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Abstract

In the study of consumer satisfaction (CS), there is a long running controversy about whether satisfaction and dissatisfaction are equal and opposite constructs or to some degree independent. Parallel to the exponential growth of e-commerce, this issue needs to be revisited with respect to the Internet due to its uniqueness compared with traditional retailing channels. This study employs depth-interviews with Web developers to address this issue. The findings suggest that .com satisfaction and .com dissatisfaction are partially, but not completely independent; just as they are partially, but not completely equal and opposite. This finding provides communication between Web professionals and their customers and further supports e-businesses in planning their marketing strategies.
The exponential development of the Internet creates magic. These days, a domain name ending with " .com" is a symbol of corporate progressiveness and leading-edge image (Cross 1998). But of course, establishment and maintenance of a corporate Web site is expensive, and once a Web site has been created, its sponsor needs to know whether it is functioning as intended. Web user satisfaction is one such evaluation mechanism.

The purpose of the present project is to understand how Web site developers think about online consumer satisfaction, how they position the relationship between online satisfaction and dissatisfaction, which factors they believe contribute to satisfaction and dissatisfaction, and their beliefs about the importance of satisfaction and dissatisfaction to e-business.

Literature Review

Though satisfaction has been an important concept in several disciplines, little research has focused on satisfaction within the domain of e-commerce.

In study of consumer satisfaction (CS), there is a long running controversy about whether satisfaction and dissatisfaction are equal and opposite constructs or to some degree independent. In industrial psychology as well as in marketing, the traditional view has been that satisfaction and dissatisfaction are points on a single dimension such that the
presence of one implies the lack of the other (Howard and Sheth 1969, p. 145; Nicosia 1966, p. 186). However, more recent research on job satisfaction has suggested that satisfaction and dissatisfaction may be at least partially distinctive variables (Herzberg, Mausner, and Snyderman 1959; SRA 1951).

Herzberg et al. (1959) were among the first to adopt a two-dimensional view of job satisfaction. Employing a critical incident or “sequence of events” methodology, they found that one set of factors characterized satisfying job incidents and a different set characterized dissatisfying incidents. The first set, named “motivators,” includes intrinsic factors such as “...achievement, recognition, advancement, possibility of growth, responsibility and work itself.” The second set, named “hygienes” (dissatisfiers or extrinsic factors), on the other hand, includes “salary; interpersonal relations with superiors, subordinates and peers; technical supervision; company policy and administration; personal life; working conditions; status; and job security” (Wood and LeBold 1970). Herzberg, therefore, argued that

"Since separate factors need to be considered, depending upon whether job satisfaction or job dissatisfaction is being examined, it follows that these two feelings are not opposites of each other. The opposite of job satisfaction is not job dissatisfaction but, rather no job satisfaction; and similarly, the opposite of job dissatisfaction is not job satisfaction but no job dissatisfaction" (Herzberg, Mausner and Snyderman 1959, pp. 107-109).

Recent research in marketing resonates this view (Aaker and Day 1971; Buskirk and Rothe 1970; Leavitt 1977). In discussing
conceptual issues related to consumer satisfaction, Czepiel and Rosenberg (1973) proposed that consumer satisfaction and dissatisfaction should be considered as parallel evaluative scales.

"Since most behavior has multiple motivations, it might be more accurate to consider that some degree of satisfaction or dissatisfaction would accrue to each motivation. This is more in agreement with common usage as when someone says: 'it gives me great satisfaction, except for the color.' Considering satisfaction-dissatisfaction as parallel evaluative scales, however, does not permit the prediction of one from the other…” (p. 6).

These authors also discussed the necessity of adopting a two-dimensional approach to consumer satisfaction by embracing Herzberg’s position fully (Leavitt 1977):

“For any level of satisfaction, these facets may be of two types: maintainers, which must exist in order for dissatisfaction to be avoided, and satisfiers, which truly motivate and contribute to satisfaction” (Czepiel, Rosenberg and Akerele 1974, p. 5).

