Observing Flow: A qualitative investigation of compelling web experiences and absorbing web environments

Detlev Zwick and Nikhilesh Dholakia
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Detlev Zwick*

Nikhilesh Dholakia**

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*Detlev Zwick is assistant professor of marketing, Schulich School of Business, York University, 4700 Keele Street, Toronto, ON M3J 1P3. Telephone: +1 416-736-2100-77199. Fax: 416-736-5762. Email: dzwick@schulich.yorku.ca.

**Nikhilesh Dholakia is professor of marketing, School of Business Administration, University of Rhode Island, Ballentine Hall, 7 Lippitt Road, Kingston, RI 02881, USA. Telephone: +1 401-874-2337. Fax: +1 401-874-4312.

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Abstract

This paper engages critically with the important concept of flow, which, for over a decade, has shaped how marketing theorists and practitioners think about delivering compelling online shopping experiences. We argue that the current controversy in the literature about the usefulness of flow to describe the whole range of online consumer behavior is caused by the concept’s inadequate theorization. By employing naturalistic techniques of inquiry, the paper offers the first study on flow that draws from rich, longitudinal qualitative data. The analysis of our data suggests that the flow model currently operant in the literature is too simplistic to describe the various levels that flow takes during online shopping. Rather than binary flow/no-flow states of minds, consumers experience various intensity levels of flow. In addition, we develop a model of repeat flow experiences in artificial marketplaces. Theoretical and managerial implications of the study are discussed.
Introduction

As online consumption keeps growing, so does competition for the online dollar. Interactive marketers face the challenge of delivering compelling online shopping experiences that ensure high per-visit spending and frequent returns to the site (Posselt and Gerstner 2005). Hence, how consumers act in, react to, and interact with electronic market environments remains an important question for interactive marketers (Bellman, Johnson, Lohse, and Mandel 2006; Hsieh, Chiu, and Chiang 2005). One of the long-standing concepts for understanding consumer behavior in online choice environments is known as flow (Hoffman and Novak 1996), which describes the pleasurable experience of feeling active, focused, alert, and creative while navigating a challenging task environment (Csikszentmihalyi 1997).

Flow has received a lot of attention from marketing scholars interested in understanding how to create a compelling online consumer experience (e.g. Agarwal and Karahanna 2000; Luna, Peracchio, and de Juan 2002; Mandel and Johnson 2002; Smith and Sivakumar 2004; Stewart and Pavlou 2002). The literature, however, shows conflicting accounts about the usefulness of the concept of flow for understanding consumer behavior in what Bellman, Johnson, Lohse, and Mandel (2006) call marketplaces of the artificial. On the one hand, critics of the flow concept surmise that – in the context of purchasing – customers are goal directed and “that entertainment-related criteria associated with online use in general (such as flow and other experiential aspects) are not relevant when the context is purchase” (Zeithaml, Parasuraman, and Malhotra 2002, p. 363). Put differently, flow should be confined to describing recreational and entertainment-related web experiences. Similarly, Novak, Hoffman, and Yung (2000) suggest that flow is most useful for describing compelling experiences during recreational web use, while
goal-oriented online activities such as information search and purchase activities do not seem to require and induce flow states.

On the other hand, other studies reported results which suggest that flow is a useful description for experiential outcomes associated with the complete range of online consumer behavior, including purposeful and goal directed activities (Mathwick and Rigdon 2004; Novak, Hoffman, and Duhachek 2003). Online activities as goal-oriented as product search have been shown to be intrinsically enjoyable and playful, leading to flow states of the user, which in turn enhances the consumer’s attitude towards the site and the brand (Mathwick, Malhotra, and Rigdon 2001; Mathwick and Rigdon 2004). From their analysis of qualitative descriptions of flow experiences, Novak, Hoffman, and Duhachek (2003) conclude that flow may in fact be more common during the performance of task-oriented activities rather than during experiential online activities.

This controversy demonstrates that researchers still struggle to develop basic conceptual tools to investigate, interpret, and fully understand consumer behavior in artificial marketplaces. Hence, taking seriously the call for phenomenological research to inform our theoretical understanding of “the construction of artificial markets and to further clarify the status of important concepts in consumer research” (Bellman, Johnson, Lohse, and Mandel 2006, p. 28), we offer the first longitudinal, naturalistic study of online flow behavior. Our analysis hones in on three heretofore neglected, yet – as the controversy above shows – important aspects of the online consumer experience, all of which have interesting theoretical and managerial implications. First, cognizant of the disagreement over the range of online experiences during which flow can be expected to occur, we explore the relationship between goal-oriented and experiential activities in the artificial marketplace. Previous research has treated these two
dispositions as mutually exclusive states of minds (Hoffman and Novak 1996; Novak, Hoffman, and Yung 2000; Smith and Sivakumar 2004; Zeithaml, Parasuraman, and Malhotra 2002), suggesting that consumers are going online either to accomplish some task or to relax and be entertained. In this paper, we draw on rich observational and interview data to offer a model of online consumer behavior that shows these two dispositions – work and play on the internet – to be fluid, overlapping, and co-present rather than discrete and singular, which may account for the difference of opinion in the literature.

Second, the realization that online consumer behavior interacts in more complex ways than hitherto acknowledged brings us back to Csikszentmihalyi’s (1997; 1991) original, yet largely overlooked notion of degrees of flow (see also Trevino and Webster 1992). The analysis of our data suggests that the flow model currently operant in the literature is too simplistic to describe the various levels that flow takes throughout an online shopping session where consumers typically “switch” back and forth from a more experiential mode of behavior to a more goal-oriented mode of behavior. Put differently, rather than binary flow/no-flow states of minds, consumers drift in and out of various levels of flow.

Third, we explore the characteristics of market environments that permit repeated flow experiences. Because theory postulates that flow occurs when “challenge and skill are balanced and elevated above some critical threshold” (Mathwick and Rigdon 2004, p. 324), researchers have struggled to explain why and how flow experiences are supposed to occur over a longer period of time, especially during goal-oriented activities that are repeated frequently (Novak, Hoffman, and Yung 2000; Smith and Sivakumar 2004). By analyzing the nature of artificial marketplaces where consumers, despite returning frequently, consistently achieve flow states, we are able to develop a theory of repeated flow that centers on the characteristics of the site rather
than the consumer. In other words, we describe the characteristics of an artificial marketplace that enable it repeatedly to produce highly focused, enjoyable, and playful consumer experiences (Mathwick, Malhotra, and Rigdon 2001) that put consumers into flow states. Of course, recurring flow experiences are not to be considered an end in itself. Rather, we argue that market environments that encourage repeat flow also promote consumer loyalty and repeat purchase. The insights presented by our discussion are valuable for marketers hoping to design online marketplaces that generate loyal and valuable customers.

**Background**

**Goal-Directed versus Experiential Behavior**

The distinction between goal-directed versus experiential consumption has been discussed at length by others (e.g., Grayson 1995; Holbrook and Hirschman 1982; Wolfinbarger and Gilly 2001). Similarly, the theory of flow, originally developed by psychologist Mihaly Csikszentmihalyi (e.g. 1997; 1982) to describe general types of cognitive states of mind during human–computer interactions, has seen ample treatment in the marketing literature (e.g., Agarwal and Karahanna 2000; Hoffman and Novak 1996; Novak, Hoffman, and Duhachek 2003; Novak, Hoffman, and Yung 2000). Therefore, rather than offering a comprehensive review of these bodies of literature, we focus our discussion on their key ideas and main shortcomings.

