The Influence of Goal-Directed and Experiential Activities on Online Flow Experiences*

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Abstract

Recently, it has been proposed that creating compelling experiences in the distinctive consumption environment defined by the Internet depends on facilitating a state of flow. While it has been established that consumers do, in fact, experience flow while using the Web, consumer researchers do not as yet have a comprehensive understanding of the specific activities during which consumers actually have these experiences.

One fruitful focus of research on online consumer experience has been on two distinct categories of consumption behavior – *goal directed* and *experiential* consumption behavior. Drawing distinctions between these behaviors for the Web may be particularly important because the experiential process is, for many individuals, as or even more important than the final instrumental result. However, the general and broad nature of flow measurement to date has precluded a precise investigation of flow during goal-directed versus experiential activities.

In this paper, we explore this issue, investigating whether flow occurs during both experiential and goal-directed activities, if experiential and goal-directed flow states differ in terms of underlying constructs, and what the key characteristics are – based upon prior theory – that define "types" of flow experiences reported on the Web. Our approach is to perform a series of quantitative analyses of qualitative descriptions of flow experiences provided by Web users collected in conjunction with the 10th GVU WWW User Survey. In contrast with previous research that suggests that flow would be more likely to occur during recreational activities than task-oriented activities, we found more evidence of flow for task-oriented rather than experiential activities, although there is evidence flow occurs under both scenarios. As a final note, we argue that the role that goal-directed and experiential activities may play in facilitating the creation of compelling online environments may also be important in a broader consumer policy context.

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INTRODUCTION AND MOTIVATION

The nature of consumer experience has been studied extensively in traditional offline settings (Havlena and Holbrook 1986; Hirshman 1984; Hirshman and Holbrook 1982; Holbrook and Hirshman 1982; Mano and Oliver 1993; Unger and Kernan 1983). One fruitful focus of research on consumer experience has been on two distinct categories of consumption behavior – *goal directed* and *experiential* consumption behavior.

The contrast between goal-directed and experiential behavior has been a pervasive topic in consumer behavior research. Communication theorists, as one example, distinguish between instrumental and ritualized orientations to media (Rubin 1984; Rubin and Perse 1987; Li and Bukovac 1999). At the most fundamental level, psychologists have proposed a variety of theories explaining how behavioral reactions are influenced both by cognition and affect (Berkowitz 1993; Shiv and Fedorikhin 1999; Epstein 1994; Leventhal 1984, 1993; Isen et al 1978; and Zajonc 1980).

In marketing, the distinction between goal-directed and experiential behavior has long been formally noted. Indeed, it underlies the entire purchase/consumption process, beginning with the consumer constructs of extrinsic vs. intrinsic motivation (Davis, Bagozzi and Warshaw 1992; Bloch and Richins 1983; Celsi and Olson 1988) and situational vs. enduring involvement (Bloch, Sherrell and Ridgway 1986; Richins and Root-Shaffer 1988; Wolfinbarger and Gilly 2001).

The consumer search process can be either directed or nondirected (Bloch, Sherrell and Ridgway 1986; Biehal and Chakravarti 1982, 1983), and the choice process can be goal-directed

or oriented to navigational-choices (Hoffman and Novak 1996; Deci and Ryan 1985). Not surprisingly, consumer attitudes have both hedonic as well as utilitarian components (Batra and Ahtola 1990), and the distinction carries through to decision making (Pham 1998), as well as satisfaction (Mano and Oliver 1993).

The shopping process itself has been analyzed from the context of goal-directed vs. experiential shopping behavior, both in traditional (Babin, Darden and Griffin 1994) as well as online (Wolfinbarger and Gilly 2001) settings, often leading to a characterization of shopping as either "work" or "play" (Hammond, McWiliam and Diaz 1998; Wolfinbarger and Gilly 2001). Additionally, specific aspects of the shopping process, such as sales promotions (Chandon, Wansink and Laurent 2000), have been viewed from the perspective of utilitarian vs. hedonic benefits. Compulsive shopping (O'Guinn and Faber 1989) and impulse buys (Rook 1987) have also been related to the distinction between experiential and goal-directed shopping behavior.

Goal-Directed vs. Experiential Behavior in Online Environments

Clearly, consumer researchers have demonstrated the value in considering both goal-directed as well as experiential behavior when evaluating consumer experience in traditional, offline settings. More recently, researchers have begun to turn their attention to an investigation of these behaviors in online environments (Hoffman and Novak 1996; Hoffman, Novak, and Schlosser 2001; Novak, Hoffman and Yung 2000; Smith and Sivakumar 2001; Wolfinbarger and Gilly 2001).

Hoffman and Novak (1996) summarize the distinction between these two categories of behavior for the World Wide Web, a specific example of what they term a "computer-mediated environment." The differences are far-reaching (see Table 1), incorporating important consumer behavior issues such as involvement, search, decision-making, consumer benefits, and motivation.

--- TABLE 1 HERE ---

Drawing these distinctions between goal-directed and experiential behavior is particularly important in online environments, because the experiential process is, for many individuals, as or even more important than the final instrumental result (Hoffman and Novak 1996).

Flow Can Create Compelling Consumer Experiences Online

Recently, it has been proposed (Hoffman and Novak (1996; Novak, Hoffman and Yung 2000) that creating compelling experiences in this distinctive consumption environment depends on facilitating a state of flow (Csikszentmihalyi 1977; 1990). Previous researchers (Csikszentmihalyi 1990; Ghani, Supnick, and Rooney 1991; Trevino and Webster 1992; Webster, Trevino, and Ryan 1993) have noted that flow is a useful construct for describing more general human-computer interactions. Hoffman and Novak (1996) defined flow as "the state occurring during network navigation which is: (1) characterized by a seamless sequence of responses facilitated by machine interactivity, (2) intrinsically enjoyable, (3) accompanied by a loss of self-consciousness, and (4) self-reinforcing." Further, flow is facilitated by the perception of a balance between a consumer's skills and challenges involved in an online interaction; further, both their skills and challenges must be above a critical threshold.

