

The Effect of Consumer Confusion Proneness on Word of Mouth, Trust, and Customer Satisfaction

Abstract

Purpose – Consumer sovereignty assumes that consumers have adequate product information and are able to understand that information in order to make an informed choice. However, this is not the case when consumers are confused. Recently, Walsh, Hennig-Thurau and Mitchell (2007) identified dimensions of consumer confusion proneness and developed scales to measure these dimensions. Drawing on their concept of consumer confusion proneness, this paper examines consumers' general tendency to be confused from marketplace information and its effect on three relevant outcome variables – word of mouth, trust and satisfaction.

Design/methodology/approach – The reliability and validity of the consumer confusion proneness scale was tested on the basis of a sample of 355 consumers, using confirmatory factor analysis. The study employs structural equation modelling to examine the hypothesised relationships.

Findings – The results show that the consumer confusion proneness scale has sound psychometric properties and that the three dimensions of similarity, overload and ambiguity have a differential impact on word of mouth behaviour, trust, and customer satisfaction.

Implications – The findings have implications for marketing theory and management, as well as consumer education. Marketers may apply the consumer confusion proneness scale to their customers and assess which dimension is the most damaging in terms of the three marketing outcomes examined.

Originality/value – This is the first study to test Walsh et al.'s (2007) consumer confusion proneness scale and to extend their work by analysing the effect of the three construct dimensions on three key marketing outcome variables.

Keywords: *Consumer Confusion Proneness, Customer Satisfaction, Stimulus Similarity, Stimulus Overload, Stimulus Ambiguity, Marketplace Trust, General Word of mouth*

© Emerald Group Publishing Limited

This is a pre-print of a paper and is subject to change before publication. This pre-print is made available with the understanding that it will not be reproduced or stored in a retrieval system without the permission of Emerald Group Publishing Limited.

The Effect of Consumer Confusion Proneness on Word of Mouth, Trust, and Customer Satisfaction

Introduction

In competitive environments characterized by a plethora of choice, an abundance of marketing communications, decreasing inter-brand differences, increasing complexity of information and its sources as well as increasing search costs, consumers can find information processing for some purchasing tasks confusing and taxing. Indeed, some authors contend that confusion pervades almost every decision that consumers make (Snider, 1993) and incidences of consumer confusion have been reported in many different countries and product markets, such as watches (Mitchell and Papavassiliou, 1997), fashion (Cheary, 1997), telecommunications (e.g., Nanji and Parsons, 1997; Turnbull et al., 2000), washing powder (Harrison, 1995), health and travel insurance (e.g., Canniffe and McMannus, 1993; Brierley, 1995) own-label brands (e.g., Balabanis and Craven, 1997; Murphy, 1997) and on the Internet (Mitchell, Walsh and Frenzel, 2004).

Consumer confusion is relevant to marketers because confused consumers are less likely to make rational buying decisions, to choose products offering the best quality or best value for money and, to enjoy the shopping experience (Huffman and Kahn, 1998; Jacoby and Morrin, 1998; Mitchell and Papavassiliou, 1999). In addition, consumer confusion has been associated with other consequences of economic relevance to companies, such as negative word of mouth (e.g., Turnbull et al., 2000), cognitive dissonance (Mitchell and Papavassiliou, 1999), decision postponement (Jacoby and Morrin, 1998; Huffman and Kahn, 1998; Walsh, Hennig-Thurau, and Mitchell, 2007), dissatisfaction (Foxman et al., 1990), decreased trust, and decreases in loyalty (Walsh, Hennig-Thurau, and Mitchell, 2007). Word of mouth, trust, and customer satisfaction are among the most important marketing outcomes and most measured by companies. Indeed, Ambler (2003) reports that 68% of firms use customer satisfaction

measures and 64% customer loyalty measures. Moreover, customer loyalty and (positive) customer word of mouth communication “are referred to in the marketing literature as key relationship marketing outcomes” (Hennig-Thurau, Gwinner and Gremler, 2002, p. 231) which are inextricably linked with trust.

Despite previous efforts to measure consumer confusion, limited attention has been given to developing a measure of consumer confusion proneness that captures the construct’s various sub-domains. A noticeable exception is a recent study which puts forth a three-dimensional scale of perceived consumer confusion proneness (Walsh, Hennig-Thurau, and Mitchell 2007). Here, we examine the effects of different types of confusion proneness on consumer general word of mouth, marketplace trust, and macro satisfaction. We begin by discussing the consumer confusion proneness concept before we discuss the construct dimensions and the related hypotheses after which we elaborate how the hypotheses were tested against empirical data. Our paper replicates and extends the work of Walsh et al. (2007) by investigating new outcome variables relevant to marketers and companies. Finally, the results are discussed with reference to marketing as well as consumer policy and education.

The concept of consumer confusion proneness and hypotheses development

Some authors argue that consumer confusion is predominantly non-conscious which implies that conscious confusion takes place at least occasionally (e.g., Poiesz and Verhallen, 1989). Walsh, Hennig-Thurau and Mitchell (2002) addressed the conscious/unconscious nature of confusion in their conceptual piece. They argue that awareness can be seen as an important aspect because it relates to consumers’ abilities to take measures to reduce it. Also, Mitchell and Papavassiliou (1999) stress this as an important aspect because it concerns the consumer’s ability to initiate confusion reduction strategies. In the present study, the authors treat consumer confusion as something the consumer is conscious of as a ‘state’ and must deal with.

Drawing on Walsh et al.'s (2007) characterization of consumer confusion as a conscious condition or 'state' that individuals may be prone to, we see this as causing them to act differently and/or to affect their decision making ability. For example, when confused, consumers are often in a state of anxiety, frustration, lack of understanding and indecision. Confusion proneness can be seen how easily/often consumers experience this state of confusion or as 'consumers' general tolerance for processing similar, too much or ambiguous information, which negatively affects their information processing and decision-making abilities'. This approach from Walsh et al. (2007) contributes to a more sophisticated understanding of the dimensions and outcomes of consumer confusion proneness and builds on previous work which has focused on specific situations of either stimulus similarity or overload.

Once confused, there are often general negative consequences. For example, when consumers perceive different brand-related stimuli as similar, overwhelming or unclear and buy the 'wrong' brand, the chosen brand might be 'inefficient' because it might fail to deliver the desired utility (Kamakura, Ratchford, and Agrawal, 1988). Or, because the state of confusion is linked with uncertainty, anxiety, a lack of understanding and indecision, the choice process is inefficient and frustrating. Drawing on Walsh and Mitchell (2005a), we argue that confusion can result in mistaken purchases, product misuse, product misunderstanding or misattribution of various product attributes which result in a non-maximization of utility. We now look at each type of confusion in turn to develop our hypotheses.

Similarity confusion proneness

Similarity confusion proneness is defined as consumers' "propensity to think that different products in a product category are visually and functionally similar" (Walsh et al., 2007, p. 702). Similarity confusion proneness can be caused by stimuli that are similar to stimuli the consumer learned in the past. Marketing related examples include advertisements

(e.g., Poiesz and Verhallen, 1989; Keller, 1991; Kent and Allen, 1994), interpersonal communications, the store environment or products which are very similar (e.g., Loken et al., 1986; Foxman et al., 1992; Kapferer, 1995; Kohli and Thakor, 1997; Jacoby and Morrin, 1998; Brengman et al., 2001). This is because consumers rely on visual cues to locate and distinguish brands and when presented with similar brands or information, can buy a fake or a retailer own-label brand thinking it is the original. Thus, when faced with similar-looking stimuli, consumers prone to similarity confusion will potentially alter their choice because of the perceived physical similarity of products.