Consumer researchers generally make a distinction between instrumental-functional and experiential-autotelic forms of consumer behavior, which differ on a number of dimensions (see Table 1, adapted from Novak, Hoffman, and Duhachek, 2003). Put simply, the former is characterized by a rational and systematic process to accomplish some kind of pre-determined, utilitarian objective imposed onto the consumer by outside circumstances. The latter, on the other hand, describes a form of consumer behavior that is non-directed, unplanned, and
intrinsically motivated while emphasizing “the experiential side of such distinctions as consumption versus purchase, consuming versus buying, and using versus choosing” (Holbrook, Chestnut, Oliva, and Greenleaf 1984, p. 736).

While this dichotomy was established for studying consumer experience in traditional offline settings, it has also proven useful for the development of conceptual tools to understand consumer behavior in artificial marketplaces (Hoffman and Novak 1996; Smith and Sivakumar 2004; Wolfinbarger and Gilly 2001). Indeed, Hoffman and Novak (1996) argue that the distinction between goal-oriented and experiential consumer behavior is particularly relevant for describing consumer activities online because the unique characteristics of the artificial shopping environment put emphasis on the experiential processes for many consumers.

Whether consumer behavior is seen as task-oriented or experiential has implications for online retailers. It has been argued that compared to goal-focused shopping, playful and experiential shopping behavior translates into more positive disposition towards the site and the retailer, greater satisfaction with the outcome of the shopping activity, and a higher likelihood of impulse purchasing (Klein 1998; Wolfinbarger and Gilly 2001). Task-oriented, rational, and deliberate shopping by far dominates overall online activities (Smith and Sivakumar 2004). Wolfinbarger and Gilly (2001) report that the most online search is narrowly delimited, that purchases are planned, and that most online consumers appear to be goal-focused when navigating artificial marketplaces. They argue that within this mode of operation, online consumers consider shopping to be product rather than process oriented, and therefore evaluate
the results of their shopping activities in terms of work performance: as either a success or failure (see also Hoffman and Novak 1996). At any rate, while the evidence suggests that utilitarian shopping behavior outweighs experiential shopping in artificial marketplaces, “some online shoppers engage in experiential shopping, or shopping for fun, a behavior desirable to marketers as fun-seekers tend to be impulsive and to make more purchases” (Wolfinbarger and Gilly 2001, p. 35).

The debate over the importance of these two modes of consumer behavior for marketing theory and practice is characterized by the important role conceptual pieces play in theorizing these two modes of consumption (e.g. Holbrook and Hirschman, 1982; Hoffman and Novak, 1996) as well as a dearth of empirical work with the express purpose of studying the nature of and the relationship between experiential and goal-directed behaviors during the actual act of consumption. Rather, empirical research studying these behavioral dispositions focuses on their effects on various outcome variables such as loyalty, satisfaction, and flow. It typically starts with the assumption that consumers display dichotomist consumption styles. In other words, consumers are taken to be either experientially- or task-oriented during the complete consumer decision process under scrutiny.

Theoretical and conceptual questions arise regarding whether consumers in fact maintain a single behavioral disposition or display both at various times during the entire consumption process. Furthermore, we lack theoretical tools to understand the effects on outcome variables such as flow if consumers exhibit both experiential and goal-oriented behavior during the same consumption process.
Flow

In their seminal article on marketing and consumer behavior in computer-mediated environments, Hoffman and Novak (1996) theorized that online shopping experiences are perceived as pleasurable and compelling by the consumer when they enter a state of “flow.” For flow states to occur, the environment needs to be engaging, responsive, and interactive but not overly difficult and challenging. It has been suggested that flow states are the result of a balance between consumer skills and environmental challenges above a certain threshold (Csikszentmihalyi 1997; Hoffman and Novak 1996; Mathwick and Rigdon 2004). When experiencing flow, consumers are so highly focused and absorbed in the activity that they lose their sense of time. Consumers appear active, alert, creative, and content as they carry out the task at hand, describing the flow experience as a very enjoyable and gratifying state of mind (Novak, Hoffman, and Duhachek 2003; Novak, Hoffman, and Yung 2000).

Delivering a compelling web experience capable of inducing flow states has been linked to improvements in customer acquisition, retention, and satisfaction (Novak, Hoffman, and Yung 2000). In addition, it has been hypothesized that flow encourages repeat visits, which over time may lead to automated consumer behaviors and skill-based habits (Johnson, Bellman, and Lohse 2003; Murray and Häubl forthcoming 2007; Zauberman 2003). In other words, the repeated use of a particular site may lead to a cognitive lock-in to incumbent consumption patterns and choice. Once consumers have acquired a certain comfort level with an online shopping environment, they rarely switch web sites, thereby mitigating price sensitivity, and positively influencing subsequent attitudes and behaviors (Murray and Häubl 2003; Zauberman 2003).

Flow experiences have been observed in a number of different work and consumption contexts (e.g. Celsi, Rose, and Leigh 1993; Csikszentmihalyi and LeFevre 1989). Yet, as Novak,
Hoffman, and Duhachek point out (2003), “consumer researchers do not as yet have a comprehensive understanding of the specific activities during which consumers actually experience flow on the Web.” In addition, the conceptualization of flow that has informed work in marketing and consumer research remains rather rudimentary and does not take into consideration the various degrees or levels of flow (e.g., microflow and deep flow) presented in the work of Csikszentmihalyi (e.g. 1997; 1991). Finally, researchers have yet to closely analyze the consumption environments in which flow experiences occur. This is surprising given the conceptual emphasis on the balance between consumer skills and environmental challenges as well as the role of interactivity and responsiveness to generate states of flow.

**Methodology**

Interpretive and naturalistic approaches that make use of interview and observational techniques have been shown to be useful for developing marketing knowledge (e.g., Arnould 1989; Arnould and Wallendorf 1994; Gilly and Wolfinbarger 1998; Thompson 1997). Our post-positivist methodological orientation aligns with the study’s discovery-oriented purpose (see Guba and Lincoln 1994; Sultan and Rohm 2004). However, this article not only sheds more light on the flow concept but also improves marketing practice with regard to customer experience and loyalty in marketplaces of the artificial. Therefore, we employ an analysis that follows the general tenets of grounded theory (Strauss and Corbin 1990). Gilly and Wolfinbarger (1998) point out that the inventors of grounded theory explicitly articulated the applied focus of this method.

Given the subjective nature of online shopping and search experiences, a qualitative design seems very suitable to explore the nature of flow (c.f. Gilly and Wolfinbarger 1998). In fact, we venture to suggest that some of the controversy over whether the flow concept is
relevant for the entire range of online consumer behavior may be rooted in the fact that online consumer behavior has not been analyzed holistically and in situ. Therefore, a naturalistic perspective on the experience of flow promises new insights into the controversy. Our study draws from specific cases of consumer experiences captured as observed behavior and as expressed in conversations.

**Data Collection**

Our data collection with online consumers took place as in-depth, one-on-one interviews (McCracken 1988). Additional data was gathered during email exchanges with some of the informants. Finally, since most of the interviews took place in front of the computer, a rich amount of observational data is available for analysis. Participants were recruited through personal contacts and referrals. Follow-up interviews were conducted with eight informants for the purpose of clarification, elaboration, and revision of key issues. 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.

Following the standard procedures for this methodology, interviews began with a set grand-tour question (McCracken 1988) aimed at elucidating participants’ backgrounds. We then inquired about the circumstances that prompted them to get involved with stock trading on the one hand, and buying and selling on the community site called “Craigslist” on the other. The interviews followed a conversational style after that and were guided by the interests of the informant (Thompson 1997). Throughout, participants commented widely on issues concerning their online investing and “craiglisting” experiences, ranging from the psychological effects of buying and selling and winning and losing to the social effects of communing (Bagozzi and

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1 This term refers to the participation on a community site called Craigslist.
Dholakia 2002; Watters 2003). Even though our methodological approach is not designed to produce statistically significant and generalizable results in the traditional sense, we felt it was important to capture the experience of consumers in two different artificial markets to achieve a higher degree of comparability (Lincoln and Guba 1985).