As a broad construct which relates to other constructs such as involvement, telepresence (Steuer 1992) and playfulness, clear specification and measurement of the components of flow is necessary for systematic investigation of its role in online environments. To that end, in the context of general consumer usage of the Web, Hoffman & Novak (1996) identified and Novak, Hoffman & Yung (2000) empirically measured and modeled a set of key constructs related to flow, including interactivity, involvement, focused attention, skill, control, challenge, arousal, telepresence, time distortion, and exploratory behavior. In addition to providing a theoretical

understanding of what leads to flow experiences, these constructs can also be used to characterize flow experiences.

While it has been established that consumers do, in fact, experience flow while interacting with computers (e.g. Csikszentmihalyi 1990; Ghani, Supnick and Rooney 1991; Trevino and Webster 1992; Webster, Trevino and Ryan 1993) and while using the Web (Novak, Hoffman and Yung 2000; Chen, Wigand and Nilan 1999), consumer researchers do not as yet have a comprehensive understanding of the specific activities during which consumers actually experience flow on the Web.

Novak, Hoffman, and Yung (2000) found that compelling online customer experiences were positively correlated with "fun, recreational and experiential uses of the Web," but negatively correlated with work-oriented activities. This suggests that flow online is more likely to be associated with play activities than work or task-oriented activities. However, the general and broad nature of flow measurement in that study precluded a more precise investigation of flow during goal-directed versus experiential activities.

To our knowledge, research has yet to explore this and other important issues, including 1) whether flow occurs during both experiential and goal-directed activities, 2) if experiential and goal-directed flow states differ in terms of underlying constructs, and 3) what the key characteristics are – based upon prior theory – that define "types" of flow experiences reported on the Web.

Some research has investigated the types of situations in which consumers experience flow on the Web (Chen, Wigand, and Nilan 1999). However, this research has classified the activities associated with flow during Web use into functional categories, i.e., researching on the Web, information retrieval, participating in discussion groups, email, creating Web pages, playing games, and chatting. What is lacking is an understanding of whether flow experiences differ in terms of the values of the underlying constructs that serve to define flow.

In this paper, we address these issues by performing a series of quantitative analyses of qualitative descriptions of flow experiences provided by Web users. The following research propositions specify the expected relationships:

- The situations in which flow is experienced on the Web is related to the respondents' perception of their skill using the Web, the challenge the Web provides them, the importance of the Web to them, and their desire for curiosity/novelty.
- The degree/extent to which respondents say they experience flow on the Web will not be related to specific examples of flow provided by respondents.
- There will be a wide variety of ways in which respondents experience flow on the Web. At the most basic level, some respondents will provide examples of *experiential flow*, while others will provide examples of *goal-directed flow*. Whether a respondent provides an experiential or goal-directed example of flow will be related to whether the respondent, in general, uses the Web for goal-directed vs. experiential uses.

DATA AND CODING

Data

Data were collected in conjunction with the 10th WWW User Survey (GVU 1998), which ran from October 10, 1998 through December 15, 1998. As the GVU WWW User Survey employs non-probabilistic sampling and self-selection (GVU 1997), it is not representative of the general population of Web users. Comparison with population projectable surveys of Web usage (e.g. Hoffman, Kalsbeek and Novak 1996) shows that the GVU User Survey sample contains more long-term, sophisticated Web users than the general population.

Participants were solicited using both online and traditional media. These included announcements placed on Internet-related newsgroups, banner ads placed on specific pages on high exposure sites (e.g. Yahoo, Netscape, etc.), banner ads randomly rotated through high exposure sites (e.g. Webcrawler, etc.), announcements made to the www-surveying mailing list maintained by GVU, and announcements made in the popular press. After the two-month survey

period, a total of 5206 respondents filled out at least one of the nine surveys that comprised the 10th WWW User Survey.

Of these 5206 respondents, 1312 elected to fill out our survey on "Flow," which contained items dealing with the customer experience of using the Web (Hoffman and Novak 1996; Novak, Hoffman and Yung 2000). This Flow survey was designed so that the survey submission was accepted only if all questions were answered; thus, there is no item-level nonresponse.

Coding

Of the 1312 respondents, 588 (44.8%) provided answers to the following three-part open-ended question:

> 1) Can you recall a time where you experienced flow when using the Web, ***where your flow experience could not be identified with visiting one specific Web site***? For example, some consumers have reported experiencing flow while searching a wide variety of sites when planning a vacation, designing their own Web pages, or simply "fooling around." If so, please tell us what you were doing on the Web when you had this flow experience.
>
> 2) Please tell us more about how you felt during this flow experience while using the Web.
>
> 3) Please describe what you think it is that contributed to your experiencing flow while using the Web.

Two examples of the three part response verbatims are shown below:

Example One:

> I had some spare time after class, so I got onto the Web and just cruised around looking for interesting things. I quite like to do a random search based on picking words out of nowhere and combining them to see what kind of things I can find. I did this and then just followed links and ended up spending three or more hours just playing around. This doesn't happen very often, usually I log on to do something in particular.
>
> I guess I was just curious. I wanted to see where things lead, where I could get from a seemingly random search query.

> The links were interesting. I couldn't really predict the content of where I was going to, but I found some cool stuff.

Example Two:

> Sometimes I feel this kind of flow when I'm looking for recipes. I might start out looking for something specific, but when all these other great recipes pop up, I can't resist them!
>
> I felt a lot of excitement that these recipes are just out there, that you don't have to pay for them, and that I could just go down to my kitchen and have a great meal. It gives me a feeling of excitement and power and it gives me lots of ideas of how to treat my family and friends.
>
> It really helps to have a fast computer. And an abundance of information so you don't get through everything - the feeling that you can just keep going

Two independent raters (rater "K" and rater "Y") were instructed to take each three-part response verbatim in its entirety, and consider which of a list of ten codes applied to that verbatim. The ten codes were developed through an iterative process beginning with extracting constructs from the theoretical foundations provided by earlier research discussing concepts related to flow, different likely flow experiences, as well as likely antecedents and consequences of flow (Csikszentmhalyi 1977, 1990; Csikszentmhalyi and LeFevre 1989; Hoffman and Novak 1996; Novak, Hoffman and Yung 2000).

Additional potential construct codes were created to represent phenomena in the data themselves. The resulting list of 35 possible content codes, from the theoretical and empirical sources, was pruned for synonyms so as to reduce redundancy[1]. This reduced set of ten codes were pre-tested by the co-authors on a short list of ten verbatims. These ten verbatims and the co-authors' codes served as "training" verbatims that the raters learned on, before proceeding to code new verbatim data.

