (Eric, 43, Ad Designer, male, American)

How did your success change your approach to investing?

Not at all. I mean, I just look at it all as numbers. Whether these numbers would have an equivalent in value of a house or a car is completely irrelevant for me. I try to optimize the numbers without thinking what this would mean in real money.
I haven’t bought anything yet either. Many others, as things were going so well, probably would have gone out and bought a car or two, but that was... I think I had, because of the big loss I suffered earlier [about 10 years ago when he speculated in currencies and a risky investment] somehow changed my approach to one where I’m totally indifferent what you could actually do with the money. I conduct pure number games. I want to increase the numbers, that’s all. If you forget about the money only then are you free to enjoy the ride. That’s only me, though. (Manfred, 37, IT Developer, male, German)

But somewhere you know that the money in the market is only fictitious. It can be gone by tomorrow. But on that fictitious level I feel at ease with it all. Look, all my savings are in stocks right now. One day I could go and buy a trip to Australia and probably a motorcycle and the next I am looking at a portfolio of penny stocks. It’s a little extreme but you know what I mean. I have had enormous fluctuations in one day and when all your savings are at stake you either get out when you can, or, like me, when you are addicted to it, you find a way to deal with the stress. (Markus, 25, Student, male, German)

If necessary, online investors suspend altogether the idea of a correspondence between the real and the nominal in the stock market. Acknowledging the speculative character of their investing and the fundamental possibility for immanent and complete market chaos, these online investors who do edgework situate their practice at the periphery of ordered reality, indeed outside the real entirely, which provides the psychological freedom that allows for a kind of experiential anarchy. In other words, by perceptually separating the sign from the signifier, which in the current context I call “virtualization,” individual online investors clear the way for working on the edge of the market.

Conclusion

This article has put forth the argument that with the transfer of stock trading from what could be called an analog world of phone calls, faxes, and trips to the local bank, to the computer-mediated environment of the computer screen, the market becomes the site for new types of individual experiences and practices that cannot be theorized by means of existing economic and finance theories. Specifically, I have argued that the representational work of the screen alters the perception of the market, giving birth to the market as a place for edgeworking, or experiencing risk as an end in itself. A prerequisite for edgework is a real sense of agency, which is afforded to the investor by the stock market-on-the-screen’s interactionally or response-present face-in-action (Knorr Cetina & Bruegger, 2000).

In the context of edgework, the strategy to “virtualize” the reality of the market in general and money in particular becomes central. The market’s potential for disruption, disorder, and chaos requires that the tension between the real and the nominal be suspended in favor of a virtual sense of reality. Once the sensation of the virtual
pervades the act of individual online investing, the investor is freed from consider-
ations that would otherwise hold him or her back in “crowding the edge.”

While a propensity for voluntary risk-taking in the market may not presup-
pose its perceptual derealization, comments of high-risk taking investors suggest
that the abstraction of the real by the screen assists in the project. Particularly,
reflections about one’s personal financial future, long-term accumulation of
wealth, diversification, and other such proven tenets of conscientious investing
can easily be discarded in the realm of the virtual. Instead, with the virtualization
of investing, individual online investors create the condition for the possibility of
pure edgework.

Acknowledgments

An early version of this paper was presented at the 2003 Digital Communities
Conference, Stockholm, Sweden. Thanks to Janice Denegri-Knott, Janet Borgerson,
Nikhilesh Dholakia, Eileen Fischer, and Jonathan Schroeder for comments on earlier
drafts of this paper. The author would like to thank the Council for Research at the
University of Rhode Island, the Computer Science Department at the University of
Aalborg, and the Research Institute for Telecommunication and Information Mar-
keting at the College of Business, University of Rhode Island, for their generous
support of this research.

Notes

1 I am not suggesting that investing online universally and automatically turns bounded
rational actors into edgeworkers. Rather my goal is to establish a link between the nature
of the medium of investing, the creation of new perceptual structures, and the emergence
of new experiential and motivational registers from which these investors may potentially
draw.

2 “Appresentation” is used in a phenomenological sense to indicate that the screen is
able of bringing closer and rendering interactionally or response-present the frag-
mented entity that is the stock market (see Knorr Cetina & Bruegger, 2002a).

References

MA: Harvard University Press.
Management Science, 43(12), 1676–1692.
on the Internet. Communications of the ACM, 41(8), 35–42.
Barber, B. M., & Odean, T. (2000). Trading is hazardous for your wealth: The common stock


MacFarquar, L. (1994). This semiotician went to market. Lingua Franca (September/October), 59–79.


**About the Author**

Detlev Zwick is an Assistant Professor of Marketing in the Schulich School of Business at York University, Toronto. He teaches courses on Consumer Culture and the Internet, the Experience Economy, and (High-)Technology Marketing. His research focuses on cultural aspects of consumer behavior in electronic, mobile, and high-tech markets.

**Address:** 324 Schulich School of Business, York University, Toronto, ON M3J 1P3 Canada