Possibly because of the legal context of the research, most stimulus-similarity definitions tend to imply that a prerequisite of confusion is that the consumer buys the wrong brand (e.g., Diamond, 1981; Kohli and Thakor, 1997; Jacoby and Morrin, 1998), which constitutes only one behavioural outcome of confusion and ignores other behaviour-related consequences such as, engaging in word of mouth, and other cognitive consequences such as decreased trust and satisfaction.

Consumers who are prone to similarity confusion are likely to have negative consumption experiences which lead to dissatisfaction. The confusion felt by seeing so many similar products, can result in indecision, frustration, increased mental processing, in addition to possibly buying, not necessarily a ‘wrong’ product but one which might not meet their needs as well as another if they were able to identify the true differences between the different brands. For our word of mouth concept, we draw on the market maven idea since they are key market monitors of such information and deliver it via word of mouth. Mavens are defined as consumers who “initiate discussions with consumers and respond to requests from consumers for market information” (Feick and Price, 1987, p. 85) and we conceptualise word of mouth as being a general concept of marketplace interpersonal interaction and ‘the degree of product related information which a consumer communicates via speaking to other consumers’. If

people are used to giving their opinions of products, these negative occurrences as a result of seeing many products as similar, might naturally lead to consumers wanting to communicate more in order to express their frustration and/or to warn other consumers.

However, similarity confusion prone consumers may not share their frustrating or mistaken shopping purchases with others as this would involve admitting the mistake and could cause them embarrassment. It likely that those who see most brands as similar and are not able to differentiate between brands will not engage in general word of mouth about these brands to others and other consumers are less likely to ask their opinion. It is also possible that when consumers perceive brands in a category as very similar, they perceive them as more like commodities with little differentiation, and thus they exhibit little interest to engage in word of mouth to learn about brand differences in the marketplace. These counter lines of reasoning lead to our first hypothesis:

Hypothesis 1: Similarity confusion proneness has no significant impact on general marketplace related word of mouth.

Trust has been defined as consumers' willingness to rely upon their expectations about a firm's future behaviour (Morgan and Hunt, 1994; Rousseau et al., 1998). Here, we view it on an aggregate level of the marketplace and conceptualise it as the sum of consumers' willingness to rely on many firms' future behaviour. In the context of consumer similarity confusion proneness, trust is likely to be undermined because when consumers see all brands as being similar or have mistakenly purchased a copy-cat product, or are confused from similar advertising or messages. This is because they are likely to think that this is either a deliberate attempt by companies to dupe them because they see no reason to have so many similar products on the market when there are few differences. This will raise their suspicions about the companies' motives and undermine the trust they have in the marketplace. This is also partly because trust can also be understood as firms' intention to "hold consumers' interest

ahead of their self-interest" (Singh and Sirdeshmukh, 2000, p. 155). Consumers that notice the similarity between products within a product category may be inclined to feel that manufacturers and retailers are putting their own interests ahead of consumers'. This is likely to have a negative impact on consumer trust in the marketplace. The more times a person is confused by similar stimuli coming from numerous brands, the less trust they will have in the marketplace. It can also be argued that similarity confusion prone consumers may not know which products to trust. Thus, we propose that:

Hypothesis 2: Similarity confusion proneness has a significant negative impact on marketplace trust.

Drawing on previous studies, van Dolen, de Ruyter, Lemmink (2004) argue that customers distinguish between two kinds of satisfaction, namely encounter and relationship satisfaction (also referred to as 'overall satisfaction'). The former is concerned with an evaluation of the events and behaviours that occur during a single customer-company interaction. The latter is a function of satisfaction with multiple experiences and encounters with firms (see also Bitner and Hubbert, 1994). In a similar vein, the literature on customer satisfaction distinguishes between micro satisfaction and macro satisfaction. The former is concerned with customers' judgments in relation to goods, services and interaction experiences with a firm (Renoux, 1974). The latter is a more general evaluation of a firm's (or the 'marketplace's') behaviour and marketing activities. Since we conceptualize confusion proneness as something which exists regardless of specific products and transactions, using macro satisfaction (as opposed to micro satisfaction) as an outcome variable seems appropriate. With regard to similarity confusion proneness, we suggest that a consumer's inability to differentiate between brands will lead to a decreasing satisfaction toward the marketplace. Perceived similarity confusion is likely to negatively influence consumer satisfaction, regardless of whether the consumer buys the wrong brand or not. The mere fact that consumers

need to invest time and energy into processing more brand related information (i.e., incurring more transaction costs) can negatively influence satisfaction. Therefore we propose:

Hypothesis 3: Similarity confusion proneness has a significant negative impact on macro satisfaction.

Overload confusion proneness

Since consumers have limited cognitive abilities, once the amount of stimuli passes a certain threshold, it overloads and confuses consumers (e.g., Jacoby, Speller, and Kohn, 1974). Although consumers who face a sufficiently rich information environment can feel information anxiety, they are often unable to stop short of information overloading themselves (Malhotra, 1984; Keller and Staelin, 1987). Overload confusion proneness is defined as the “consumers’ difficulty when confronted with more product information and alternatives than they can process in order to get to know, to compare and to comprehend alternatives” (Walsh et al., 2007, p. 704).

Drawing on Sundaram, Mitra, and Webster (1998), it is conceivable that overload (and ambiguity) confusion prone consumers may engage in more general word of mouth behaviour purely because they have much more to talk about. For market mavens, the overload is likely to be due to them actively seeking out information in order to process it for the benefit of others via word of mouth. Thus, the more products and product information they process, the more and the better the information they have to disseminate and the more word of mouth occurs. An unfortunate by product of this is that they are more likely to experience overload confusion as a result of the extra amounts of information being processed. In addition, the reverse logic also might hold, namely that overload confusion prone consumers are likely to communicate with reference group members, whom they trust, as a way of perhaps clarifying some of the information they have (Wiedmann, Walsh, and Mitchell, 2001). Those reference group members can play an important role in terms of adding decision-making competence and

aiding consumers in dealing with large amounts of decision-relevant information. The fact that they talk more about products and services as a way of working through some of their confusion, makes them be perceived as high information disseminators or market mavens as the product and marketplace information puts them in a more informed position vis-à-vis other consumers who might therefore ask them for advice. Thus, overload confusion prone consumers might engage in more word of mouth. We therefore suggest that:

Hypothesis 4: Overload confusion proneness has a significant positive impact on general marketplace related word of mouth.

Trust tends to be based on consumer experience and consumers' evaluation of a firm and product-related information (Moorman et al., 1993). As we conceptualise trust as a general marketplace phenomenon not related to one individual firm, we are concerned with the amount of information consumers have to process in their daily lives. To the extent that consumers can no longer process all the information in the marketplace, they can feel disempowered and overall less trusting because they know they must be missing some possibly important information. There might also be an attribution effect whereby consumers blame the companies as a whole for making the marketplace too complex and difficult to understand and question their motives. Related to this, increases in the amount of buying related information and more choices consumers have to process might lead to more products being chosen and therefore consumers are able to establish less trust with any individual product. Taken on a macro scale, this could lead to a decrease in marketplace trust. General insights from the 'consumer resistance' literature also increasingly suggest that "whereas companies want consumers to trust them, consumers often choose to ignore or avoid them" (Roux 2007, p. 603). Others discuss the effects of product and information overchoice on the consumer's decision-making quality and argue "[m]ore choice often makes choice harder not easier for consumers (Shankar, Cherrier, and Canniford, 2006). Indeed, the resistance literature consistently questions the view

that empowerment of consumers through choice is beneficial and trust enhancing. We can therefore hypothesize that:

Hypothesis 5: Overload confusion proneness has a significant negative impact on marketplace trust.