Each verbatim could potentially have several codes. The two raters were first given a trial set of 25 verbatims. After this trial set was inspected for accuracy by the third author of this

[1] Reducing the 35 codes down to a lesser number of super-codes is analogous to conducting a factor analysis, but on qualitative data.)

paper, the full set of verbatims was made available to the raters for coding, along with a set of sample questionnaires coded by the third author. The sample questionnaires demonstrated examples of multiple coded responses to single questions, and in some cases, multiple coded responses within individual sentences of a particular open-ended question response, and could be used as a guide for coding the full data sample.

The actual codes and coding instructions are presented in Table 2.

--- TABLE 2 HERE ---

Percent agreement between the two raters ranged from a high of 94.0% to a low of 62.8%, with an average of 76.7% agreement over all ten codes. Complete results are shown in Table 3.

--- TABLE 3 HERE ---

Verbatims such as those used in this study will be relatively difficult to achieve consensus on. We performed a multiple correspondence analysis of the ten binary variables each for rater *K* and rater *Y*. This plot of category quantifications for the "yes" category for each rater is shown in Figure 1, with the categories for raters *K* and *Y* connected with a solid line. The MCA provides graphical evidence of the very strong overall similarity between the two raters' judgments.

--- FIGURE 1 HERE ---

Given that the agreement between the raters was relatively high, in percentage terms, we are confident that the experiences described by the respondents are captured by the coding. However, with such a large sample size, even a small percentage of disagreement translates into many responses in an absolute number, which, to achieve 100% rater agreement, would have

required extensive revisiting on the part of the coders. Hence, we created a sum, whereby rater K's ten categories with values 0 and 1 were added to rater Y's ten categories, respectively, also with values 0 and 1. The resulting sums provide scales, one for each of the ten coded categories, each of which ranges from 0 (both raters agreed that the coded theme was not represented by the respondent's expressed thoughts) to 2 (both raters agreed that the coded theme was indeed present in the response) with an intermediate score of 1 (one rater identified the code as present, the other rater thought the code absent). Hence, the end scores, 0 and 2, represent inter-rater agreement, and the intermediate score of 1 suggests a "weaker" presence of the coded theme (i.e., only one rater saw its evidence).

We believe this three-point scale represents a reasonable approach. In the first place, disagreements among raters will only serve to attenuate results, rather than create false positives, so it is unlikely our coding will create relationships that do not exist. Secondly, we expect that rater disagreements relate more to errors of omission, rather than errors of misclassification, so that the "1" code, representing an error of omission, reflects a coding situation that is less readily apparent than a "2" code where both raters assigned the same code.

ANALYSIS

Creating Flow Construct Composites

Besides collecting the verbatims describing flow experiences on the Web, we also collected a series of seventeen survey items measuring flow and related constructs. These items, shown in Table 4, were measured on 9-point rating scales, and are a subset of the items used by Novak, Hoffman and Yung (2000). Four additional items were included (items 13, 15, 16 and 17) to capture the distinction between "experiential vs. goal-directed" uses of the Web.

These items were grouped into six *a priori* categories defining the flow experience (flow, experiential versus goal-directed, skill, challenge, novelty, and importance) on the basis of

previous research. Results of a principal components analysis with a Promax rotation allowing for correlated factors (Table 4) were consistent with our *a priori* groupings. We therefore constructed six composite variables as summed scores. All coefficient alphas for these six summed composites, indicated in Table 5, were in the acceptable level, and ranged from a low of 0.66 to a high of 0.91.

Table 6 shows correlations among the composite variables (upper diagonal), correlations among the rotated Promax factors (lower diagonal), and correlations between the composite variables and the Promax factors (diagonal). As intercorrelations among the summed composites very closely mirror intercorrelations among the rotated Promax factors, and we use the simpler summed composites in all subsequent analyses.

--- TABLES 4, 5, 6 HERE ---

Predicting the presence of a general flow verbatim from the flow constructs

As 44.8% of our respondents provided a verbatim description of a flow experience, to what extent do the six composite variables for the six "Flow Constructs" predict whether a respondent provided a verbatim? A discriminant analysis used the six composite variables to predict which of the 1312 respondents provided a general flow verbatim. Wilks' Lambda for the test of the canonical discriminant function used to predict the binary variable for presence/absence of flow verbatim was significant ($p<.0001$), with a canonical correlation of .540.

The standardized canonical discriminant functions, shown in Table 7, indicate that the majority of the prediction, as would be expected, is due to the first "Flow" composite. However, skill, challenge, novelty, and importance composites all positively relate to the presence of a flow verbatim. In contrast with expectations from prior research, respondents tending to use the Web

for experiential use were less likely to provide a flow verbatim than respondents using the Web for goal-directed purposes.

--- TABLE 7 HERE ---

Classification results were quite good, with 73.2% of the respondents with a verbatim present correctly classified, as well as 72.6% of the respondents with a verbatim absent correctly classified. Therefore, respondents' general beliefs about their Web experience are strongly related to the likelihood the respondent will provide a verbatim example of a flow experience. We next examine the relationship of these general beliefs to the nature of the verbatim that was provided.

Relationship of composite variables with verbatim codes

Table 8 presents correlations of the six flow composite variables with the summed (i.e. 0/1/2) coding for each of the 10 flow codes. Correlations are fairly low, as expected. This is because we are correlating respondents' stated tendencies for experiencing flow, level of skill, challenge, and so on while using the Web in general with codes assigned to verbatims that describe a single, specific Web experience. If respondents were to describe a wider range of flow experiences, presumably we would be able to capture and code a wider range of responses that might relate more strongly to general tendencies. Nevertheless, the significant correlations in Table 8 provide a consistent interpretation.

We note that respondents who, in general, state they use the Web more for experiential than goal-directed activities produce verbatims more likely to be coded for disorientation and experiential content, and less likely to be coded for getting information. Respondents who feel they have relatively high skill using the Web are more likely to produce verbatims coded for positive affect, process, and expecting to share information. Respondents who are relatively high on novelty are more likely to have verbatims coded for experiential and ability. And respondents

for whom the Web is important produce verbatims high in positive affect, process, abilities, and with expectation to share information. We expect low correlations for the flow scale since *all* 588 respondents upon whom the correlations are based have provided a flow verbatim, and we would expect these respondents to be relatively higher on flow. Thus there is reduced variability on the flow dimension for this subset of respondents.