Although the appropriateness of a two-factor model is still debatable, this issue needs to be considered with respect to the Internet. Compared with traditional retailing, the Internet offers surfers more abundant choices and more convenient exits from one e-tailer to another; therefore, there are reasons to believe that online satisfaction and dissatisfaction are not equal and opposite — that the facets of dissatisfaction are not necessarily the obverse of the facets of satisfaction. A two-factor model, therefore, might bring new light to understanding online consumer behavior. In addition, we will also look at whether consequences of dissatisfaction are the obverse of the consequences of satisfaction.
Method

One obvious way to investigate this issue would be to look at online consumer responses. However, in the present study, we take an alternative route: We employ depth-interviews with Web developers. We choose Web developers for the following reasons: 1) Web developers pay close attention to consumer satisfaction issues. Therefore, knowing their opinions and practices helps the development of a .com satisfaction|dissatisfaction framework. 2) Web users’ evaluations of Web sites have been examined in previous studies (e.g. Chen and Wells 1999), while Web developers, who may offer different a point of view, have been avoided. 3) Web developers usually get feedback from Web users. Therefore, Web developers’ viewpoints might constitute a condensation and integration of reactions of Web users.

The developers interviewed in the present investigation are from 25 top Web design firms. On the average, they have 4.5 years of Web Site development experience. They all hold crucial positions in planning their companies’ e-commerce activity. They are Web designers, creative directors, producers, and senior art directors. They commonly hold a BA/BS degrees in communication, computer science, or English. Some of them also earned their MA and Ph.D. degrees. They are predominantly male, and they are all active Internet surfers and e-commerce patrons. The companies they work with vary greatly in revenue, size,
function and marketing niche. They provide a rough picture of typical Web professionals.

In-depth interviews employed the critical incident technique (Grigaliunas and Herzberg 1971), which requires individuals to describe instances in which they felt particularly satisfied or particularly dissatisfied about a Web experience and the consequences of the experience. The purpose of this step was to identify the possible components and consequences of satisfaction and dissatisfaction (Grigaliunas and Herzberg 1971). Interviewees were asked to relate and describe their responses to these incidents.

Fourteen in-depth interviews were completed. This cutting point was chosen because responses in the later interviews basically repeated responses in the earlier ones. Interviewees were asked open-ended questions such as: What about a Web site results in a satisfied online consumer and what are the consequences? What efforts have you made on the Web sites you’ve developed to ensure consumer online satisfactions. What is it about a Web site that results in a dissatisfied online consumer and what are the consequences? What efforts have you made to decrease consumer online dissatisfaction?

Findings

Sixteen-hours of interview responses were transcribed from audio tapes to text files. The files were then coded and content analyzed. Preliminary findings are as follows:
Web developers regard .com satisfaction and dissatisfaction as very important in e-business. In average, they gave a mean score of 9.4 on a scale from 1 to 10 (with 10 the highest). Most Web developers regard .com satisfaction and .com dissatisfaction as partially independent constructs. They believe that, in many cases, the opposite of .com satisfaction is the lack of .com satisfaction and the opposite of .com dissatisfaction is the lack of .com dissatisfaction. Designer W related the following experience:

W is a busy professional. As his girlfriend’s birthday approached, he became anxious about the selection of an appropriate gift. He finally figured that ordering a gift online might be a wise way to save the hassle. He used a search engine to help identify some virtual sources. Then he visited each shop to take a brief survey. The first e-shop he visited had several broken links. He therefore quickly exited. The second e-shop actually had some items that looked pretty good, and the price seemed fair, but the product images were too blurry for him to make a decision. He had to exit again. The third e-shop obviously wanted to provide high-resolution pictures for the Web page, but took more than 3 minutes to be fully downloaded. W got impatient and stopped the downloading process. The forth shop he went to had a nice design and offered many options. He checked some gifts and liked them. However, he felt that the price of the gift was higher than his budget, so he left this shop. The fifth shop he went to was quite pleasant and very organized. He quickly found a watch that he thought was quite cool. The thumbnail picture offered the link that he could click to see an enlarged image. He was also pleased to find that he also had the option to view images taken from different angles. He ordered the watch, and spent a sweet night with his girlfriend on her birthday. He felt very satisfied with his experience with the fifth e-shop. When he was asked his evaluation of his experience with the other four e-shops, he expressed high dissatisfaction toward the first three sites. He emphasized, however, even if these three sites fixed their broken links, set up some clear images, and made their files smaller for downloading, he would not necessarily feel satisfied with them. About the forth site, he said that he found it was OK and he did not feel dissatisfied with it. But he lacked satisfaction with it.

The above example shows that with respect to e-commerce, the opposite of satisfaction may be lack of satisfaction rather
than dissatisfaction (as in W’s evaluation of the forth e-shop) and the opposite of dissatisfaction may be lack of dissatisfaction rather than satisfaction (as in W’s evaluation of the first three e-shops).

This issue impacts e-commerce practice significantly. If satisfaction and dissatisfaction are simple obverses of each other, the often-stated goal of maximizing consumer satisfaction is appropriate. However, if it turns out that satisfaction and dissatisfaction are at least partially independent concepts, the practitioner is faced with a more complex situation. If practices that lead most directly to maximization of satisfaction do not necessarily lead most directly to minimization of dissatisfaction, these two goals must be pursued separately and simultaneously with different actions (Stokes 1974, p.2).

Figure 1: Two-Factor Model of .com Satisfaction|Dissatisfaction

<table>
<thead>
<tr>
<th>.com Satisfaction</th>
<th>.com Dissatisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive Unipolars</strong></td>
<td><strong>Bipolars</strong></td>
</tr>
<tr>
<td>Entertainment</td>
<td>Simplicity</td>
</tr>
<tr>
<td>Communication</td>
<td>Accessibility</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Potency</td>
</tr>
<tr>
<td>Fulfillment</td>
<td>Efficient</td>
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<tr>
<td>Trust</td>
<td>Follow-ups</td>
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<tr>
<td>Value</td>
<td>Support</td>
</tr>
<tr>
<td>Technological Proficiency</td>
<td>Security</td>
</tr>
<tr>
<td>Goal Congruity</td>
<td>Maintenance</td>
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</table>
By analyzing the depth interviews, we delineate a tentative framework in explaining the conceptual domain of .com satisfaction/dissatisfaction (see Figure 1). This framework maintains that .com satisfaction and dissatisfaction are partially independent constructs.

These interviews suggest that at least three kinds of facets help describe, explain and predict .com satisfaction and dissatisfaction. The first kind portrays .com dissatisfaction as the bipolar opposite of .com satisfaction. We call these facets bipolars. These facets include Simplicity, Accessibility, Potency, Efficient, Follow-Ups, Support, Security and Maintenance. In Table 1, at least two statements were used to describe each facet. Web developers indicate that these bipolars are the barometers used to evaluate Web sites. A very positive evaluation would evoke satisfaction while a very negative evaluation would evoke dissatisfaction. For instance, a Web site offering very convenient, one-step checkout would evoke consumer satisfaction. By contrast, if checking out from a Web site requires a very complex, painstaking ordeal, site users might feel increasingly dissatisfied. Some Web developers indicate that they have been noticing this relation:

When you are in this business for a while, you sort of gain the sense automatically what you should demonstrate to make them [the consumers] happy...Checkouts have to be simple, no way a very complicated checkout won’t annoy your customers. Just think about this standing in their shoes for a while, you would know that what they really want is a straight forward, one step checkout. Bingo! (Smile) (Mr. D, project manager with 4-year and 8-month experiences)
We tentatively group the bipolar scales in Table 1. A semantic 7-point Likert scale describes each bipolar for future quantitative measurement.