Although more information can lead consumers to feel companies are trying to be transparent and supportive in helping them to make sound buying decisions, if this information is too much and causes the consumer to become confused, they are likely to be less satisfied with the company for confusing them and could blame the company for their inability to process all the information. Moreover, confusion from information overload is likely to cause consumer anxiety, frustration, indecision and stress which can lead to dissatisfaction. Indeed Beattie et al. (1994) show that choosing from overly large sets makes consumers feel that the decision is difficult and dissatisfying. Overload confusion prone consumers who become confused and are unable to process information satisfactorily will have to give extra time and effort to the decision-making process. This may involve employing strategies that involve extra effort such as asking store personnel for help or search for consumer reports which can lead to an increase in dissatisfaction with the process (Turnbull, Leek, and Ying, 2000). Thus we propose that:

Hypothesis 6: Overload confusion proneness has a significant negative impact on macro satisfaction.

Ambiguity confusion proneness

Consumer confusion has been discussed beyond the context of perceived stimulus similarity and overload (e.g., Mitchell and Papavassiliou, 1999; Turnbull et al., 2000). For example, some studies stress aspects, such as product complexity (e.g., Boxer and Lloyd, 1994; Cahill, 1995), ambiguous information or false product claims (e.g., Golodner, 1993; Kangun and Polonsky, 1995; Chryssochoidis, 2000) or non-transparent pricing (e.g., Berry and Yadav,

1996), all of which cause problems of understanding on part of the consumer (e.g., Eagly, 1974) and are related to the concept of cognitive unclarity (Cox, 1967). According to Cox (1967), consumers perceive unclarity when they feel uncomfortable from information ambiguity and incongruity (see also MacDonald, 1970). Ambiguity confusion prone consumers are likely to infer things about, or to be unclear about, product characteristics that are different than the actual product characteristics. Examples of this might be dubious product claims such as a product being ‘nutritious’ or ‘healthy’, or conflicting information on the same product from different sources can lead to confusion (e.g., Golodner, 1993). Therefore, ambiguity confusion proneness can be largely attributed to consumers’ response to dubious product claims or conflicting information on the same product from different sources. Walsh et al. (2007, p. 705) define ambiguity confusion proneness, as “consumers’ tolerance for processing unclear, misleading, or ambiguous products, product-related information or advertisements”.

When consumers compare two or more complex products and experience confusion from the ambiguous information they find, this could lead to choice deferral because the consumer tries to cope with what seem to be non-comparable alternatives (Dhar, 1997). Consumers who process lots of product and marketplace information are more likely to come across ambiguous or misleading information as a result of the sheer amount of information they are processing. Secondly, market maven type individuals, who like helping others navigate the marketplace, are more likely to be drawn to confusing and ambiguous product information and want to deal with it and understand it more as this presents greater value to their friends and relatives. Thirdly, it is possible that because they encounter more ambiguous stimuli and sometimes get confused by it, one way of dealing with the confusion and helping to organise and understand the information better is to explain it to others. Being more confused by ambiguous information and using an ‘explaining it to others strategy’ to help them understand it better means that they are perceived as good marketplace information providers. We know, for example, that

consumers prone to be confused by ambiguous stimuli are likely to seek help and to get other people to agree on the choice (Greenleaf and Lehmann, 1995). Once the information has been clarified, they are now in a position to show off their new knowledge and help others understand the ambiguity or conflicting information which will also increase their general marketplace word of mouth. Hence:

Hypothesis 7: Ambiguity confusion proneness has a significant positive impact on general marketplace related word of mouth.

Research suggests that when the decision situation offers many equally acceptable alternatives and none can be easily verified as best, such as exists when products are very similar or there are ambiguous information about their differences, this can create feelings of confusion which lead to a reluctance to commit an action (Ellsberg, 1961; Scholnick and Wing, 1988). Not knowing which alternative is preferred, while not being certain that one wants them equally, may result in indecision and a tendency to avoid commitment (Dhar, 1997). Commitment understood as the customer's long-term orientation toward a business relationship that is grounded on emotional bonds (e.g., Hennig-Thurau et al., 2002) is likely to wane in the face of ambiguity, as well as trust (Morgand Hunt, 1994). Hence, faced with this uncertainty, ambiguity confusion prone consumers are likely to have less trust in a marketplace which provides them with ambiguous and sometimes conflicting product information. Consequently, we hypothesize that:

Hypothesis 8: Ambiguity confusion proneness has a significant negative impact on marketplace trust.

The relationship between ambiguity confusion and macro satisfaction can be partly explained by drawing on cognitive categorization theory (e.g., Mervis and Rosch, 1981; Cohen and Basu, 1987), which suggests that as consumers gain experience with a variety of products, they cognitively group these products into categories which then serve as a basis for evaluating

new products. Ambiguity confusion results from a new (or just unfamiliar) product carrying ambiguous or conflicting information which requires extra processing to understand which category it fits into. Because consumers prefer products that require moderate levels of cognitive effort to categorize (Mandler, 1982), any message or product that involves ambiguous or conflicting information, and hence defies current categories, can be rejected and cause decreased satisfaction because the consumer has to make more effort to fit the new message/product into current categories.

It is also the case that when consumers perceive high levels of ambiguous information, they are uncertain and anxious as to which information to believe. The extra processing required to obtain the additional information to reduce the ambiguity, coupled with the increases in uncertainty and anxiety will contribute to a reduction of consumers' satisfaction with the process and companies. In addition, ambiguous product information can cause consumers not to be able to evaluate and utilize product features as well as being negatively correlated with perceived user friendliness which is an important quality dimension for consumers and is associated with customer satisfaction (Brucks, Zeithaml, and Naylor, 2000). Thus, we propose that:

Hypothesis 9: Ambiguity confusion proneness has a significant negative impact on macro satisfaction.

Model testing

Measures

In the present study, confusion proneness is not measured in a specific context at a point-in-time, but as an individual difference characteristic. Walsh et al. (2007) developed a scale from a mix of original and adapted scale items derived from other confusion studies to provide an overall assessment of consumers' confusion proneness and its three dimensions (i.e., similarity, overload, and ambiguity). Based on comprehensive validation procedures (exploratory interviews, confirmatory and exploratory factor analysis, Cronbach alpha, etc.),

© Emerald Group Publishing Limited

Walsh et al. (2007) found support for a three-dimensional, 12-item scale with the following dimensions: *Similarity confusion*, *Overload confusion*, and *Ambiguity confusion*. They used a 5-point scale (1 = strongly disagree, 5 = strongly agree), which we employed for our study. The items to measure the three outcome variables were adapted from previous studies measuring consumer word of mouth behaviour (Feick and Price, 1987), marketplace trust (Doney and Cannon, 1997), and (general) satisfaction (Spreng and Mackroy, 1996). General satisfaction was measured with a single item, which are increasingly common in marketing research (e.g., Hurley and Estelami, 1998; van Birgelen, de Ruyter and Wetzels, 2001). The most substantive issue is that of whether the item(s) is sufficient to measure the construct. Since we are not looking at transactional satisfaction, that is, satisfaction with aspects of the product design, use or price, but are more concerned with macro satisfaction, which is a more overall evaluation, a multi-item scale is not needed to capture the nature of the macro-concept. This is inline with Bergvist and Rossiter (2007) who argue that for constructs that consist of a singular object, single-item measures should be used. Also, multiple-item measurement instruments can occasionally aggravate respondent behaviour and undermine respondent reliability (Drolet and Morrison, 2001), supporting the use of a single-item scale. We face-validated and pre-tested our questionnaire was with a small sample of consumers ($n = 30$).