**Investors and Craigslisters**

For our case studies, we made use of observational and interview data of a total of fifteen online consumers who are active participants in artificial marketplaces, either as online investors or as participants on Craigslist. Table 1 shows the profiles of the participants.

| Insert table 2 about here… |

**Investors**

The online investors among our informants can be characterized as technology-savvy, self-taught, and small traders. All of them trade frequently, conducting 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. While absolute and relative amounts invested differed significantly from informant to informant, individuals with lower total wealth and income were more likely to have a higher percentage of their available funds invested in stocks and vice versa.

Our informants rely on well-known online brokerage services such as E*Trade and Ameritrade to make their trades and conduct market research. Other online sources such as Yahoo! Finance and the Motley Fool community are consulted by most for additional research.
The computer screen gives the market a distinctive written surface or, as Knorr Cetina and Bruegger (2000, p. 145) call it, a “gestural face-in-action” to which our informants relate and become attached. Because informants during the interview often felt the need to demonstrate how online trading works, most interviews ended up in front of the computer with the informant logged on to the trading account. In some cases, trades were made in order to illustrate the process.

**Craigslisters**

Craigslist was founded in 1995 by Craig Newmark for the San Francisco Bay Area. Inspired by the successes of early online communities like The Well and Usenet, Craigslist was started with the idea of creating a small, social, and trusting online community for close friends to exchange advice, goods, and services. Through word-of-mouth, participation in the open community grew very quickly due to the benefits of being able to freely and easily post items for sale or buy those of others, post jobs or search for them, find housing, make friends, and so forth.

Craigslist was incorporated in 1999, and expanded into 22 more American cities by 2003. By 2006, there were over 150 city-specific “Craigslist” all over the world, spanning from South Africa to Brazil to North America. Over the years, the individual city sites have become increasingly content-rich, featuring free classified advertisements, résumé posting spaces, dozens of “for sale/barter/wanted” categories, and forums sorted by various topics. The company’s business model is based solely on revenues generated by job postings. All other services on the site are free to the users. Hence, the “for sale” area is among the most active ones of the entire site because it allows owners to post ads including pictures for free. Since each city site is by definition local, items purchased on Craigslist can typically be picked up easily, eliminating the
need for shipping which is often required for transactions made on the commercial auction site eBay.

According to Wikipedia, Craigslist delivers over three billion page views per month to ten million unique visitors, which makes it the seventh busiest site among internet companies. With seven million new classified ads each month, Craigslist is the leading classifieds service in any medium. In 2005, the original San Francisco Craigslist became the star of film maker Michael Ferris Gibson’s documentary, “24 Hours on Craigslist”, underscoring the site’s status as a growing cultural and economic institution of the city. For this study, Craigslist informants were recruited through personal contacts developed by the lead researcher via community participation as an active buyer and seller of used items. As with the online traders, these informants were interviewed at home in front of the computer.

**Model**

The model of deep flow and of repeated flow developed in this paper is empirically grounded and the result of data analysis. Although the conventions of interpretive marketing and consumer research suggest that the presentation of the model is the end result of an in-depth and iterative process of data analysis, we present our model upfront to frame and facilitate the discussion of the data below. We depict the model and our propositions in Figure 1.

The two established behavioral modes that categorize online consumer activities – experiential and goal-directed – represent key components of our model. However, the interview and observational data we draw from strongly suggests the need for reconceptualizing goal-
directed and experiential online consumer behavior. The narratives from our informants do not support such a stark distinction between these supposedly opposite consumer dispositions as is currently presented in the literature (e.g. Hoffman and Novak 1996; Zeithaml, Parasuraman, and Malhotra 2002). Hence, the notion of whether flow states are possible or relevant – either in goal-directed or experiential online consumer behavior situations, or perhaps both – rests on the untested assumption that consumers in fact make such a distinction. Our data points us to a much more fluid and integrated experience of shopping in artificial marketplaces where various degrees of flow states ensue from the frequent “switching” between a more purposeless and a more purposeful behavior. Put differently, in artificial marketplaces, consumers are more likely to oscillate between experiential and goal-directed behavior rather than exhibit either experiential or goal-directed behavior only.

Other important components of the model are based on the introduction of a conceptual differentiation of the flow concept, lacking in current discussions of flow. Our data suggests that the nature of the behavioral disposition while shopping online affects the degree of the flow experience. Moreover, not all flow states are equally relevant for instilling consumer desire to return to the site of flow. Our informants stress that the prospect of achieving deep flow states motivates them to return to the artificial marketplaces more frequently. In other words, if a visit to the marketplace led to a state of deep flow, the consumer is more likely to return to the site sooner.

Finally, we suggest linkages between flow, the nature of the marketplace, and the possibility for persistent consumer interest in the market that delivers consistently compelling web experiences. Specifically, we find that regardless of the intensity of the flow experience, consumers’ motivation to return to the artificial marketplace is higher when the market is
perceived as ontologically unstable. Repeat flow experiences support frequent returns to the site, potentially leading to cognitive lock-in, which is a situation wherein the repeated use of a particular product leads consumers to develop goal-activated automated behaviors (e.g. Johnson, Bellman, and Lohse 2003; Murray and Häubl forthcoming 2007; Zauberman 2003).

The subsequent presentation of the findings is structured as follows. We begin with the informants’ view on their behavioral dispositions when acting in the respective artificial marketplaces and then proceed to the concept of flow. Each section is data-driven and presents an organized view of representative quotes from our data set to expand on the narratives in the text. Propositions are formulated at the end of each section.

**Findings**

Hoffman and Novak (1996) proposed that consumer behavior in artificial marketplaces can broadly be categorized as either experiential or goal-directed. Experiential behavior is the result of more general and indeterminate motivations for online search and a more enduring involvement with products and processes. Goal-oriented behavior on the other hand is characterized by specific search objectives and a situational involvement with products and tasks. Importantly, the authors proceeded to theorize that either of these behavioral dispositions has the potential to lead to flow states in situations where consumers also experience a heightened sense of focus and tele-presence.

Since its articulation by Hoffman and Novak, this theory has not seen much empirical testing. While scholars have been willing to accept that flow states occur during experiential behavior in artificial markets, they have been skeptical about the possibility for flow states during task-oriented and goal-directed activities (Novak, Hoffman, and Yung 2000; Zeithaml, Parasuraman, and Malhotra 2002). Only recently, two studies presented evidence suggesting that
flow states do happen during task-oriented activities such as purposeful information search behavior (Mathwick and Rigdon 2004; Novak, Hoffman, and Duhachek 2003).

Our interview data reveal a number of problems with the current debate. First, such a strict distinction between experiential and goal-directed behavior in artificial marketplaces is not tenable. Instead, consumers’ behavioral dispositions appear much more fluid and intertwined, oscillating quickly between states of casual browsing and intentional searching, recreational reading and deliberate purchasing. Hence, efforts to build a theory of flow in artificial marketplaces that rely on a stark conceptual and analytical binary separation of these behavioral states are problematic. Also, we find evidence in the data that consumers who maintain an experiential behavioral disposition for an extended period of time are more likely to experience a superficial, or “micro” state of flow (c.f. Csikszentmihalyi 1991; Trevino and Webster 1992), while consumers that enter a goal-directed behavioral disposition are more likely to enter deep states of flow.

Below, we offer a discussion of our findings in the form of a continuous argument while making judicious use of the data. Because of space restrictions and for the sake of flow, as it were, only a relatively small subset of the entire dataset can be presented in the body of the text. Therefore, we offer a summary table that supplies additional sample quotes related to the formation of the propositions (see Table 2).