--- TABLE 8 HERE ---

Flow Segmentation

We next sought to determine if there were systematic differences in the types of flow examples provided by respondents. To do this, we performed a K-means cluster analysis of the 588 verbatims, based upon the 0/1/2 summed rater scores on the ten codes. Table 9 summarizes results for the 2 through 10 cluster solutions, showing the eta-squared (proportion of variance explained) predicting each cluster solution from the 10 codes. Six through eight clusters, shaded in Table 9 below, are a good compromise between parsimony, minimum number of observations in a cluster, and explanatory ability.

--- TABLE 9 HERE ---

Table 10 reports p-values for ANOVAs with the 10 cluster solutions vs. the six Flow construct composite variables. Note that the factors were not used to determine the clusters and thus the clusters can be tested to see if they are significantly different on each factor composite variable.

--- TABLE 10 HERE ---

From Table 10 it is apparent that only in three cluster solutions (for 3, 4, and 8 clusters, shaded in the Table above) are there significant differences among clusters on the means of at least three of the composite variables. Note also that as the number of factors increases, the degrees of freedom between groups increase and it becomes more difficult to achieve significant results. Combining Tables 9 and 10 we conclude that the 8 cluster solution is useful, both in terms of describing differences in the ten rater codes used to define the clusters (i.e. Table 9), and also in terms of predicting differences among the six flow composite variables (i.e. Table 10).

Table 11 shows the group means on the six composite variables for clusters from the eight cluster solution. The summed 0/1/2 codes have been scaled from zero to one (i.e. simply divided by two), which provides a simpler interpretation of the proportion of times verbatims in the cluster were assigned a code by one of the two raters.

--- TABLE 11 HERE ---

To provide a richer understanding of these eight clusters, two "exemplar verbatims" are presented for each cluster in Table 12. These verbatims are observations that have a relatively small distance from the cluster center. After inspecting the pattern of cluster means from Table 11, the exemplar verbatims in Table 12, and additional verbatims from other observations near the cluster centers, we were able to interpret the eight clusters as follows. We have labeled the clusters with these interpretations at the bottom of Table 11.

Cluster 1: "In the zone" [goal directed, involved Web use in which telepresence was experienced]
Cluster 2: "In charge" [experiential Web use where the respondent felt in control]
Cluster 3: "Ambiguous" [relatively few codes were coded for these verbatims, many represent respondents who did not provide much information]
Cluster 4: "Content lovers" [very involved with specific content]
Cluster 5: "Out of Body" [experiential Web use in which telepresence was experienced]
Cluster 6: "Builders" [creation of Web sites]
Cluster 7: "Goal directed" [goal-directed information search]
Cluster 8: "Feel good" [tend to be goal-directed uses, respondent felt good about the experience, in particular the process]

--- TABLE 12 HERE ---

Table 13 shows means on the eight clusters for each of the six Flow construct composite variables, and provides a few additional insights into differences among the eight clusters. The four composite variables (1, 2, 4 and 6) on which there were significant differences in cluster means (from Table 10) are highlighted in bold. We compare means that are relatively high and low on these four composites to see if respondents who provide different examples of flow differ in terms of their general self-reported levels of flow and related constructs.

--- TABLE 13 HERE ---

We find the following. First, respondents in clusters 2 (*In charge*), 5 (*Out of body*) and 8 (*Feel good*) are more likely to experience flow in general, while respondents in clusters 6 *(Builders*) and 7 *(Goal-directed*) were less likely. When asked to provide an example of a flow experience, the nature of the example provided relates to the general degree to which respondents experience flow. Second, respondents in clusters 2 (*In charge*) and 5 (*Out of body*) are more likely to use the Web, in general, for experiential purposes, while respondents in cluster 7 (*Goal-directed*) are less likely. Third, respondents in cluster 2 (*In charge*) are more likely to find the Web, in general, to be challenging, while respondents in cluster 7 (*Goal-directed*) are less likely. Finally, respondents in clusters 2 (*In charge*), 6 (*Builders*) and 8 (*Feel good*) are more likely to find the Web, in general, to be important, while those in cluster 5 (*Out of body*) are less likely.

DISCUSSION AND CONCLUSIONS

Recent consumer research has demonstrated that creating flow experiences for consumers may be important in creating compelling online environments. Our analysis shows that respondents' general beliefs about their Web experience are strongly related to the likelihood the respondent will provide response verbatims of flow experiences. In contrast with expectations from prior research, respondents tending to use the Web for experiential use were less likely to provide a flow verbatim than respondents using the Web for goal-directed purposes.

Although previous research (e.g. Novak, Hoffman and Yung 2000) suggests that flow would be more likely to occur during recreational activities than task-oriented activities, we found more evidence of flow for task-oriented than experiential verbatims, although we find flow experiences in both types of activities. Thus, when we examine things in more detail – at the level of the actual flow experience – we find considerable evidence that flow occurs during both goal-directed as well as experiential types of activities. Viewed in the context of dual-process models of consumer information processing, which specify experiential/associative and rational/rule-based processing modes (Epstein 1994, Sloman 1996), this suggest that one important future research area is specifying and testing conceptual frameworks which differentiate experiential and task-oriented flow. Conceptual models of flow which have been developed and tested to date do not in any way differentiate between experiential and task-oriented flow. The relative importance of antecedents of flow such as skill, challenge, involvement, focused attention, and telepresence may well differ across rational vs. experiential processing modes.

The response verbatims were best described by eight clusters that revealed that flow experiences could be distinguished according to different types of goal-directed versus experiential activities. Table 14, below, adapted from Hoffman and Novak (1996), shows that the Flow clusters (excluding the third cluster) can be characterized by situational vs. enduring

involvement, as well as by the object of involvement (goal/process vs. product/content). In the context of differentiating consumer search motives, Hoffman and Novak (1996) characterized cell 1 as "task completion," cell 2 as "recreation," cell 3 as "prepurchase deliberation," and cell 4 as "opinion leadership." While not all of our flow examples relate to consumer search, it is important to note that flow on the Web occurs across a broad range of ways that consumers are involved with goals, processes, products, and content.