The sample

For practical reasons, previous consumer confusion studies have predominantly used student samples, despite contentions that students have specific attitudes and behaviours that differ from other consumers not least their higher cognitive abilities which are of relevance to confusion proneness and that results derived from student samples have limited generalizability.

In this study, consumers were interviewed to represent the shopping public from a major northern German city. The on-street interviews were carried out from Monday to Saturday and conducted by students majoring in marketing as a requirement of their senior field experience.

The average interview length was just under 30 minutes. The interviewers were instructed to interview consumers and to conduct interviews according to some fixed quota. Using proportional quota sampling, an attempt was made to represent the gender characteristics of the population by sampling a proportional amount of each. In terms of gender, the sample is representative of the current German population. A total of 355 interviews were conducted, representing approximately a 30% response rate of those individuals asked to respond (see Appendix 1).

Efforts were made by the researchers carrying out the research project to control and avoid non-response error. First, personal interviews were chosen to minimize participation refusal due to time constraints or inconvenience. Second, the questionnaire was relatively short.

Measurement and factor structure

The appropriateness of the 12 items for explaining the three consumer confusion proneness traits was tested in several steps. In the first step of the measurement procedure, the three-factor structure was tested using confirmatory factor analysis (Table 1). Three items showed poor loadings and a more parsimonious model was estimated. Model identification was achieved, and the fit indices suggested that the model adequately represented the input data, with GFI being .963, AGFI being .934, an RMR of .087, RMSEA being .091, a competitive fit of CFI of .943, and $\chi^2/df = 3.08$. Reliabilities were calculated for the three scales. All multi-item measures, except satisfaction, had good reliability, with composite reliabilities larger than .60 (Bagozzi and Yi, 1988) (see Table 1). The error of the customer satisfaction indicator was fixed to 0 because the authors did not expect it to be significantly different from 0. Indeed, many recent multi-item customer satisfaction scales tend to have very high Cronbach alphas and errors close to 0, justifying fixing the error to 0 (and variance to 1). Further, discriminant validity was found for all possible pairs of factors, with squared correlations being .14 for

similarity and overload, .05 for similarity/ambiguity, and .31 for overload/ambiguity, respectively (Fornell and Larcker, 1981) (see Table 2).

Insert Table 1 about here

Insert Table 2 about here

Structural model – Hypotheses testing

The conceptual model was tested simultaneously with LISREL 8.52. The fit statistics indicated that the model represents the data reasonably well, with GFI = .944, AGFI = .921, RMR = .092, RMSEA = .085, CFI = .934, $\chi^2/df = 3.27$. Standardized residuals and modification indices were reviewed with the intent to pinpoint potential areas of model misspecification (e.g., Saris, Satorra, Sörbom, 1987). There were no unreasonable estimates and all factor loadings were significant and hence there was no need to re-estimate our model. By explaining 25 percent of general word of mouth, 36 percent of marketplace trust, and 38 percent of the overall customer satisfaction construct, the relevance of consumer confusion proneness for consumer behaviour is clearly demonstrated.

Results

The strongest relationship between the three confusion traits was between overload and ambiguity (.45), followed by similarity/overload (.31) and similarity/ambiguity (.15). Table 2 contains the correlation coefficients, means and standard deviations for all variables of the model as finally operationalized in the structural equation modelling procedure.

In Table 3, the path coefficients and *t*-values for each of the nine hypotheses can be seen. Six of the nine hypotheses are confirmed by the data (see Table 3). The similarity confusion proneness trait has a strong negative impact on customers' word of mouth behaviour and trust, indicating that high degrees of perceived similarity proneness are associated with low levels of

© Emerald Group Publishing Limited

general word of mouth and marketplace trust, and vice versa. Support was also found for H₃, which predicted a negative relationship between similarity confusion proneness and macro satisfaction.

Consistent with H₄, overload confusion proneness had a significant positive impact on general word of mouth, supporting the notion that overload-prone consumers involve others in the decision-making to add expertise or to help narrowing the choice set and also are seen as information givers because of all the information they have collected. H₅ was not supported, with the relationship of overload confusion proneness to marketplace trust being non significant. Consistent with H₆, overload confusion proneness was found to have a negative impact on macro satisfaction.

As predicted in H₇, ambiguity confusion proneness does have a significant positive impact upon general word of mouth. However, contrary to predictions, ambiguity confusion proneness had a positive impact on marketplace trust (H₈), but non-significant impact on macro satisfaction (as predicted in H₉), hence H₈ and H₉ were rejected. Table 3 summarizes the results of hypotheses testing.

Insert Table 3 about here

Discussion and implications

Our findings offer several key contributions which have implications for research and managerial practice and public policy.

Theoretical implications

The findings support the validity of Walsh et al.'s (2007) consumer confusion proneness scale, which exhibits good psychometric properties. In addition, our structural analysis

indicated that the three confusion proneness dimensions behave differently with regard to their linkage with the three consequences, thus providing support for the nomological validity of treating consumer confusion proneness as a three-dimensional construct. Perhaps the most important finding is that there is an indication of generality of most scale items. Given this finding, there is reason to believe that the scale has construct validity and has potential use across populations. Further, in this study, we have examined how the three confusion proneness dimensions affect important marketing outcomes. At a conceptual level, a better understanding is needed on the differential impact of the three confusion proneness dimensions on outcome variables. We have tested our hypotheses against empirical data and failed to support four hypotheses.

Hypothesis 1, that similarity confusion proneness had no effect on key information providers' word of mouth activity is not supported. Given the competing lines of reasoning in the hypothesis development, the result suggests that the more powerful explanation is that consumers who are normally asked for their opinions, such as market mavens, are more reluctant to offer word of mouth when they are faced with seeing many products as similar in the marketplace. We speculate that this might be an 'embarrassment' effect or perhaps more likely, that because they see products as being similar, this gives them less to talk about to others.

Unlike anticipated in H₅ and postulated in the consumer reactance literature, overload confusion proneness is not associated with lower levels of marketplace trust. A plausible explanation of this finding may lie in the fact that consumers view information as beneficial whether or not they have the cognitive capacity to utilise it. Another reason may be that more information reduces the consumer's perceived uncertainty (Urbany, Dickson, and Wilkie, 1989) which makes a negative information-trust kink less likely (e.g., Geyskens, Steenkamp, and Kumar, 1998).

Another key implication for theory is the observed but unexpected positive ambiguity-trust relationship. There are several possible explanations for this. First, it is conceivable because when consumers experience ambiguity confusion repeatedly, they begin to feel more comfortable with ambiguous information. Second, some research has found that ambiguity confusion is associated with brand loyalty (Chryssochoidis, 2000). It could be that product-related information or advertisements perceived as ambiguous cause consumers to increase their blind faith in the marketplace not to dupe them or provide poor products. For example, mobile phone manufacturers are often accused of packing too much technology and too many complex features into their phones, such as Bluetooth capabilities, personal digital assistants and so forth, but consumers might ‘trust’ in the technology that it is good and might be useful. Many consumers may not know how to use these features and could perceive ambiguity confusion, but they may still appreciate those features. Thus a consumer with a state-of-the-art mobile phone may struggle to understand how exactly her phone works, but nonetheless puts trust in the manufacturer, and feels satisfied, for devising such a sophisticated product.