**Flow States during Experiential versus Goal-Directed Behavior in Artificial Markets**

Throughout their visits to one of the artificial marketplaces that we use as the context for our study – the online stock market and Craigslist – consumers engage in a range of activities and behaviors such as searching, communicating, shopping, researching, and organizing future
shopping possibilities. The impetus for visiting the online market is often motivated by what Novak, Hoffman, and Duhachek (2003) refer to as enduring involvement with the process and a desire for staying generally informed about the options rather than by a specific shopping task.

Sometimes [I visit my broker’s site] because I want to make a trade, but not usually. Mostly, I just want to do some research or check things out, look up what is going on at the other [stock] markets, check my portfolio and definitely my watch list and that kind of stuff. Usually when I go online thinking, “ok, now I’ll make a trade,” it’s because a friend gave me a tip or I saw something in the paper or on TV (online trader).

We [informant and her husband] do visit Craigslist regularly just to see if anything has been posted that may be interesting to look at. Often after dinner we sit down in front of the TV for the news or a movie and we’d have the laptop there and we just kind of search the postings and stuff (Craigslister).

These instances indicate that recreational search and enduring involvement with the process of knowing the marketplace is a motivation to enter the market and drives the initial mode of behavior. However, as the comment made by the online trader suggests, there are moments when fulfilling a specific shopping task prompts consumers to visit the artificial marketplaces:

Yes, it seems that we use Craigslist to do more and more of our shopping, at least for certain items like furniture or, now, all the baby stuff. It’s really good for that and so when there is a specific item that we know we want, we’d go and search Craigslist for that, for sure (Craigslister).

However, contrary to the assumption of motivational, emotional (involvement), and behavioral consistency implicit in previous analyses of flow, consumers typically do not sustain their initial
behavior for very long. We learn that recreational browsing and non-directed information search can quickly turn into deliberate search as well as highly focused task definition and completion:

I go there for one thing and then end up with something completely different, that’s the problem. I’m looking for a bicycle and next thing you know you send an email to some guy who is selling two tickets for a [local hockey team] game and another for a flat panel TV. It’s kind of what happens on Craigslist. You just end up getting distracted and looking around for nothing in particular and suddenly something catches your eye and you go for it. It’s the hunt, right? That’s how I got these art pieces over there [points to three, framed, black and white photographs showing the same tree in different seasons].

One day just doing the usual I ended up in “barter” [one of Craigslist’s categories] and saw this listing, you know, “need a bike, offer art in exchange” and that piqued my interest. I liked the idea that I could get art for my old bike I thought that’s cool and so I emailed the artist. When she responded she sent me pics [pictures] of her art and I chose these photographs and gave her my bike (Craigslister).

I use Yahoo! Finance and MSN Money for general business news and also when I am looking for additional research on a company. But most of the time I just go to [the broker’s] website because that’s where I see my portfolio and also my watch list. I have this customized view of the market basically, plus they send you email alerts when there is anything going on with your stocks. […] I usually browse on there for a while until I find something interesting or get an investor alert which gets my attention and I’d read up on whatever that is, drop or add companies from my watch list, or make a trade even if it is related to an opportunity or some kind of risk that I wasn’t aware of before (online investor).
These stories illustrate the much more mixed and alternating nature of consumer behavior than has been assumed in the theorization of flow in artificial marketplaces. Furthermore, observational data supports this interpretation. Individual web sessions are characterized by frequent transitions from recreational information search and general market learning to deliberate search and task-oriented activities. As the interview data shows, these alternations correspond to varying levels of involvement and focused attention where cognitive intensity increases remarkably during the transition from experiential to task-oriented behavior:

So these days I’m on my computer from anywhere from 8 or 8:30 AM to 4-4:30 PM. I don’t look that much outside of those times. But inside these times, I am engaged with the market. I’m literally glued to the desk … At a minimum, I check the ticker here at the screen but whenever there is an opening here at work, I’m on Yahoo! Finance or CNBC.com [now MSN Money] … I’m basically grazing for an opportunity and keeping my eyes open for anything that looks interesting and when something really interesting comes up is when I might jump into action mode. Often it’s no more than an investor alert that sets you up and there is not a lot of context when they come in. So, immediately I hit [the online broker’s] website and search for stuff on that company or whatever, right? Check the chart, look at numbers, read summary reports, that sort of thing. Sometimes there is not a lot of time with the market like it is, so, yeah, you gotta work fast and smart and decide quickly if you want to hold, buy, sell, or whatever. That’s what’s really fun about trading, these “rush moments” (online investor).

I visit Craigslist because either I need something and want to see if anyone is selling or because I just want to see if anything interesting has been posted somewhere. About three months ago, I bought a portable CD and tape player to put in the nursery and that came
out of just browsing and looking around. Actually that one happened when my husband and I were looking together and he said, let’s check electronics for a flat panel TV and someone had posted a “boombox” for $30 and suddenly we were like, maybe that’s something we should think about for the nursery to listen to while feeding the baby, you know. So we got all excited and searched all the portable devices listed within the last month or so and sent out emails and stuff. (Craigslist)

Such transitioning from a more enduring and unfocused to a situational and deliberate involvement with the site within the same web session points us to a more complex, continuous, and holistic online marketplace experience than has been operant in previous studies on flow (e.g. Mathwick and Rigdon 2004; Novak, Hoffman, and Duhachek 2003). Hence, efforts to measure flow may need to take into consideration that consumers rarely remain locked in one behavioral disposition. Instead, within what consumers experience as one continuous visit to the artificial marketplace, they move into and out of experiential and task-oriented activities. Yet, consumers evaluate the whole marketplace interaction episode rather than individual aspects of it as confined to their behavioral mode. This discussion leads to the following proposition:

Proposition 1: In artificial marketplaces, consumers are more likely to oscillate between experiential and goal-directed behavior than to exhibit either experiential or goal-directed behavior only.

Artificially separating these two behaviors for analytical purposes may still be warranted if it does not lead to the drawing of simplistic relationships between behavioral disposition and the possibility for flow states. As our data shows, different experiences of flow occur depending on the mode of behavior the consumer is in at any time during the visit to the artificial marketplace. During a more recreational consumption activity, flow states are clearly experienced but appear
to be lower than during task-oriented behavior such as selected information search, pre-purchase deliberation, and transactions, where deeper flow states are entered:

It’s [being on the e-broker’s website] a time-sucking machine. I know that when I come home and don’t force myself to stay away from the computer, I’ll be in trouble. I spend way too much time just poking around, looking things up, reading this and that analyst report, play around with ideas, check the chat rooms, stuff like that. Then my wife calls for dinner and an hour is gone.

*An hour every night? And you don’t even make a trade during that time?*

Yeah, more or less an hour every night, just browsing and playing. When I get into trading mode, easily more than an hour because first of all, it takes some time to set up the trades and then the research I do before takes longer because I get really anal about everything and really start to focus. My rule is that I don’t buy any stock that wasn’t on my watch list first to prevent any impulse buying, so I already did a lot of research at some point and now it is just catching up with the latest information on the company and maybe looking for any sign that something might be wrong there, that sort of thing. […] My wife recognizes right away when I am trading because I am not coming for dinner [laughs]. (online trader).