--- TABLE 14 HERE ---

There are several limitations in this research. Using response verbatims meant that it was relatively difficult to achieve consensus on the codings. Nevertheless, our analysis showed that the two raters' judgments exhibited very strong overall similarity. Additionally, our three-point sum scales of inter-rater agreement is a conservative approach, since disagreements among raters would only attenuate results, rather than create false positives. Thus, we are confident that our coding approach did not create relationships that do not exist.

Because we related respondents' general flow tendencies with a single, specific Web experience, future research should have respondents describe a wider range of flow experiences under a variety of conditions. Such extensions would presumably lead to an even wider range of responses. Researchers have begun to explore this. Smith and Sivakumar (2001) recently proposed a contingency model of flow-induced shopping behaviors in which flow intensity varies according to whether the behavior involves browsing, one-time purchase, or repeat purchase.

Exploring the role that goal-directed and experiential activities play in facilitating the creation of compelling online environments may also be important in a broader consumer policy context. Csikzentmihalyi (2000, p.267) notes, rather dramatically, that "if the rest of the world's population was to develop a lifestyle approaching that of the United States or of Western Europe,

at least two additional planets such as ours would have to be harnessed to provide the required energy and materials."

While Csikzentmihalyi does not extrapolate this compelling discussion of resource constraints directly to online environments, his discussion provides a policy-oriented motivation for considering the online consumption experience as a socially-beneficial substitute for traditional "real-world" consumption experiences. Further, Csikzentmihalyi (2000, p. 270) comments that the level of material consumption, in addition to not being scalable to the world's population, also does not correlate with people's happiness and subjective well-being (Csikszentmihalyi 1999; Diener 2000; Myers 2000). Given these two concerns, Csikzentmihalyi raises the question: "Is it impossible to develop an economy…where consumption involves the processing of ideas, symbols, and emotional experiences rather than the breakdown of matter?"

The beginnings of such an economy are currently taking shape on the Web. As a largely virtual environment, the Web provides opportunities for non-resource depleting consumption that satisfies both goal-directed as well as experiential consumption objectives. Consider, for example, "virtual collectors" who collect MP3 files or movie files, in contrast to people who collect physical CD's or record albums. Arguably the same goal-directed and experiential benefits accrue to both types of collectors, but the former is considerably less resource depleting and scales much better to larger numbers of people and larger collections. In this view, the Web and devices used to access it, become a relatively non-resource intensive "consumption platform."

In the context of innovation and diffusion theory (Gatignon and Robertson1985; Mahajan, Muller & Bass 1990; Rogers 1983), when a new technology is introduced, the most immediate applications of that new technology are to implement current activities in new ways. The "innovators" are only partial innovators, in that they are applying new tools to existing problems. Only in the latter part of the adoption process does true innovation take place, when

the new technology is used to facilitate new activities that are grounded in the unique characteristics of the new technology.

Just this phenomenon is currently unfolding on the Internet. Many early business models – and many spectacular failures – were efforts to implement current consumption activities in an online environment. Now failed, but well-funded early start-ups in online retail categories as diverse as art (art.com), gardening (egarden.com, garden.com), groceries (kozmo, Webvan), toys (eToys, toysmart), pet food (Petopia, pets.com, petstore.com) and music (Cdnow, CDworld) provide good examples of this. A large number of early online firms still in business, including the "poster child" for consumer e-commerce, Amazon.com, continue to lose money and see their ultimate chances for profitability continually questioned. It is highly doubtful that the ultimate Web success stories will be those attempts at using new technology to implement conventional consumption activities.

Instead, those activities that take advantage of the unique features of the Internet, what Hoffman and Novak (2000) call the "Webby" applications (for example, MP3 file sharing, instant messaging, Webcams, and consumer-to-consumer models), will more likely be behind eventual commercial success on the Web. This is important because these Webby applications have in common a strong experiential process underlying the application. Thus, continued study of the contrast between goal-directed and experiential processes online is likely to further enhance consumer researchers' understanding of the fundamentals of compelling online experiences.

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TABLE 1
Distinctions between goal-directed and experiential behavior

Goal-directed	Experiential
Extrinsic motivation	Intrinsic motivation
Instrumental orientation	Ritualized orientation
Situational involvement	Enduring involvement
Utilitarian benefits/value	Hedonic benefits/value
Directed (prepurchase) search	Nondirected (ongoing) search; browsing
Goal-directed choice	Navigational choice
Cognitive	Affective
Work	Fun
Planned purchases; repurchasing	Compulsive shopping; Impulse buys

TABLE 2
Ten Codes and Detailed Coding Instructions for the Response Verbatims

CODING INSTRUCTIONS: The codes needed for these questions are listed below, along with extracted examples. Remember, individual responses may represent more than one code. The letters in boldface preceding the code description should be used to connote the presence of that particular code in a given response. Try to be as literal as possible in fitting responses to codes. The study's hypotheses have not been revealed in order to preserve the integrity of coding, so try not to infer the presence of particular codes, only use information explicitly stated. Please read **slowly and carefully**!

Goal-oriented (G): This type of Internet encounter occurs when the respondent has a distinct or identifiable purpose for their browsing. Responses typical of this type of Web experience are:
1) "looking at pictures of Mars on the NASA Website"
2) "identifying orchid species, their growing conditions, etc."
3) "making travel reservations"

Get Information (I): This refers to the respondents collection and learning of new information. It is no secret that the Internet serves as an excellent educational tool, and many respondents report using it for this purpose.
1) "I was looking up information on plants"
2) "I was reading movie reviews and newspaper articles"

Involvement (V): This category refers to the relative level of concentration and interest aroused by the Web experience. Examples of this type of response:
1) "I was completely absorbed by the site"
2) "I was very involved in my searching"
3) "I often feel totally immersed when browsing"

Disorientation (D): This refers to the various loss in perceptual processing people often experience while on the Internet. There are two primary types typically reported—time and space distortion. Some times, respondents do not differentiate between types, or report both types. Examples of each:

1) "Time disappears when I visit this site"
2) "I tuned out the TV, noise from outside"
3) "I lost myself in the site"
4) "Concentrating very hard on the task at hand"