The explanation for the non-significant effect on macro satisfaction might be due to the same factor, namely, that as consumers become more comfortable with repeated exposure to ambiguous product information, its dissatisfaction effect reduces.

Marketing implications

Our findings have several implications for marketing management. One implication is for marketers to identify whether their customers are confusion prone by using the scale developed. Brand manufacturers and retailers can measure confusion proneness at different levels of abstraction by either considering individual confusion-proneness dimensions (lower level of abstraction) or looking at the overall confusion-proneness score for a given segment (higher level of abstraction). Our results suggest that consumer confusion proneness should be operationalized as a multidimensional construct. However, whether as a multidimensional or

second-order construct, confusion proneness can be related to important outcome variables.

Essentially, the confusion-proneness scale could serve as a diagnostic tool that will allow marketers to determine how likely their customers are to be confused by their own and competing brands and related communications and even to establish market or market sector norms.

If there are significant numbers of confused consumers in their target market, or of their own customers, marketers need to consider what the cause of consumers' confusion is and whether they are doing something to exacerbate it. If for example, stimulus ambiguity was found to be a problem in the marketplace for the customers of a particular good, then the manufacturer knows that traditional messaging will not work and must find other ways of making the communications clearer and less ambiguous. For example, companies may need to systematically identify sources of perceived stimulus ambiguity, such as product claims, and to rectify them. Reducing confusion causing stimuli can help to reduce the incidence of confusion and conversely increasing consumers' decision-making quality, which could be a major source of competitive advantage in any market, but particularly in those markets where confusion has already been shown to exist, e.g., telecommunications and financial services. One way of doing this could be to train sales and other personnel to recognize confusion-prone consumers and to assist them in reducing their confusion. Alternatively, the company could choose to promote self-help strategies such as shopping with a friend who could help in making purchase decisions. The most implications are for retailers who select our brand choices. If for example, many of their customers see few differences between brands, this would imply that a great range of product categories could be stocked, with fewer brands per category.

A second implication for marketers comes from looking at the specific results presented which are illuminating yet complicated for marketers to act upon. It is clear that confusion proneness has an important impact on key marketing variables such as general word of mouth,

marketplace trust and overall satisfaction, but that the relationships are complex. For example, consumers engage in general word of mouth less when they are prone to similarity confusion, but talk more when they are overload and ambiguity confused. This emphasizes the importance of our conceptualization and measuring the different types of confusion proneness as they have different outcomes for marketers to consider. The conceptual model gives companies guidance on what to look for and the areas where attention may be required.

Public policy and consumer education implications

Consumers can suffer loss of utility due to unfair marketplace practices or information asymmetries between firms and consumers (e.g., Rotfeld and Rotzoll, 1980; Sprott and Miyazaki, 2002). Discriminating between brands, processing and understanding available marketplace information is a key consumer ability. Warlop et al. (2005) argue that consumer welfare depends upon how well consumers learn and remember quality differences among competing products and demonstrate that consumers have difficulties to learn and remember quality differences between well-established (manufacturer) brands and lower-priced look-alikes. It can be argued that confusion prone consumers suffer a welfare loss because their decision making is impaired. If they mistakenly buy a look-a-like brand or make a suboptimal choice due to perceived overload or ambiguity confusion, they suffer a double-whammy effect: First, they relinquish utility because they do not get the brand they had a satisfactory prior consumption experience with. Second, consumers are likely to experience dissatisfaction with the look-a-like brand (Warlop et al., 2005). Moreover, when consumers struggle to discriminate between manufacturer and look-a-like brands which look similar they can resort to simplifying decisions (e.g., buying the most expensive product) or avoid shopping altogether.

The issue of burgeoning amounts of consumer information and consumers' ability to process and understand it is one of the major challenges facing consumer policy makers who have the task of managing the tension between marketers' interest and those of consumers

(Smith and Cooper-Martin, 1997). Despite the much heralded advent of ‘consumer empowerment’ it appears that empowered consumers are not always able to create greater benefits for themselves. The reason for that being that empowerment and the concomitant increase in choice and information can result in overload and lead to less consumer control (e.g., Denegri-Knott, Zwick, and Schroeder, 2006; Wathieu et al., 2002).

The three traits of consumer confusion proneness can be interpreted as the focal point of future educational activities. Consumer policy makers could use the confusion proneness scale to identify the prevalence of confusion-prone consumers within the population by using it on a national sample. Indeed the scale could be adapted and distributed to consumers for them to complete by themselves to ascertain their own confusion proneness score. Before this can be done, however, the scale needs calibrating on random samples of consumers to establish benchmark scores. The insight gained from applying the confusion scale might help policy makers educate consumers about which confusion they are more prone to. The information might also be used to encourage the development of consumer education programs which analyse consumer confusion and consumers’ response to it. This could then be used to teach consumers how to rectify it, for example, by focusing on key information when comparing similar brands, delaying decisions, asking a friend for advice, or buying the one you know.

Once confusion-prone consumers have been identified, they could then be profiled and the information brought to the attention of various consumer organizations and government departments, e.g., health, education, safety, which might need to be aware of their potential special needs. At a minimum, these organizations should test important communications and other material on this potentially vulnerable confused group for ease of understanding. At best, consumer policy makers could consider that this group may require more targeted help in the form of specialist information and guidance.

One consumer policy issue which arises from considering consumer confusion proneness is whether traditional consumerism, with its calls for ‘more’ information to be provided to consumers, could actually be undermining consumers’ ability to process that information. There appears to be the risk that consumers become over-burdened, shopping fatigued, confused and turn off trying to understand the information. It would appear that consumers need ‘better’, more targeted, more attuned, and more comprehensible information which could in some circumstances be less than they have now thus reducing their information processing burden. In order to reduce confusion and improve consumers’ rights to be informed and safe, a radical step could be for marketers to be restricted from developing products, packages and commercial messages that do not cater for the needs of confused consumers, e.g., products with larger fonts carrying no redundant information and ambiguous terms, or less complicated products and product manuals. In certain situations, more official and well-monitored definitions for potentially confusing terms particularly on food products and cosmetics, e.g., ‘alcohol free’, ‘hypoallergenic’, ‘healthy’ and ‘natural’, would be a major advantage.

Conclusions, limitations, and future research

The purpose of this research was to apply a consumer confusion proneness scale and provide empirical evidence on the scale’s validity and on how confusion proneness affects consumers’ behaviour. The results give an indication of generality of most scale items and support the proposition that consumer confusion proneness is a multi-dimensional phenomenon that has a significant impact on key variables such as marketplace trust, general marketplace related word of mouth and macro satisfaction, but not always in ways which could be predicted.

As we seek to understand consumer confusion proneness, there is need for additional research. Also, our research is not free of limitations, which introduce future research opportunities. First, consumer confusion proneness was conceptualized here as a cognitive construct and only three outcome variables were considered. It is likely that some consumers

become frustrated, suggesting that emotions may be associated with confusion (e.g., anger at his/herself or the retailer). The three outcome variables considered in this study had not been previously examined in relation to consumer-confusion proneness. However, other responses may also be useful to understanding how the construct operates such as, cognitive dissonance, self reproach.

Second, the original confusion proneness scale was developed in Germany. In the present replication study German data were also used. Future research should focus on exploration of the dimensions of confusion proneness and its impact on relevant outcome variables, using data in other countries and across cultures.