Most of our informants made an explicit distinction between states of normal browsing and states of heightened focus (see also Smith and Sivakumar 2004), illustrated here by the term trading mode. As hypothesized in the extant literature (e.g. Hoffman and Novak 1996; Novak, Hoffman, and Yung 2000), we find evidence for flow states during experiential online consumer behavior. Interestingly, we find that with the switch from normal mode to focused (transaction) mode, certain phenomenological dimensions of the consumer experience are changed as well.
Consumers narrow the focus of consciousness on a clearly delimited stimulus field such as the product in question; they exclude from the field of awareness any irrelevant immediate stimuli and focus only on the unfolding present, and they show a heightened awareness of clear goals and how to reach them (c.f. Csikszentmihalyi 1991):

We have these moments of chaos [laughs] when we browse Craigslist where suddenly we both get really kind of hectic and excited about some item or idea, like buying a pull-out couch for the basement that we just finished, you know. When we found that one [couch now in the basement], we were just looking around there again and in fact, I think we were actually posting something or something like that. Anyway, we were looking around and then [her husband] said, what about a couch, you know, for the basement and so we were like, yeah, let’s see what is on here and then we get all agitated and want to find a good deal and we start talking faster and we get impatient with the internet and send out tons of emails, yeah, basically just get pretty excited for a while (Craigslist).

Hence, the capacity to induce flow is not equal to all behavioral dispositions. While our data supports recent claims that flow states are possible during task-oriented as well as experiential activities (Mathwick and Rigdon 2004; Novak, Hoffman, and Duhachek 2003), we also find that flow states during goal-oriented behavior in artificial marketplaces are different from flow states experienced during experiential online shopping behavior.

In order to update the current notion of flow, we return to the original theory that accounts for the possibility – so far largely overlooked in the marketing literature (for an exception see Smith and Sivakumar 2004) – that activities available in everyday life form a continuum in terms of their capacity to induce flow (Csikszentmihalyi 1997; Csikszentmihalyi 1982; Csikszentmihalyi and LeFevre 1989). At the lowest level of the continuum are microflow
activities characterized by microflow patterns of behavior like doodling, pacing, or smoking, which provide more fleeting experiences; and at the highest end we find deep flow activities and patterns like creative endeavors, complex symbolic or religious thought, or the peaks of physical performance that provide relatively lasting and totally absorbing experiences (Csikszentmihalyi 1975).

Hence, flow experiences are not all created equal. Specifically, we find that recreational activities are more likely to induce microflow states, while switching to task-oriented activities also increases the possibility for deep flow experiences to occur. Such a thesis aligns with Novak, Hoffman, and Duhachek’s (2003) view that flow states appear to be more relevant for task-oriented than recreational online consumer behavior, despite claims to the contrary (e.g. Zeithaml, Parasuraman, and Malhotra 2002).

Theory, however, supports our finding because according to the conceptualization of flow, an activity is capable of providing flow experiences when the kind and degree of challenges (opportunities of action) that it makes available balances the consumer’s skill (capacity to relate to them). Importantly, the complexity and depth of flow experiences are a function of the extent of challenges the activity presents and of the consumer’s skills. When consumers in the artificial marketplace switch from recreational and general exploration to task-directed and deliberate activity, the degree of difficulty increases (note the complexity added to the task of making a trade versus “just looking” from the example above), which provides the maximum of flow experience as long as it is matched by skill. This discussion leads to the following proposition:

Proposition 2a: During experiential behavior, consumers are more likely to experience microflow states than deep flow states.
Proposition 2b: During goal-oriented behavior, consumers are more likely to experience deep flow states than microflow states.

Insert table 3 about here…

Creating Recurring Flow States in the Artificial Marketplace

Despite persisting interest in refining our understanding of the role of flow in artificial marketplaces, marketers have paid much less attention to understanding the conditions under which flow states are likely to recur. This is surprising given the widely acknowledged benefits of flow on customer satisfaction and willingness to buy. Thus, one of the goals of this section is to address Smith and Sivakumar’s (2004) call for investigations into the role of flow experiences for stimulating repeat visits to the artificial marketplace. Answering how flow stimulates repeat visits, however, is only the first step. The more important question is how to recreate flow states during repeat visits? This question is as important as it is difficult because of the theoretical contradiction of the flow model with regard to repetition. Boredom is the result of an environment that no longer provides sufficient challenges for the consumer. Repeat visits to the same site, however, lead to increased familiarity with the products and processes that make up the market environment (Bloch, Sherrell, and Ridgway 1986), threatening the maintenance of the important balance between challenges and skills above a certain threshold. Hence, it appears that – if all else remains equal – flow experiences become less likely the more frequent the returns to the same site become, thus eliminating the benefits of flow-related consumer behavior that is characterized by playful exploration and heightened willingness to buy (Hoffman and Novak 1996; Srinivasan, Anderson, and Ponnavolu 2002).
With respect to the relationship between flow and repeat visits, the analysis of our data reveals that the experience of flow states motivates repeat visits to the online marketplace. Regarding the question about the conditions for a repeated experience of flow occurring in the same artificial marketplace, we find in the data clear evidence for the important role of the environment. Since both artificial marketplaces – the online investing site and craigslist – are capable of drawing consumers back in over and over again, they represent excellent sites for such an investigation. From the statements of our informants we derive a theory of the “repeat flow environment,” which maintains that a site has the capacity to repeatedly draw in consumers and put them in a state of flow if the site appears to be “alive.”

**Flow leads to Flow**

Probing the data on the effects of flow experiences reveals that consumers develop quite a “taste” for this mental state, which they often capture with the term “fun” (see also summary table of quotes). Because flow is perceived as a pleasurable state of being, it is sought again and again, lending support to Smith and Sivakumar’s (2004) hypothesis that the flow experiences may generate a desire to return to the site:

I come back for the fun of searching. Checking things out, the pics, imagine how stuff might look in our place, finding a good deal […] I fire out emails to people to ask about details about the item, especially if they don’t post a pic. We [informant and her husband] can get really into it although we don’t really end up getting much in terms of actual items or whatever. It’s really a lot about “just looking,” like going shopping, or like television, except a little more active (Craigslist).

There is a high entertainment factor to online trading and that is what draws me to it, aside from the greed, of course [laughs]. And it’s not just the trading part of it but
everything around it, too: the research, checking your portfolio especially when it’s moved up is fun, reading bulletin boards, analyze the market, see where it’s going, what sectors are moving up or down and think about opportunities for buying and selling. The computer makes it very easy to get lost [emphasis added] in the story of the market. There is so much information and trying to make sense of it and all at night when I finally get to log on and catch up with the events of the day has been loads of fun (online trader).

Mathwick and Rigdon (2004) have argued that online information search can be transformed into a form of play during which consumers experience the activity as intrinsically valuable (see also Holbrook, Chestnut, Oliva, and Greenleaf 1984). Consistent with this argument, our data shows that under conditions of interactivity, novelty, and involvement both exploratory and task-oriented information search is transformed into a possibility for playful escapism and enjoyment. In addition, by likening browsing on Craigslist to watching television, still widely regarded the most popular means for escapist consumption (Green 1998), users give witness to the captivating and immersive nature of the artificial marketplace. Similarly, online traders return to the marketplace to recapture the experience of losing oneself in the absorbing context of the environment. This discussion leads to the following proposition:

Proposition 3: The more consumers experience flow during their visits to the artificial marketplace, the more they desire to return.

The Morphing Market as Repeat Flow Environment

It is useful but insufficient to know that flow leads to a desire to experience more flow states without also asking how it is possible to recreate flow states over and over again. Since the introduction of flow theory into the marketing literature, this question has not been addressed even though it points to an interesting theoretical quandary. On a very basic level, flow can be
regarded as the result of matching challenges and skills above a threshold of difficulty while performing some activity. Obviously, the repeated performance of an activity leads to learning, which is defined by an increasing skill level. For flow to recur under such conditions, the environmental challenges have to keep increasing as well. A good example is a video game whose several levels of difficulty are intended to match growing skill levels of frequent players. Online shopping environments, however, are considered most effective in attracting and retaining customers if consumers perceive them to be transparent, predictable, and easy to navigate – minimizing consumers’ cognitive involvement (e.g., Abbott, Chiang, Hwang, Paquin, and Zwick 2000; Chiang and Dholakia 2003; Krug 2000). Therefore, it is not clear how a market environment may be capable of inducing flow in loyal customers.