Table 1: Bipolars in .com Satisfaction|Dissatisfaction Model

Bipolars

Facet: Simplicity

- The presentation of the information is
  Clear
  1 2 3 4 5 6 7
  Overwhelming

- The checkout has
  One-step checkout
  1 2 3 4 5 6 7
  Too many checkout steps

- The order form is
  Simple
  1 2 3 4 5 6 7
  Complicated

- The whole purchase process is
  Simple
  1 2 3 4 5 6 7
  Complicated

Facet: Accessibility

- The Web site is
  Completely constructed
  1 2 3 4 5 6 7
  Has broken links

- The Web site is
  Well-organized
  1 2 3 4 5 6 7
  Poorly organized

- The Web site offers
  Good navigation aids
  1 2 3 4 5 6 7
  Poor navigation aids

- The interface of this Web site is
  Friendly
  1 2 3 4 5 6 7
  Unfriendly

- Locating desirable product/information in this Web site is
  Easy
  1 2 3 4 5 6 7
  Difficult

- The URL of this Web site is
  Easy to remember
  1 2 3 4 5 6 7
  Difficult to remember
Facet: Potency
- The information in this Web site is
  Accurate  Inaccurate
  1  2  3  4  5  6  7
- This Web site has
  High technological competency  Low technological competency
  1  2  3  4  5  6  7

Facet: Efficiency
- This Web site provides
  Prompt shipments  Delayed shipments
  1  2  3  4  5  6  7
- This Web site provides
  Timely feedback  Slow feedback
  1  2  3  4  5  6  7
- This Web site loads
  Quickly  Slowly
  1  2  3  4  5  6  7

Facet: Follow-ups
- This Web site provides
  Complete order confirmation  Incomplete order confirmation
  1  2  3  4  5  6  7
- This Web site provides
  Good after sale service  Poor after sale service
  1  2  3  4  5  6  7
- This Web site follows through the offer
  Very Well  Very Poorly
  1  2  3  4  5  6  7

Facet: Support
- The service provided by this Web site meets consumer needs
  Very well  Very Poorly
  1  2  3  4  5  6  7
- The products offered by this Web site
  Exceed consumer expectations  Fail to meet consumer expectations
  1  2  3  4  5  6  7

Facet: Security
- This Web site provides
  Secure surfing environment  Insecure surfing environment
  1  2  3  4  5  6  7
- This Web site
  Ensures privacy  Violates Privacy
  1  2  3  4  5  6  7
Facet: Maintenance

- This Web site is
  Frequently updated
  Out-of-date
  1  2  3  4  5  6  7

- The information content offered on this Web site is
  Most recent
  Very old
  1  2  3  4  5  6  7

The second kind of facet solely describes, explains or predicts dissatisfaction. We call these facets *Negative Unipolars*. These facets include Dissonance, Misbehavior, Insufficiency, Ugliness, Unusability, Confusion, and Rigidity. They show that the opposite of .com dissatisfaction is not necessarily satisfaction, but rather lack of .com dissatisfaction. Web developers indicate that these *negative unipolars* are the norms used to critique the performance of Web sites. On *negative unipolar* facets, evaluations could range from zero to very negative. The more negative the evaluation becomes, the more dissatisfaction will be evoked. However, fixing these points does not guarantee satisfaction. One example would be a Web site that forces whoever happens to visit there to sign on for a membership. Some of consumers may only visit for a casual look-around. This enforcement, therefore, is very annoying and increases consumers’ dissatisfaction. On the other hand, no membership enforcement does not guarantee satisfaction to be evoked. Some Web developers illustrate this point in a more colorful way:

There are bunch of sites that designed in a very inappropriate way. I’ve been to some Web sites where you have no way to click
through something looks like a button. In this business, there are some tacit norms. For example, if you decide to put a button on your site, it must be clickable. So we call that “something looks like a button should better act like a button.” Otherwise, you gonna piss off your customers. Imagine how frustrated they will be after click all your button-like stuff, nothing happens...Well, of course it does not mean that a clickable button will make then love you, it only mean that you play the game according to the norm. (Mr. E, Art Director and Principal with 5-year experience)

We tentatively group the negative unipolars in Table 2. At least two statements are used to describe each facet. A binary (agree; disagree) or 7-point Likert scale (range from completely agree to completely disagree) could be employed here for future quantitative measurement.