Positive Affect (POS): These are thoughts that are positive, indicating an enjoyable experience. Typical positive responses were:

1) "interesting"
2) "Fun and exciting"
3) "I was having a great time on XYZ's site"

Negative Affect (NEG): These are generally negative responses, reflecting unenjoyable experiences. These emotions occur much more infrequently among our sample than positive responses. Responses typical of this state are:

1) "I was bored"
2) "I was frustrated/angered/incensed by the content of the sites"

Process (P): This measure refers to the respondent's perception that their experience is productive (i.e. things are going well). Examples:

1) "I found what I was looking for"
2) "the Website was well-designed"

Experiential (E): Experiential Internet encounters are characterized by a non-specificity of task. That is, the respondent is "surfing" or has no preconceived purpose for their Internet experience. Examples of responses listed in the data:

1) "reading the news"
2) "surfing" or "browsing"
3) "looking at various links"

Abilities (A): This category refers to the perceived degree of skill and challenge required to engage in the experience. Often times, respondents report that their Web experience challenges them above and beyond normal levels. Positive Web experiences are often characterized by a relative balance between skills and challenges required (Challenging, yet the respondent maintains "control" of the situation). Examples of this found in the data are:

1) "I was in full control of the situation"
2) "pleasure of achieving small goals and working towards greater goals"
3) "Joy from discovering my own abilities and solving problems"

Expect to Share or Disseminate Information (S): In some instances, a distinction can be made by whether the respondent used the Web to create or disseminate information. This is the obverse of the Get Information category. Examples:

1) "I was creating a homepage"
2) "I was working on Web design"
3) "I found some information on new car ratings that I planned on sharing with my friend"

TABLE 3
Rater agreement

Code :	**% agreement (yes/yes or no/no)**
G (goal)	62.8
I (info)	65.8
V (involvement)	72.4
D (disorient)	85.7
POS (positive affect)	66.3
NEG (negative affect)	88.8
P (process)	74.9
E (experiential)	81.4
A (abilities)	75.1
S (share info)	94.0

TABLE 4
Pattern Matrix from a Principal Components Analysis of the Seventeen Flow Survey Items

	Component:					
	1	2	3	4	5	6
[1B] In general, how frequently would you say you have experienced flow when you use the Web?	**.958**	.009	-.001	.028	-.010	-.009
[1C] Most of the time I use the Web I feel that I am in flow.	**.914**	.044	-.011	.048	-.051	.013
[1A] Have you, yourself, ever had a flow experience?	**.906**	-.041	-.001	-.090	.032	.015
[15] Use Web for: Entertainment	-.008	**.854**	.167	-.079	-.068	.024
[16] Use Web for: Work	.045	**-.752**	.172	.090	.143	-.053
[17] Use Web for: Just fooling around and exploring for fun	.051	**.739**	.067	.019	.181	-.026
[13] I usually have specific goal in mind when I browse.	-.032	**-.510**	-.025	-.064	-.177	.254
[6] How would you rate your skill at using the Web, compared to other things you do on the computer?	-.086	.123	**.821**	.054	-.050	.059
[7] How would you rate your skill at using the Web, compared to the sport or game that you are best at?	-.018	.092	**.821**	.027	-.036	.067
[5] When did you start using the Web?	.020	-.299	**.582**	-.219	.078	-.192
[4] How much time would you estimate that you personally spend using the Web?	-.130	.027	**-.550**	-.083	.024	-.057
[9] How much does the Web challenge you, compared to the sport or game you are best at?	-.018	-.054	.058	**.956**	-.004	-.043
[8] How much does the Web challenge you, compared to other things you do on the computer?	.005	-.043	.001	**.933**	-.001	.010
[11] I often click on a link just out of curiosity.	.011	.004	-.067	-.027	**.923**	.031
[10] I enjoy visiting unfamiliar Web sites just for the sake of variety.	-.041	.020	.001	.020	**.907**	.060
[14] The Web matters to me.	-.019	-.136	.024	-.061	.031	**.901**
[12] The Web means a lot to me.	.051	.077	.073	.040	.069	**.760**

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

TABLE 5
Coefficient Alphas for Flow Composite Variables

Composite variable:	Items summed:	Coefficient Alpha:
1-Flow	1a, 1b, 1c	.91
2-Experiential[2]	13 (reversed), 15, 16 (reversed), 17	.70
3-Skill	4 (reversed), 5, 6, 7	.66
4-Challenge	8, 9	.86
5-Novelty	10, 11	.84
6-Importance	12, 14	.68

[2] Experiential versus Goal-directed.

TABLE 6
Correlations Among the Flow Composites (upper diagonal), Rotated Factors (lower diagonal), and Flow Composites and Rotated Factors (diagonal) in the Full Sample n=1312

	Summed scale:					
Rotated Promax Component:	Composite 1	Composite 2	Composite 3	Composite 4	Composite 5	Composite 6
Factor 1	*.997*	.058	.291	.246	.192	.342
Factor 2	.074	*.983*	-.146	.143	.327	-.028
Factor 3	.301	-.134	*.993*	.012	.128	.250
Factor 4	.260	.235	.005	*.989*	.154	.252
Factor 5	.207	.310	.181	.164	*.987*	.203
Factor 6	.319	.027	.195	.278	.146	*.973*

Upper-diagonal correlations: Composite-to-composite
Diagonal correlations: *Factor-to-composite*
Lower-diagonal correlations: Factor-to-factor

TABLE 7
Discriminant Analysis Predicting Presence/Absence of Flow Verbatim

Composite variable:	Standardized Canonical Discriminant Function Coeffiecients
1 (Flow)	.925
2 (Experiential vs. Goal-Directed)	-.229
3 (Skill)	-.031
4 (Challenge)	.201
5 (Novelty)	.175
6 (Importance)	.007