Hence, in this section we explore the role of the environment for repeat flow experiences. In particular, we wish to empirically address the puzzle of the skill-challenge balance that previous research has discussed only in fleeting and theoretical terms (e.g. Hoffman, Novak, and Schlosser 2003; Hoffman and Novak 1996; Wolfinbarger and Gilly 2001). An analysis of our data helps us theorize the conditions of possibility for artificial market environments to continuously provide an above-threshold balance between skills and challenges needed for flow states to occur:

Because the market changes all the time, right? And so what that means is that every time you log on, there is a chance that what you thought was a great opportunity yesterday looks like a really bad idea today or the other way around. You want to be on your toes (online trader).

With the internet the whole thing comes to life. It’s in real-time, you can see the market change right in front of your eyes and I am waiting for the right moment to sell or buy.
The market never stands still and something is always happening, so somewhere buried in all the numbers and analysts’ reports you can find opportunities to make money. Often I look at my stocks and I’m thinking “c’mon, climb just 50 more cents and I’ll sell that thing” and sometimes it happens and sometimes it doesn’t (online trader).

It’s kind of like a soap opera. What’s the company going to do and what are they going to say? Like when does their forecast come out, when does their earnings statement come out? And then what are the investors going to do (online trader)?

These online traders refer to the artificial marketplace as an unfolding soap opera or a changing and moving life form, suggesting that the excitement about the market as well as the desire to return to it are not so much based on its current condition but on what it might become next. As Knorr Cetina and Bruegger (1997, p. 170) state, “[stock] markets have their moments of fixedness when prices ‘lock’, but behind such fixed facades they always prepare to mutate, and at times explode, into something else.” Hence, the stock market as experienced via the computer screen is sensed as a constantly mutable and morphing entity that fuels the consumer’s continuous desire to explore and discover. The consumer constantly finds new areas for further inquiry that spark a sequence of exploration, discovery, and more exploration:

I started out in technology stocks but have gotten into biotech when that started moving, and now I’ve gotten out again then I tried some futures to see how that works and I got really burned there. But I learned something new, right? I’ll probably try it again some time … The thing with the stock market is that it’s opened up a fascinating world for me that just keeps surprising me. And the more I learn about investing, or at least the more I think I know about stocks, ratios, charts, and projections, the more the market comes to life for me (online trader).
Unforeseen events occur all the time, transforming the face of the market in the blink of an eye and signaling opportunities for new discoveries. The consumer’s motivation to turn the market is fueled by an awareness that the current set of properties making up the market is merely a transitory state of affairs and that an unknown future lies ahead which promises to consistently surprise. These dimensions of the virtual stock market are also characteristic of Craigslist, albeit in a less dramatic fashion:

The appeal of Craigslist or actually eBay is the same although I like Craigslist better because it’s more local and less commercial, but anyway, they are both the same in that they always have new stuff there when you haven’t been for a few days. That’s what I like about it. Some things are gone, new things have been posted, it’s always changing, right? which is the fun thing about Craigslist (craigslister).

Hence, a market environment that is perceived by consumers as always morphing, changing, and moving generates a sense of curiosity and a motivation to return to the site that no longer looks like it did yesterday. Consumers visiting these morphing market environments often end up in a continuing activity of learning as the ever-shifting – and in some sense undefined and unknowable – market continuously signals more possibilities for examination and study. Hence, consumers build an ongoing relationship with the unfolding market because it consistently poses new challenges and new questions that consumers want to face up to and answer. In other words, the ontological instability of the market environment (Knorr Cetina and Bruegger 2002; Knorr Cetina and Preda 2005) encourages repeat visits. This discussion leads to the following proposition:

Proposition 4: The less ontologically stable the artificial marketplace, the higher the motivation of the consumer to return to it.
Implications and Further Research

This study was motivated by the vivid controversy surrounding the concept of flow for understanding consumer behavior in artificial marketplaces. Drawing from the interpretive research tradition, our research sheds new light on the nature and the role of flow during goal-directed and experiential online activities such as information search and shopping. The findings allow us to formulate theoretical and managerial contributions (see Table 5 for a summary).

Investigations of flow states and their role in providing compelling web experiences have looked at goal-directed and experiential behavior separately, as two mutually exclusive dispositions. Our data, however, provides evidence that during their visits consumers often oscillate between both behaviors while always remaining above the flow-inducing threshold. For example, consumers who enter the marketplace for unspecified entertainment and recreational purposes (experiential mode) often switch to task-oriented activities (goal-directed mode) as their browsing signals opportunities for action or triggers very specific searches. After concluding the self-formulated task, consumers may return to a more experiential mode of behavior until another cue sets off the next round of goal-directed activity. Because of such transitioning between behavioral modes, consumers acquire a much more holistic impression of their online experience, including the sensation of flow states.
We suggest that much of the confusion in the literature about the relevance of flow for the whole range of online consumer behavior may be rooted in the conceptual simplification of real online shopping behavior underlying these studies. Based on the analysis of naturalistic data, we propose that flow states are better understood as the experiential result of transitioning between behavioral modes rather than a cognitive state attributable to a discrete consumption orientation. According to this model, a compelling web experience is constituted by the sum of the flow states across consumer engagement with the site, rather than by the isolated flow experience while pursuing a specific task or mere recreational browsing. In other words, repeated and episodic flow experiences add up to a relational flow-based involvement. The exact nature as well as conceptual and managerial implications of such a form of involvement warrants further investigation.

A perspective of flow as a holistic gestalt complicates the notion of the critical threshold above which flow is induced (Csikszentmihalyi 1997; Csikszentmihalyi and LeFevre 1989; Ellis, Voelkl, and Morris 1994). Future researchers motivated by Mathwick and Rigdon’s (2004) call for simulation research to identify this threshold need to keep the transitional nature of online activities in mind during the design of the test environments. Also, future research is needed to explore whether deep states of flow differ from more microflow states with respect to customer satisfaction, price sensitivity, and positive attitudes and behaviors among other outcome variables (Mathwick and Rigdon 2004).

A related analysis deals with the questions of whether flow states occur during experiential behavior, goal-orientated behavior, or both. Conflicting evidence can be found in the literature. Initially, a consensus was emerging that the notion of flow was only appropriate for describing consumers’ state of mind during recreational and non-directed online activities
(Novak, Hoffman, and Yung 2000; Zeithaml, Parasuraman, and Malhotra 2002). Later studies (Mathwick and Rigdon 2004; Novak, Hoffman, and Duhachek 2003) argued, however, that the experiential outcomes associated with flow are relevant concepts for the study of both goal-directed and experiential online consumer behavior.

While our study corroborates these recent findings, it also produces two important additional observations. First, we suggest that the current model of flow needs to be revised to account for variations in the intensity with which consumers experience flow. The standard flow/non-flow model (see e.g., Mathwick and Rigdon 2004) does not distinguish between various degrees of flow. We find clear evidence, however, that the level of flow differs depending on the activity in which the consumer is engaged. Hence, furthermore, while it is true that flow occurs during both experiential and goal-directed behavior, it is typically stronger (deep flow) during the latter and weaker (microflow) during the former. Such a differentiation seems to align with related work by Mathwick and Rigdon (2004) who point to the critical role of involvement and the importance of situational influences on flow outcomes. Future researchers may be interested in refining our understanding of the relationship between involvement and context on flow intensity.