Table 2: Negative Unipolars in .com Satisfaction|Dissatisfaction Model

<table>
<thead>
<tr>
<th>Negative Unipolars</th>
<th>Facet: Dissonance</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Web site</td>
<td></td>
</tr>
<tr>
<td>▪ disobeys conventional design norm</td>
<td></td>
</tr>
<tr>
<td>▪ does not employ industry standards</td>
<td></td>
</tr>
<tr>
<td>▪ does not employ standard navigation rules</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Facet: Misbehavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Web site is</td>
</tr>
<tr>
<td>▪ rude</td>
</tr>
<tr>
<td>▪ intruding</td>
</tr>
<tr>
<td>▪ meaningless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facet: Insufficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Web site offers</td>
</tr>
<tr>
<td>▪ insufficient information</td>
</tr>
<tr>
<td>▪ insufficient inventory</td>
</tr>
<tr>
<td>▪ no hyperlinks to relevant information</td>
</tr>
<tr>
<td>▪ insufficient technical support</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facet: Ugliness.</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Web site has</td>
</tr>
<tr>
<td>▪ bad color</td>
</tr>
<tr>
<td>▪ cheap look</td>
</tr>
<tr>
<td>▪ poor branding strategy</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Facet: Unusability</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Web site</td>
</tr>
<tr>
<td>▪ is alienating</td>
</tr>
</tbody>
</table>
• has no usability
• has no search function

**Facet: Confusion**
This Web site
• provides no abstract for large pieces of information
• has overwhelming number of links
• has too much animation
• is confusing
• pops out too many additional windows

**Facet: Rigidity**
This Web site
• forces consumers to join its membership
• offers no packing choices
• offers no shipment option
• fails to work properly in unconventional browsers

The third kind of facet solely describes, explains or predicts satisfaction. We call these facets *Positive Unipolars*. These facets include Entertainment, Communication, Flexibility, Fulfillment, Trust, Value, Technological Proficiency, Goal Congruity, Customization, Synchronization and Reversibility. These facets show that the opposite of .com satisfaction is not necessarily dissatisfaction, but rather lack of .com satisfaction. Web developers indicate that these positive unipolars are additional values used to appraise the performance of Web sites. On positive unipolars, evaluations range from very positive to zero. The more positive the evaluation becomes, the more satisfaction will be evoked. However, not having these features does not necessarily generate dissatisfaction. For instance, a Web site that offers consumers a sense of belonging would likely gain more satisfaction from consumers. On the
other hand, no sense of belonging does not necessarily generate dissatisfaction. Web developers make this point quite clear:

Web sites that could truly excel are those provide additional values to their customers. For instance, some sites keep their consumers’ record and very considerately make their checkout process more pleasant...Ever been to Amazon? If you buy things from them for more than once, you will notice when you check out your item, they've already memorized your address, preference and even your friends’ name and address if you’d ever sent gifts to them via Amazon. All you have to do is to select the desirable address instead of typing your address again tediously as you usually have to do in other sites. From the standpoint of a consumer, he will say, “Hi, it’s really neat. I’m pleasantly impressed.” (Ms. K, Producer with 1-year experience)

We tentatively group the positive unipolars in Table 3. At least two statements are used to describe each facet. A binary (agree; disagree) or 7-point Likert scale (completely agree to completely disagree) could be employed here for future quantitative measurement.