TABLE 8
Correlations of Flow Verbatim Codes with Flow Construct Composites

	Composite variables:					
Rater codes:	(1) Flow	(2) Experiential vs. Goal-Directed	(3) Skill	(4) Challenge	(5) Novelty	(6) Importance
G (goal)	-.073	-.030	-.046	-.048	-.072	-.055
I (info)	-.027	-.115**	.010	-.074	-.060	.017
V (involvement)	.023	.040	.009	.007	-.004	-.018
D (disorient)	.061	.093*	.025	.009	.048	-.037
POS (positive affect)	.057	-.054	.109**	.033	.030	.127**
NEG (negative affect)	.023	-.055	.021	.050	-.060	-.077
P (process)	.051	-.066	.121**	.066	.030	.116**
E (experiential)	.065	.172**	-.014	.087*	.132**	.013
A (abilities)	.043	-.014	-.015	.074	.079	.094*
S (share info)	-.077	-.041	.117**	-.047	.027	.091*

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

TABLE 9
Eta-squared for general codes with 2 through 10 cluster solutions

Code:	2	3	4	5	6	7	8	9	10
G (goal)	**.602**	**.473**	**.471**	**.546**	**.527**	**.574**	**.512**	**.557**	**.582**
I (info)	**.566**	**.484**	**.440**	**.432**	**.344**	**.418**	**.451**	**.461**	**.477**
V (involvement)	.005	.102	.141	**.303**	**.526**	**.412**	**.462**	**.530**	**.443**
D (disorient)	.002	**.791**	**.727**	**.449**	**.707**	**.729**	**.757**	**.736**	**.763**
POS (positive affect)	.077	.043	.056	.255	.239	.291	**.391**	.217	**.471**
NEG (negative affect)	.001	.010	.008	.013	.007	.035	.022	**.335**	.074
P (process)	.019	.019	.044	.098	.101	.198	.122	.158	.219
E (experiential)	.082	.073	.081	**.454**	**.335**	**.352**	**.546**	**.471**	**.575**
A (abilities)	.007	.012	.022	.018	.034	.047	.072	.040	.097
S (share info)	.030	.031	**.833**	**.830**	**.827**	**.737**	**.771**	**.814**	**.753**
mean eta-squared:	.1391	.2038	.2823	.3398	.3647	.3793	.4106	.4319	.4454
Minimum cluster size	276	179	65	63	59	34	49	15	25

TABLE 10
p-values for composite variables with 2 through 10 cluster solutions

Composite:	2	3	4	5	6	7	8	9	10
1-Flow	.225	**.042**	**.033**	.149	.182	.132	**.040**	.121	.143
2-Experiential	**.013**	**.010**	**.010**	**.013**	**.021**	.075	**.010**	.068	.080
3-Skill	.490	.757	.127	.153	.156	.182	.212	.149	.198
4-Challenge	.055	.146	.150	.372	.900	.321	**.014**	.437	.061
5-Novelty	**.047**	**.027**	**.046**	.297	.146	**.011**	.069	.109	**.029**
6-Importance	.417	.133	**.013**	**.045**	**.034**	**.010**	**.001**	.334	.051

TABLE 11
Cluster Means on 10 Codes (scaled from 0 to 1)

Codes:	1 n=88	2 n=49	3 n=108	4 n=89	5 n=58	6 n=50	7 n=79	8 n=67	Mean n=588
G (goal)	**.71**	.19	.14	.39	.10	.13	**.86**	**.52**	.40
I (info)	**.50**	.17	.06	.25	.05	.20	**.77**	.25	.29
V (involvement)	**.60**	.28	.05	**.85**	.47	**.59**	.27	.09	.39
D (disorient)	**.94**	.06	.04	.11	**.93**	**.49**	.08	.08	.32
POS (positive affect)	.29	.28	.13	.16	.23	.29	.41	**.91**	.32
NEG (negative affect)	.05	.03	.13	.10	.09	.04	.08	.09	.09
P (process)	.14	.15	.07	.12	.09	.23	.24	**.40**	.17
E (experiential)	.08	**.76**	.08	.06	**.66**	.17	.05	.06	.19
A (abilities)	.11	**.31**	.07	.17	.06	.17	.16	.18	.14
S (share info)	.02	.02	.04	.06	.03	**.97**	.03	.04	.12
Interpretation:	In the zone	In Charge	Not clear?	Content Lovers	Out of Body	Builders	Goal-Directed	Feel Good	

TABLE 12
Exemplar Verbatims for 8 Cluster Solution

Note:

Q6 : Can you recall a time where you experienced flow when using the Web? … If so, please tell us what you were doing on the Web when you had this flow experience.
Q7 : Please tell us more about how you felt during this flow experience while using the Web.
Q8 : Please describe what you think it is that contributed to your experiencing flow while using the Web

General Cluster 1: "In the zone"

Q6) Primarily, it happens when I am researching products for reports that I write at work.
Q7) Totally disconnected - almost like my body did not exist, hands moved independently, info went directly to brain bypassing eyes, etc.
Q8) Quiet environment, fast (for once!) response times from Web, totally focused on task.

Q6) When I do genealogy using the Web I sometimes feel that I am in flow. I use so many sites I can't remember an exact on.
Q7) I was just in a world of my own and time goes by so fast that I am not aware of what time it is.
Q8) I think it happens when I am in total concentration in a site and no outside elements can enter my thoughts.

General Cluster 2: "Hunters"

Q6) Using search engines. You are looking for something special, you end up in a rhythm of click, scan, back page until you hit just what your looking for or you find something totally unexpected
Q7) euphoric, empowered
Q8) I am a seeker. I quest for certain knowledge. The power of the Web to locate most anything you want can take over. You become so riveted to what you are doing that everything else seems less important until you find what you seek.

Q6) I might read erotic stories. I might surf a bunch of pages Alta Vista gave me on infrared capable camcorders.
Q7) There is a hint of euphoria, barely observable. Most of the time you are so involved with what you are doing that you notice there was a feeling only once it's gone.
Q8) Maybe all it takes is the fact that you were reading in an Active Manner for an extended time. Reading a book is passive by comparison. Maybe this is the closest we get to hunting?!

(TABLE 12 continued)

General Cluster 3: (Ambiguous)

Q6) chat rooms, chatting at the speed of light, virtual conversation
Q7) the quantum of human emotions were there
Q8) knowing the person for a while mainly

Q6) travel
Q7) euphoric
Q8) daydreaming

General Cluster 4: "Content lovers"

Q6) look for and at net.art works
Q7) focused, undistracted
Q8) focusing in on the screen; the content is fulfilling.