Finally, we offer the first empirical investigation of the relationship between flow and repeat visits to the artificial marketplace (Smith and Sivakumar 2004). We find that previous flow experience and a morphing, lifelike environment are key predictors for both repeat visits to the site and repeat flow states. Especially, the challenge of inducing flow repeatedly in the same online environment has received only abstract treatment as researchers theorize that the task characteristics must remain sufficiently challenging to balance the skills of the user (Ghani and Deshpande 1994). In the context of online consumption, the characteristics of market
environments that might induce flow have remained unspecified. Conventional wisdom has suggested that retail environments should avoid making the consumer perform too much cognitive labor (Krug 2000).

Taking on this theoretical contradiction, we presented two artificial marketplaces that are capable of generating both frequent repeat visits and repeat flow experiences. Constant shifting and morphing of content and conditions characterize both these marketplaces – with the intensity of such morphing higher for online trading than for Craigslist. Both are ontologically unstable entities (Knorr Cetina 1997). Because of their always-changing nature, these markets consistently produce new challenges, motivating consumers to return to them for exploration, interaction, transaction, and entertainment.

Such frequent returns to the artificial marketplaces results in a certain learning effect. The importance of consumer learning has been illustrated in recent work on cognitive lock-in, which posits that the repeated use of a particular product leads consumers to develop goal-activated automated behaviors, locking them in to incumbent consumption patterns and choice (e.g. Johnson, Bellman, and Lohse 2003; Murray and Häubl forthcoming 2007). Significantly, this type of lock-in is not based on the notion of financial or search costs as barriers for switching but the power law of practice or learning curve of the user (Murray and Häubl 2003). Hence, even in an online choice environment, consumers rarely tend to switch web sites once they have acquired a level of automated behavior that helps them accomplish their shopping goal more comfortably (Murray and Häubl 2003; Zauberman 2003).

Thus while user characteristics certainly should not be ignored when theorizing the likelihood of flow, we would like to draw attention to the critical role of the interaction environment for consistently producing a sufficient challenge to the increasing skill level of the
consumer. Future research might further investigate how structural site characteristics that go beyond mere design aspects (Balabanis and Reynolds 2001) affect intensity and frequency of flow experiences and – extending this link of thinking – form attitudes towards the market.

Conclusions

From our analysis of the data we conclude that flow is a relevant concept that can be applied to the full range of online consumer behavior, supporting recent results of experiential studies (see Mathwick and Rigdon 2004; Novak, Hoffman, and Duhachek 2003). Although observable for both behavioral dispositions – experiential and goal-directed – consumers experience stronger, deeper flow states during task-directed, purposeful online activities.

We also illustrate that the current conceptualizations of flow in relation to behavioral modes need to be revisited to account for discrepancies between our observation of shifting behaviors and the literature’s view of single behavioral dispositions per visit. Also, theoretically and managerially important is the fact that not all flow is equal. Rather than a binary flow/non-flow distinction, marketers need to adopt a more sophisticated model of online consumer experience that accommodates the possibility of various degrees of flow, and of microflows and deep flows.

Finally, we presented a concept of repeat flow environment. Flow theory has suffered from an inherent contradiction ever since it was introduced to the marketing literature because flow requires a balance between skill and environmental challenge. Unlike video games where degrees of difficulty are built-in to allow for the systematic adjustment of challenges to the increasing skill level of the player, online shopping environments are typically designed to prevent too much cognitive burden on the consumer (Krug 2000). We show, however, that the more challenging the environment (through constant morphing, what we call the ontological
instability of the market) the more likely consumers are to return and experience flow. Staging an episodic compelling flow experience is very different from continually staging compelling flow experiences and we propose that marketers adopt the notion of the morphing market to increase the possibility for consumers to experience repeat flow.
References


Table 1

Distinctions between Goal-Directed and Experiential Behavior

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Goal-Directed</th>
<th>Experiential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation for activity</td>
<td>Extrinsic</td>
<td>Intrinsic</td>
</tr>
<tr>
<td>Orientation to media</td>
<td>Instrumental</td>
<td>Ritualized</td>
</tr>
<tr>
<td>Involvement</td>
<td>Situational</td>
<td>Enduring</td>
</tr>
<tr>
<td>Benefits/value sought</td>
<td>Utilitarian</td>
<td>Hedonic</td>
</tr>
<tr>
<td>Pre-purchase search</td>
<td>Directed</td>
<td>Non-directed</td>
</tr>
<tr>
<td>Choice</td>
<td>Goal-seeking</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Decision style</td>
<td>Cognitive</td>
<td>Affective</td>
</tr>
<tr>
<td>Perception of activity</td>
<td>Work</td>
<td>Play</td>
</tr>
<tr>
<td>Purchase decisions</td>
<td>Planned</td>
<td>Impulse</td>
</tr>
<tr>
<td>Pseudonym*</td>
<td>Gender/Age</td>
<td>Profession/Education</td>
</tr>
<tr>
<td>------------</td>
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<td>----------------------------</td>
</tr>
<tr>
<td>Larry</td>
<td>M 20</td>
<td>Soldier/B.A.</td>
</tr>
<tr>
<td>Richard</td>
<td>M 21</td>
<td>Student</td>
</tr>
<tr>
<td>Susan</td>
<td>F 21</td>
<td>Student</td>
</tr>
<tr>
<td>Claudia</td>
<td>F 28</td>
<td>Account Executive/MBA</td>
</tr>
<tr>
<td>Kenny</td>
<td>M 42</td>
<td>Academia/Ph.D.</td>
</tr>
<tr>
<td>Peter</td>
<td>M 25</td>
<td>Sales Rep./B.A.</td>
</tr>
<tr>
<td>Ernie</td>
<td>M 32</td>
<td>Manager/M.B.A.</td>
</tr>
<tr>
<td>Eric</td>
<td>M 43</td>
<td>Ad Designer/ M.A.</td>
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<tr>
<td>John</td>
<td>M 34</td>
<td>Academia/Ph.D.</td>
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<tr>
<td>Jacqueline</td>
<td>F 48</td>
<td>Manager/ M.B.A.</td>
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<tr>
<td>Adam</td>
<td>M 23</td>
<td>Student</td>
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<tr>
<td>Judy</td>
<td>F 34</td>
<td>Home maker (professor)</td>
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<tr>
<td>Karin</td>
<td>F 29</td>
<td>Lawyer</td>
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<tr>
<td>Brian</td>
<td>F 32</td>
<td>Journalist</td>
</tr>
<tr>
<td>Kristin</td>
<td>F 38</td>
<td>Home maker (teacher)</td>
</tr>
</tbody>
</table>