Third, despite the confusion proneness scale's overall good psychometric properties, there appears to be a need to develop additional items to bolster the 'similarity confusion proneness' dimension. Of the three items measuring 'similarity confusion proneness' one item ("Sometimes I want to buy a product seen in an advertisement, but cannot identify it clearly between scores of similar products") does not perform well and may need to be replaced.

Finally, we must consider the sample limitations in terms of size, representativeness and country effect. In particular we note that the sample had a large number of 20-29 year olds and was quite well educated. Given that a younger age and higher education are likely to affect information processing capacity positively and to be negatively correlated with consumer-confusion proneness (Walsh and Mitchell, 2005b), it is likely that the results presented are not only not generalizable, but also represent something of a 'best case' scenario.

References

- Balabanis, G. and Craven, S. (1997), "Consumer Confusion from Own Brand Lookalikes: An Exploratory Investigation", *Journal of Marketing Management*, Vol. 13, pp. 299-313.
- Beattie, J., Baron, J., Hershey, J.C. and Spranca, M.D. (1994), "Psychological determinants of decision attitude", *Journal of Behavioral Decision Making*, Vol. 7, pp. 129-144.
- Bergvist, L. and Rossiter, J.R. (2007), "The Predictive Validity of Multiple-Item Versus Single-Item Measures of the Same Constructs", *Journal of Marketing Research*, Vol. 44 (May), pp. 175-184.
- Berry, L.L. and Yadav, M.S. (1996), "Capture and Communicate Value in Pricing of Services", *Sloan Management Review*, Vol. 37 No. 4, pp. 41-52.
- Bitner, M.J. and Hubbert, A.R. (1994), "Encounter Satisfaction Versus Overall Satisfaction Versus Quality: The Customer's Voice," In *Service Quality: New Directions in Theory and Practice*. Eds. Rust, R.T. and Pliver, R.L. Thousand Oaks, CA: Sage Publications, 72-94.
- Boxer, S. and Lloyd, C. (1994), "Too many systems spoil the CD broth", *The Sunday Times*, February, pp. 13-16.
- Brengman, M., Geuens, M., and De Pelsmacker, P. (2001), "The impact of consumer characteristics and campaign related factors on brand confusion in print advertising", *Journal of Marketing Communications*, Vol. 7 No. 4, pp. 231-243.
- Brierley, S. (1995), "A matter of life and death," *Marketing Week*, 18 July 28, p. 26.
- Cahill, D.J. (1995), "We sure as hell confuse ourselves, but what about the customers?" *Marketing Intelligence and Planning*, Vol. 13, pp. 5-9.
- Canniffe, M. and McManus, J. (1993), "33% Cut in Life Policy Commissions - Shake-up an Attempt to Reclaim Share of Savings Market", *The Irish Times*, October 8.
- Cheary, N. (1997), "Fashion Victim", *Marketing Week*, 20, October, pp. 36-39.
- Chryssochoidis, G. (2000), "Repercussions of consumer confusion for late introduced differentiated products", *European Journal of Marketing*, Vol. 34, pp. 705-722.
- Cohen, J.B. and Basu, K. (1987), "Alternative Models of Categorization: Toward a Contingent Processing Framework", *Journal of Consumer Research*, Vol. 13 (March), pp. 455-472.
- Cox, D.F. (1967), "Risk Handling in Consumer Behavior - An Intense Study of Two Cases," In Cox, D.F. (Ed.), *Risk Taking and Information Handling in Consumer Behavior*, Harvard University, Division of Research, Graduate School of Business Administration, Boston, 34-81.
- Denegri-Knott, J., Zwick, D. and Schroeder, J.E. (2006), "Mapping consumer power: An integrative framework for marketing and consumer research", *European Journal of Marketing*, Vol. 40 No. 9/10, pp. 950-971.
- Dhar, R. (1997), "Consumer Preference for a No-Choice Option", *Journal of Consumer Research*, Vol. 24 (September), pp. 215-231.
- Diamond, S.A. (1981), *Trademark Problems and How to Avoid Them*, Revised Edition, Crain Communications, Chicago.
- Doney, P.M. and Cannon, J.P. (1997), "An Examination of the Nature of Trust in Buyer-Seller Relationships", *Journal of Marketing*, Vol. 61 No. 2 (April), pp. 35-51.
- Drolet, A.L. and Morrison, D.G. (2001), "Do we really need multiple-item measures in service research?" *Journal of Service Research*, Vol. 3 No. 3, pp. 196-204.
- Eagly, A.H. (1974), "Comprehensibility of persuasive arguments as a determinant of opinion

- change”, *Journal of Personality and Social Psychology*, Vol. 29, pp. 758-773.
- Ellsberg, D. (1961), “Risk, ambiguity, and the Savage Axioms”, *Quarterly Journal of Economics*, Vol. 75, pp. 643-669.
- Feick, L.F. and Price, L.L. (1987), “The Market Maven: A Diffuser of Marketplace Information”, *Journal of Marketing*, Vol. 51 (January), pp. 83-97.
- Fornell, C. and Larcker, D.F. (1981), “Evaluating Structural Equation Models with Unobservable Variables and Measurement Error”, *Journal of Marketing Research*, Vol. 18 (February), pp. 39-50.
- Foxman, E.R., Muehling, D.D., and Berger, P.W. (1990), “An Investigation of Factors Contributing to Consumer Brand Confusion”, *Journal of Consumer Affairs*, Vol. 24, pp. 170-189.
- Foxman, E.R., Berger, P.W., and Cote, J.A. (1992), “Consumer Brand Confusion: A Conceptual Framework”, *Psychology and Marketing*, Vol. 9 (March-April), pp. 123-140.
- Geyskens, I., Steenkamp, J-B. E.M. and Kumar, N. (1998), “Generalizations About Trust in Marketing Channel Relationships Using Meta-Analysis”, *International Journal of Research in Marketing*, Vol. 15 (July), pp. 223-248
- Golodner, L.F. (1993), “Healthy Confusion for Consumers”, *Journal of Public Policy and Marketing*, Vol. 12 (Spring), pp. 130-134.
- Harrison, K. (1995), “Revolution in the tub”, *SuperMarketing*, February 17, 8-19.
- Hennig-Thurau, T. and Klee, A. (1997), “The Impact of Customer Satisfaction and Relationship Quality on Customer Retention: A Critical Reassessment and Model Development”, *Psychology & Marketing*, Vol. 14 No. 8, pp. 737-764.
- Hennig-Thurau, T., Gwinner, K.P. and Gremler, D.D. (2002), “Understanding relationship marketing outcomes: An integration of relational benefits and relationship quality”, *Journal of Service Research*, Vol. 4 (3), pp. 230-247.
- Huffman, C. and Kahn, B.E. (1998), “Variety for Sale: Mass Customization or Mass Confusion?” *Journal of Retailing*, Vol. 74 No. 4, pp. 491-513.
- Hurley, R.F. and Estelami, H. (1998), “Alternative Indexes for Monitoring Customer Perceptions of Service Quality: A Comparative Evaluation in a Retail Context”, *Journal of the Academy of Marketing Science*, Vol. 26 No. 3, pp. 209-221.
- Inman, J.J., Dyer, J.S. and Jia, J. (1997), “A Generalized Utility Theory Model of Disappointment and Regret Effects on Post-Choice Valuation”, *Marketing Science*, Vol. 16 No. 2, pp. 97-111.
- Jacoby, J., Speller, D.E., and Kohn, C.A. (1974), “Brand Choice Behavior as a Function of Information Load”, *Journal of Marketing Research*, Vol. 11 (February), pp. 63-69.
- Jacoby, J. and Morrin, M. (1998), “‘Not manufactured or authorized by...’: recent federal cases involving trademark disclaimers,” *Journal of Public Policy and Marketing*, Vol. 17, pp. 97-108.
- Kamakura, W.A., Ratchford, B.T. and Agrawal, J. (1988), “Efficiency and Welfare Loss”, *Journal of Consumer Research*, Vol. 15 No. 3 (December), pp. 289-302.
- Kangun, N. and Polonsky, M.J. (1995), “Regulation of environmental marketing claims: a comparative perspective,” *International Journal of Advertising*, Vol. 14 No. 1, pp. 1-24.
- Kapferer, J.-N. (1995) Brand Confusion: Empirical Study of a Legal Concept. *Psychology and Marketing*, Vol. 12, pp. 551-568.
- Keller, K.L. (1991), “Memory and Evaluation Effects in Competitive Advertising