Table 3: Positive Unipolars in .com Satisfaction|Dissatisfaction Model

Positive Unipolars

Facet: Entertainment
This Web site is
▪ fresh
▪ visually appealing
▪ attractive
▪ fun
▪ trendy
▪ beautifully designed

Facet: Communication
This Web site provides
▪ viable contact to human customer care staff
▪ other contact channels
▪ feedback to consumers’ complaints

Facet: Flexibility
This Web site
▪ has abundant selection of products/information
▪ gives options for comparing products
▪ gives consumer choices of printer friendly version
▪ offers search options
**Facet: Fulfillment**  
This Web site  
- delivers on its promises  
- provides fulfillment  
- offers better prices

**Facet: Trustworthiness**  
This Web site  
- gives a sense of trust  
- ensures transparency in business procedure  
- does not demand information

**Facet: Value**  
This Web site  
- gives consumers a sense of being cared about  
- is considerate  
- is thoughtful  
- actively finds out what consumers want  
- tracks consumers’ preferences  
- gives consumers a sense of community  
- gives consumers a sense of belonging

**Facet: Technological Proficiency**  
This Web site has  
- outstanding features  
- innovative features  
- technological expertise

**Facet: Goal Congruity**  
This Web site  
- meets consumers’ purposive surfing tasks  
- provide relevant information  
- meets the mindset of the consumer  
- provides goal-relevant suggestions

**Facet: Customization**  
This Web site  
- provides information tailored to target consumers  
- lets consumers personalize the presentation  
- offers options of skipping animations  
- offers options according to consumers’ preferences

**Facet: Synchronization**  
This Web site synchronizes  
- with its real store  
- offline services with online promises  
- its image with its branding strategy  
- with its foreign language version
Facet: Reversibility
This Web site
- allows reversibility of steps (for instance, consumers will be able to go back to correct the errors they made in previous steps)
- is forgiving of errors made by consumers

Previous studies of consumer satisfaction (Leavitt 1977) suggest that the one-factor approach does not explain the phenomenon fully, nor does the two-factor model. Resolution of this problem calls for more complex, finer textured models. The findings in this study meet this challenge. We find that .com satisfaction and .com dissatisfaction are partially, but not completely independent; just as they are partially, but not completely equal and opposite. We also provide detailed facets that describe, explain and predict satisfaction|dissatisfaction online.

Implications and Future Research

"The satisfaction literature has not yet, explicitly or implicitly, established a generally accepted definition of satisfaction." (Giese and Cote 2000) There are even fewer attempts to clarify satisfaction|dissatisfaction online. This study revisits the two-factor model employed in the consumer satisfaction and job satisfaction literature and proposes a working framework to identify the components of .com satisfaction|dissatisfaction.

This study suggests that .com Satisfaction and .com Dissatisfaction are partially, but not completely independent;
just as they are partially, but not completely equal and opposite. To further validate and improve this view, data from online consumers need to be collected.

This study has the following implications: First, by revisiting the issue of dimensionality of consumer satisfaction|dissatisfaction in the special domain of e-commerce, it supports e-businesses’ decision-making in terms of designing marketing strategies. If .com satisfaction and .com dissatisfaction are at least partially independent concepts, e-commerce managers need to pursue two goals simultaneously: i.e., maximization of satisfaction and minimization of dissatisfaction. The negative unipolars that contribute to .com dissatisfaction offer insights to prevent problems or correct problems at early stages. Reliable information on these issues will help businesses gain new customers and retain existing customers by improving the quality of their service (Fornell and Wernerfelt’s 1987).

Second, by reporting the viewpoints of Web developers, this study provides communication between Web professionals and their customers. This is a critical issue because Web developers must understand what leads to .com satisfaction and dissatisfaction. Increases in this understanding will contribute to development of new theories of how consumers react to Internet presentations. Obviously, increases in this understanding will
also have significant managerial implications in helping e-businesses' practices.

References