* all names have been changed to protect anonymity
<table>
<thead>
<tr>
<th>Theme</th>
<th>Exemplary Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivations to Visit Online Marketplace</strong></td>
<td>“It’s rare that I go online just to make a trade. If I do make a trade, it often happens because of what I see when I’m looking around [my broker’s] site.”</td>
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<tr>
<td></td>
<td>“I go and check on my investments every night so that’s the main motivation. Not to buy or sell per se. But in this volatile market I am much more ready to make transactions once I’m logged on. Especially on the sell-side I pull the trigger fast these days.”</td>
</tr>
<tr>
<td></td>
<td>“I would say that we probably have some general idea what we might be looking for. So, we’d be looking for baby stuff or electronics or something like that, but not anything in particular in that category. So we’d click on the category and once we start getting into the stuff that is posted, then that changes.”</td>
</tr>
<tr>
<td></td>
<td>“Yes, I check Craigslist for specific items, so, yeah, you could say I go there to shop … I also go there to look for jobs, actually. Not necessarily for myself but for my niece who is looking.”</td>
</tr>
<tr>
<td><strong>Frequent Switching between Experiential and Goal-Directed Behavior</strong></td>
<td>“I’d just be like looking around. That’s kind of what you do on Craigslist, right? And then usually something grabs my attention. The other day it was ‘vacation rentals’ and it was great I have been emailing with a few people since.”</td>
</tr>
<tr>
<td></td>
<td>“I go on Craigslist because I want a good deal on something. So yeah, if I need something in particular and I think someone might sell it there, I’d go and look for it. Mostly I just go and browse for nothing in particular and then end up making arrangements with five people to by their furniture. It’s more that kind of place, I’d say.”</td>
</tr>
<tr>
<td></td>
<td>“It’s pretty unpredictable. I can’t say I’ll just do research today or something. Often all I want to do is check up on my portfolio and see what the market is doing and stuff and that’s it. And then I see a link to a report or some commentary somewhere and that’s when I get all nervous and then it’s all about finding out about this and that and what this might mean and what that might mean. That’s usually what happens before I decide to make a trade.”</td>
</tr>
<tr>
<td><strong>Levels of Flow</strong></td>
<td>“It varies. When I am getting in purchasing mode, I’m all business, bam, bam: baby bjorn, changing table, car seat, emails to all. If I’m just browsing to get ideas or see what’s been posted, I’m actually less stressed about it and maybe here and there send an email to check if something is still available.”</td>
</tr>
<tr>
<td></td>
<td>“I think the whole experience [of trading online] has been intense for me … The lead up to making a trade is the most intense time for me and then when you see if it went through. I wonder if I ever get more relaxed about that.”</td>
</tr>
<tr>
<td></td>
<td>“Making trades is the intense part of investing. I wasn’t really prepared for it when I started out. I only do trading at home where I know I can take my time and focus, no distractions. It’s almost like operating [on a patient].”</td>
</tr>
</tbody>
</table>
Table 4

Behavior in Artificial Marketplaces, P3, P4

<table>
<thead>
<tr>
<th>Theme</th>
<th>Exemplary Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow States as Drivers of Repeat Visits to the Online Marketplace</strong></td>
<td>“I come back for the hunt, I think. I keep looking and looking until I find things that kind of look interesting and I’d send a few emails to see if they are still there. Often I’d still be browsing when I get emails back from the sellers and then I go kind of back and forth between email and Craigslist, negotiating prices, looking at photos, going to new categories, starting the whole thing all over [laughs] and at the end I have arranged 5 meetings. This kind of shopping is a lot more gripping than your regular trip to the mall.”</td>
</tr>
<tr>
<td></td>
<td>“Since I signed up with [online brokerage] the market has become this great diversion for me. It’s right up there with the ESPN site [laughs]. [The broker’s website] is just a great way to pass time because the market does not get boring, right? That’s what’s so fun about the place.”</td>
</tr>
<tr>
<td></td>
<td>“Yes, having fun or as you say ‘entertainment’ is definitely part of it. It’s possible because of the computer. I feel very close to the action and when I’m logged on I have the same access to information as professional traders do. Looking at charts, there are analysis reports, sector analyses, switching between funds and stocks, thinking about my strategy, that is all very fascinating stuff.”</td>
</tr>
<tr>
<td><strong>The Market as Life Form</strong></td>
<td>“If I don’t log on for a couple of days, I get really nervous and I feel like I’m missing out on something, good or bad, right? … I remember I was on vacation, it was spring break and I was somewhere in New Hampshire and then the market just dropped … I mean, this market changes on a dime. Want to get a hold of it? Good luck, right? You think you have seen it and tomorrow it is a whole different ballgame again.”</td>
</tr>
<tr>
<td></td>
<td>“Some days the market goes nuts, Wall Street goes nuts. You sit in front of the computer and you can’t believe the speed at which things move. Like, my portfolio can change by 20% in one hour. I’ve seen it happen. Then you have a meeting in the morning, so you are stressed out about that. Anything can happen in three hours. For all I know, in this market, I come back to my desk and my money just went up in smoke.”</td>
</tr>
<tr>
<td></td>
<td>“That [not finding what she was looking for] happens a lot, actually, but that’s the thing with Craigslist: try the next day. Lot’s of people are on it posting and selling and you never know what comes up in the next couple of days.”</td>
</tr>
</tbody>
</table>
Table 5: Theoretical and Managerial Implications of Reconceptualizing Flow

<table>
<thead>
<tr>
<th>Current Conceptual Approaches and Gaps</th>
<th>Our Results</th>
<th>Theoretical Implications</th>
<th>Managerial Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumers display either experiential orientation or goal-orientation.</td>
<td>Consumers in fact switch between both modes frequently.</td>
<td>Flow states are better understood as the result of transitioning between behavior modes rather than produced by one or the other.</td>
<td>Design market environments that allow for easy transitioning between exploration (variety seeking, entertainment) and task-specific focus (purchase, search).</td>
</tr>
<tr>
<td>Disagreement whether flow states occur during experiential behavior, goal-orientated behavior or both.</td>
<td>Flow states are possible during both behavioral states.</td>
<td>Flow is independent of behavioral orientation.</td>
<td>A compelling web experience is possible for market environments that foster an experiential and a goal-oriented behavioral mode.</td>
</tr>
<tr>
<td>Flow comes in one shape.</td>
<td>There are levels of flow and stronger flow states occur during goal-oriented behavior (corroborating Novak, Hoffman, and Duhachek, 2003).</td>
<td>The threshold above which flow states occur only determines a minimum level of flow. Relationships between levels of flow, behavior, and attitudes need theoretical attention.</td>
<td>Marketers interested in higher levels of flow experiences should create environments that provide for absorbing task-orientation.</td>
</tr>
<tr>
<td>Effect of flow experiences on repeat visit and site loyalty not known.</td>
<td>The experience of flow states results in increased desire to return to site (anticipation of renewed flow states).</td>
<td>Relationship between flow and attitude towards site and site loyalty needs to be explored over time when flow states are either repeated or not.</td>
<td>Pressure to provide a market environment that consistently reproduces flow states.</td>
</tr>
<tr>
<td>No conceptualization of the market environment as a place capable of balancing skills and challenges over time.</td>
<td>Concept of the morphing market as the model for repeat flow environment.</td>
<td>Need to theorize the market environment for more complete understanding of conditions enabling repeat flow states.</td>
<td>Marketers need to design market environments that are able continuously to surprise consumers, motivating them to constantly observe, explore, and interact with it.</td>
</tr>
</tbody>
</table>
Figure 1

A Model of Repeat Flow in Artificial Market Places

- Goal-directed shopping behavior
- Experiential shopping behavior
- Deep Flow
- Morphing Market
- MicroFlow
- Repeat Flow Experiences
  - cognitive lock-in ↑
  - price sensitivity ↑
  - switching behavior ↓
Founded in 1892, the University of Rhode Island is one of eight land, urban, and sea grant universities in the United States. The 1,200-acre rural campus is less than ten miles from Narragansett Bay and highlights its traditions of natural resource, marine and urban related research. There are over 14,000 undergraduate and graduate students enrolled in seven degree-granting colleges representing 48 states and the District of Columbia. More than 500 international students represent 59 different countries. Eighteen percent of the freshman class graduated in the top ten percent of their high school classes. The teaching and research faculty numbers over 600 and the University offers 101 undergraduate programs and 86 advanced degree programs. URI students have received Rhodes, Fulbright, Truman, Goldwater, and Udall scholarships. There are over 80,000 active alumnae.

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The creation of this working paper series has been funded by an endowment established by William A. Orme, URI College of Business Administration, Class of 1949 and former head of the General Electric Foundation. This working paper series is intended to permit faculty members to obtain feedback on research activities before the research is submitted to academic and professional journals and professional associations for presentations.

An award is presented annually for the most outstanding paper submitted.