Q6) I was looking for wedding dresses.
Q7) Engrossed.
Q8) There are THOUSANDS of dresses to look through on the Internet... I had to be engrossed in order to get through them.

General Cluster 5: "Out of body"

Q6) most of time, when I am exploring a specific Web site that has a lot of interesting elements and pages available. So I am just clicking and looking.
Q7) Connected to the Web site - background noise reduced to nothing. intrigued.
Q8) I like following the "threads" to new places on the Web. so it is easy to get lost in the Web and out of real time experience.

Q6) Random surfing, simply going where the links take me. Lateral surfing.
Q7) Everything on the outside falls away, noise becomes wallpaper, and I hyperfocus on the areas I'm surfing.
Q8) It helps if I'm tired, in a relaxed state of mind, especially after surfing for two or three hours. Late at night is good, with high access speeds.

General Cluster 6: "Builders"

Q6) Designing a Web pages and creating graphics - various illustrations to use on that page - as well as learning html code at the same time
Q7) complete focus on the task at hand - suspension of time - not aware of how much time is passing.
Q8) The creating process - learning something new while accessing different mediums

Q6) Working on my own Websites, immersed in the design process.
Q7) I am able to focus my attention on or off the Web. I usually don't get immersed in a project, but occasionally it's the best way to get something done.
Q8) Just the need to complete a task, and with a good workflow going.

TABLE 12 continued)

General Cluster 7: "Goal directed"

Q6) Looking for movie times and a map of the Chicago metro area.
Q7) I just got caught up in different pages, finally ending up at a museum in Seattle's Web page.
Q8) The variety of links

Q6) Finding out the latest news about Apple Computer and the Macintosh
Q7) Good. Captivated.
Q8) Interest in what was being discussed.

General Cluster 8: "Feel good"

Q6) When doing a search for information about New York nightlife during the golden era ('78-'88) of "clubbing."
Q7) There was great excitement and satisfaction in being able to experience a place and time which I was unable to in reality, but had always wished to.
Q8) Coming upon various images and descriptions of places and people that I never actually knew, but had long wondered about.

Q6) Sometimes I feel this kind of flow when I'm looking for recipes. I might start out looking for something specific, but when all these other great recipes pop up, I can't resist them!
Q7) I feel a lot of excitement that these recipes are just out there, that you don't have to pay for them, and that I could just go down to my kitchen and have a great mean. It gives me a feeling of excitement and power and it gives me lots of ideas.
Q8) It really helps to have a fast computer. And an abundance of information so you don't get through everything – the feeling that you can just keep going.

TABLE 13
Means of 8 clusters on standardized (within n=588) Flow Composites

Standardized composite variable:	1 n=88	2 n=49	3 n=108	4 n=89	5 n=58	6 n=50	7 n=79	8 n=67	P-value
1-Flow	**.01**	**.15**	**-.04**	**.11**	**.17**	**-.31**	**-.23**	**.15**	**.040**
2-Experiential	**.15**	**.28**	**-.09**	**-.05**	**.29**	**-.08**	**-.27**	**-.09**	**.010**
3-Skill	-.11	-.15	-.02	-.12	.12	.31	.02	.09	.212
4-Challenge	**-.01**	**.32**	**-.08**	**.20**	**-.15**	**-.12**	**-.24**	**.15**	**.014**
5-Novelty	.11	.29	-.01	-.13	.11	.03	-.27	.03	.069
6-Importance	**-.09**	**.26**	**-.09**	**.14**	**-.39**	**.22**	**-.14**	**.23**	**.001**
	In the zone	*In charge*	*Ambiguous*	*Content Lovers*	*Out of Body*	*Builders*	*Goal-Directed*	*Feel Good*	

TABLE 14
Segments characterized by nature of involvement

	Situational Involvement (goal-directed)	**Enduring Involvement (experiential)**
…with goal or process	*(1)* *Feel good* *In the zone* *Goal-directed*	*(2)* *Out of Body* *In charge*
…with product or content	*(3)* *Content lovers*	*(4)* *Builders*

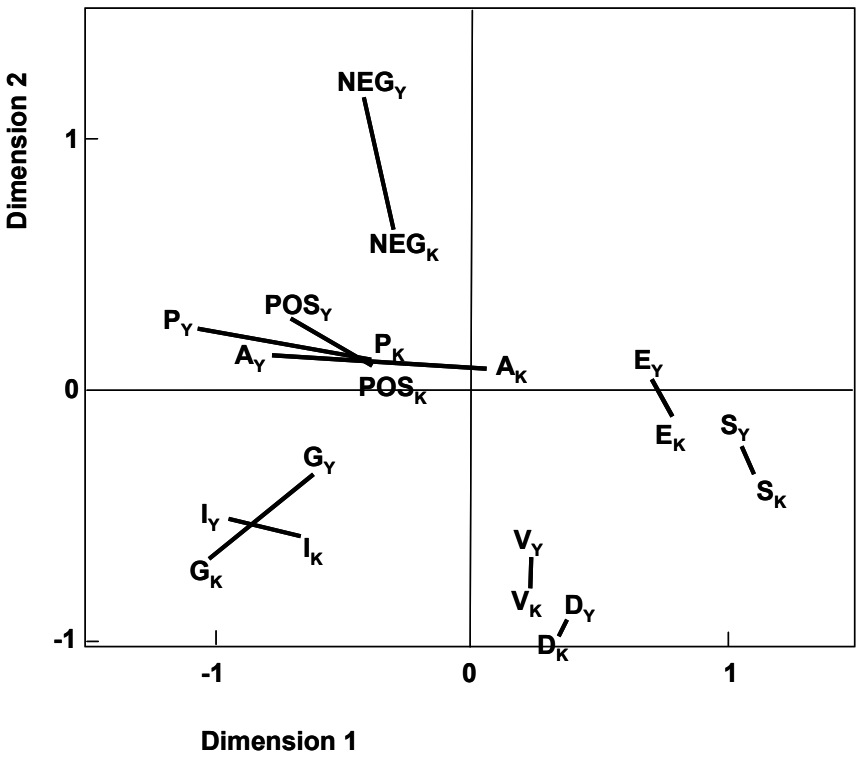

FIGURE 1 Multiple Correspondence Analysis of Raters' Codes