© Emerald Group Publishing Limited

- Environments”, *Journal of Consumer Research*, Vol. 17 (March), pp. 463-476.
- Keller, K.L. and Staelin, R. (1987), “Effects of Quality and Quantity of Information on Decision Effectiveness”, *Journal of Consumer Research*, Vol. 14 (September), pp. 200-213.
- Kent, R.J. and Allen, C.T. (1994), “Competitive Interference Effects in Consumer Memory for Advertising: The Role of Brand Familiarity”, *Journal of Marketing*, Vol. 58 (July), pp. 97-105.
- Kohli, Ch. and Thakor, M. (1997), “Branding consumer goods: insight from theory and practice”, *Journal of Consumer Marketing*, Vol. 14, pp. 206-219.
- Lichtenstein, D.R.; Netemeyer, R.G. and Burton, S. (1990), “Distinguishing Coupon Proneness from Value Consciousness: An Acquisition-Transaction Utility Theory Perspective”, *Journal of Marketing*, Vol. 54 (July), pp. 54-67.
- Loken, B., Ross, I., and Hinkle, R.L. (1986), “Consumer Confusion of Origin and Brand Similarity Perceptions”, *Journal of Public Policy and Marketing*, Vol. 5, pp. 195-211.
- MacDonald, A.P. (1970), “Revised Scale for Ambiguity Tolerance: Reliability and Validity”, *Psychological Reports*, Vol. 26 (June), pp. 791-798.
- Malhotra, N.K. (1984), “Reflections on the Information Overload Paradigm in Consumer Decision Making,” *Journal of Consumer Research*, Vol. 10 (March), pp. 436-440.
- Mandler, G. (1982), “The Structure of Value: Accounting for Taste,” In *Affect and Cognition*. Eds. Margaret S. Clark and Susan T. Fiske. Hillsdale , NJ: Erlbaum, 3-36.
- Mervis, C.B. and Rosch, E. (1981), “Categorization of Natural Objects,” In *Annual Review of Psychology*, eds. Rosenzweig, R. and Porter, L.W., Palo Alto, CA: Annual Reviews, inc, 89-115.
- Mitchell, V.-W. and Papavassiliou, V. (1997), “Exploring the Concept of Consumer Confusion”, *Market Intelligence and Planning*, Vol. 15 (April-May), pp. 164-169.
- Mitchell, V.-W. and Papavassiliou, V. (1999), “Market Causes and Implications of Consumer Confusion”, *Journal of Product and Brand Management*, Vol. 8, pp. 319-339.
- Mitchell, V.-W., Walsh, G., Frenzel, T. (2004), “Consumer E-Confusion on the Internet”, *Thexis*, Vol. 21 No. 4, pp. 17-21.
- Mitchell, V.-W., Walsh, G. and Frenzel, T. (2004), “Consumer E-Confusion on the Internet”, *Thexis*, Vol. 21 (4), pp. 17-21.
- Moorman, C., Deshpande, R. and Zaltman, G. (1993), “Factors affecting trust in market research relationships”, *Journal of Marketing*, Vol. 57 No. 1, pp. 81-101.
- Morgan, R.M. and Hunt, S. (1994), “The Commitment-Trust Theory of Relationship Marketing”, *Journal of Marketing*, Vol. 58 (3), pp. 20-38
- Murphy, C. (1997), “17% of shoppers take own-label brands in error”, *Marketing*, March 6.
- Nanji, Z. and Parsons, K. (1997), “So many choices,” *Telephony*, 233 (July), pp. 34-40.
- Poiesz, T.B.C. and Verhallen, T.M.M. (1989), “Brand Confusion in Advertising”, *International Journal of Advertising*, Vol. 8, pp. 231-244.
- Renoux, Y. (1974): The Interface with Consumers, in: Holloway, R. J. and Hancock, R. S. (Eds.): *The Environment of Marketing Management*, 3rd Ed., New York, pp. 442-448.
- Rotfeld, H.J. and Rotzoll, K.B. (1980), “Is advertising Puffery Believed?” *Journal of Advertising*, Vol. 9 No. 3, pp. 16-20.

- Roux, D. (2007), "Ordinary Resistance as a Parasitic Form of Action: A Dialogical Analysis of Consumer/Firm Relations", *Advances in Consumer Research*, Vol. 34, eds. Fitzsimons, G. and Morwitz, V., Provo, UT: Association for Consumer Research, pp. 602-609.
- Saris, W.E., Satorra, A. and Sörbom, D. (1987), "The detection and correction of specification errors in structural equation models," In Clogg, C.C. (Ed.), *Sociological Methodology* (pp. 105–129). San Francisco: Jossey-Bass.
- Scholnick, E.K. and Wing, C.S. (1988), "Knowing When You Don't Know: Developmental and Situational Considerations", *Development Psychology*, Vol. 24 (March), pp. 190-196.
- Shankar, A., Cherrier, H. and Canniford, R. (2006), "Consumer empowerment: a Foucauldian interpretation," *European Journal of Marketing*, Vol. 40 (9/10), pp. 1013-1030.
- Simonson, I. (1994), "Trademark Infringement from the Buyer Perspective: Conceptual Analysis and Measurement Implications", *Journal of Public Policy and Marketing*, Vol. 13 No. 2, pp. 181-190.
- Singh, J. and Sirdeshmukh, D. (2000), "Agency and Trust Mechanisms in Consumer Satisfaction and Loyalty Judgments", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 150-167.
- Smith, N.C. and Cooper-Martin, E. (1997), "Ethics and Target Marketing: The Role of Product Harm and Consumer Vulnerability", *Journal of Marketing*, Vol. 61 (July), pp. 1-20.
- Snider, J.H. (1993), "Consumers In The Information Age", *The Futurist*, January-February, pp. 15-19.
- Spreng, R.A. and Mackroy, R.D. (1996), "An Empirical Examination of a Model of Perceived Service Quality and Satisfaction", *Journal of Retailing*, Vol. 72 No. 2, pp. 201-214.
- Sprott, D.E. and Miyazaki, A.D. (2002), "Two Decades of Contributions to Marketing and Public Policy: An Analysis of Research Published in Journal of Public Policy & Marketing", *Journal of Public Policy & Marketing*, Vol. 21 No. 1, pp. 105-125.
- Sundaram, D.S., Mitra, K. and Webster, C. (1998), "Word-of-Mouth Communications: A Motivational Analysis", *Advances in Consumer Research*, Vol. 25, pp. 527-531.
- Turnbull, P.W., Leek, S. and Ying, G. (2000), "Customer Confusion: The Mobile Phone Market", *Journal of Marketing Management*, Vol. 16 (January-April), pp. 143-163.
- Urbany, J. E., Dickson, P. R. and Wilkie, W. L. (1989), "Buyer Uncertainty and Information Search", *Journal of Consumer Research*, Vol. 16 (September), pp. 208-215.
- van Birgelen, M., de Ruyter, K. and Wetzel, M. (2001), "Customer evaluations of after-sales service contact modes: An empirical analysis of national culture's consequences", *International Journal of Research in Marketing*, Vol. 19 No. 1 (March), pp. 43-64.
- van Dolen, W., de Ruyter, K. and Lemmink, J. (2004), "An empirical assessment of customer emotions and contact employee performance on encounter and relationship satisfaction", *Journal of Business Research*, Vol. 57, pp. 437-444.
- Walsh, G., Hennig-Thurau, T., Mitchell, V.-W. (2002), "Conceptualizing Consumer Confusion", in Kehoe, W.J. and Lindgren, J.H. (Eds.), *Proceedings: Enhancing Knowledge Development in Marketing*, AMA 2002 Summer Educators' Conference, Vol. 13, American Marketing Association, Chicago, pp. 172-173.
- Walsh, G. and Mitchell, V.-W. (2005a), "Consumers Vulnerable to Perceived Product Similarity Problems: Scale Development and Identification", *Journal of Macromarketing*, Vol. 25 No. 2, pp. 140-152.

- Walsh, G. and Mitchell, V.-W. (2005b), "Demographic characteristics of consumers who find it difficult to decide", *Marketing Intelligence & Planning*, Vol. 23 No. 3, pp. 281-295.
- Walsh, G., Hennig-Thurau, T. and Mitchell, V.-W. (2007), "Consumer Confusion Proneness: Scale Development, Validation, and Application," *Journal of Marketing Management*, Vol. 23 No. 7/8, pp. 697-721.
- Wathieu, L., Brenner, L., Carmon, Z., Chattopadhyay, A., Wertenbroch, K., Drolet, A., Gourville, J., Muthukrishnan, A.V., Novemsky, N., Ratner, R.K. and Wu, G. (2002), "Consumer Control and Empowerment: A Primer", *Marketing Letters*, Vol. 13 (3), pp. 297-305.
- Wiedmann, K.-P., Walsh, G., and Mitchell, V.-W. (2001), "The German Mannmaven: An Agent for Diffusing Market Information", *Journal of Marketing Communications*, Vol. 7 No. 4, pp. 195-212.

Table 1
Item Listing, Factor Structure and Reliability for Model Variables

Factors and Items	Items remained for 2 nd CFA	Coefficient of Determination (from CFA)	Average Variance Extracted/ Composite Reliability
Factor 1: Similarity confusion proneness <i>(adapted from Walsh et al., 2007)</i>			.76 / .64
Due to the great similarity of many products it is often difficult to detect new products.	yes	.49	
Some brands look so similar that it is uncertain whether they are made by the same manufacturer or not.	yes	1.00*	
Sometimes I want to buy a product seen in an advertisement, but cannot identify it clearly between scores of similar products.	No		
Factor 2: Overload confusion proneness <i>(adapted from Walsh et al., 2007)</i>			.54 / .62
I do not always know exactly which products meet my needs best.	yes	.40	
There are so many brands to choose from that I sometime feel confused.	yes	.67	
Due to the host of stores it is sometimes difficult to decide where to shop.	yes	.48	
Most brands are very similar and are therefore hard to distinguish.	No		
Factor 3: Ambiguity confusion proneness <i>(adapted from Walsh et al., 2007)</i>			.50 / .63
Products such as CD players or VCR often have so many features that a comparison of different brands is barely possible.	yes	.62	
The information I get from advertising often are so vague that it is hard to know what a product can actually perform.	yes	.32	
When buying a product I rarely feel sufficiently informed.	yes	.50	
When purchasing certain products, such as a computer or hifi, I feel uncertain as to product features that are particularly important for me.	yes	.50	
When purchasing certain products, I need the help of sales personnel to understand differences between products.	No		
<i>Items used to operationalize Consequences of Confusion proneness</i>			
Word of mouth <i>(adapted from Feick and Price, 1987)</i>			.75 / .90
I like introducing new brands and products to my friends.		.78	
I like helping people by providing them with information about many kinds of products.		.71	
People ask me for information about products, places to shop, or sales.		.69	
If someone asked me where to get the best buy on several types of products, I could tell him where to shop.		.66	

Factors and Items	Items remained for 2 nd CFA	Coefficient of Determination (from CFA)	Average Variance Extracted/ Composite Reliability
My friends think of me as a good source of information when it comes to new products or sales.		.61	
Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but not necessarily feel he or she is an expert on one particular product. How well you say this description fits you?		.47	
<i>Trust</i> (<i>adapted from Doney and Cannon, 1997</i>)			.48 / .68
In general, I trust the products I buy.		.41	
In general, I trust the manufacturers of the products I buy.		.80	
In general, I trust the store personnel that sells me products.		.24	
<i>Customer satisfaction</i> <i>(adapted from Spreng and Mackroy, 1996)</i>			1.00
Overall, I am satisfied with the products I buy.		1.00*	

* = Fixed parameter

Table 2
Correlation Coefficients, Means and Standard Deviations of Model Variables

	Means	SD	No. of items	1	2	3	4	5	6
1 Similarity	3.30	.99	2	1					
2 Overload	2.77	.95	3	.31	1				
3 Ambiguity	3.29	.88	4	.15	.45	1			
4 Word of mouth	2.84	1.25	6	-.46	.19	.10	1		
5 Trust	3.41	1.06	3	-.20	.20	.33	.18	1	
6 Customer satisfaction	3.19	1.15	1	.31	.17	-.22	.26	.70	

Table 3
Summary of Hypotheses

		Path coefficients	Support
		(<i>t</i> -values)	
H1	Similarity confusion proneness has no significant impact on marketplace related word of mouth.	-.20 (-6.61)	Not confirmed
H2	Similarity confusion proneness has a significant negative impact on marketplace trust.	-.211 (-3.31)	confirmed
H3	Similarity confusion proneness has a significant negative impact on macro satisfaction.	-.29 (2.36)	confirmed
H4	Overload confusion proneness has a significant positive impact on marketplace related word of mouth.	.37 (8.94)	confirmed
H5	Overload confusion proneness has a significant negative impact on marketplace trust.	.05 (1.08)	Not confirmed
H6	Overload confusion proneness has a significant negative impact on macro satisfaction.	-.22 (-2.64)	confirmed
H7	Ambiguity confusion proneness has a significant positive impact on marketplace related word of mouth.	.26 (2.22)	confirmed
H8	Ambiguity confusion proneness has a significant negative impact on marketplace trust.	.24 (5.40)	Not confirmed
H9	Ambiguity confusion proneness has a significant negative impact on macro satisfaction.	-.01 (-1.55)	Not confirmed

Appendix 1: Demographic Profile of the Sample

		Sample (n = 355)
Age	14-19	3.3%
	20-29	47.3%
	30-39	13.4%
	40-49	15.6%
	50-59	13.2%
	60+	7.2%
Gender	Male	50%
	Female	50%
Education	Some High School or Less/ High School Graduate	15.7% 26.5%
	Vocational School/ Some College	33%
	College Graduate/ Graduate School	24.8%

Fonte: European Journal of Marketing, v. 44, n. 6, 2010. [Base de Dados]. Disponível em: <http://www.emeraldinsight.com>. Acesso em: 18 maio 2010.