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## From product performance to consumption experience The development of a new scale for measuring customer satisfaction

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## 1. Introduction

Customer satisfaction is traditionally defined by means of the so-called “disconfirmation paradigm”, as an evaluation emerging from the post-purchase comparison between product/service performance and customer expectations (Oliver, 1993). This concept has been the topic of recent studies (e.g., Spreng, MacKenzie, Olshavsky, 1996) which argue that, although this paradigm must still be considered valid in its basic formulation, it should be extended as regards expectancies: *i.e.*, *expectations*, which represent cognitive elements with a rational nature, should be considered together with *desires*, which represent motivational elements associated with personal objectives.

Until now, however, the other term of comparison – product performance – has not yet been extended by considering the social, other than material, nature of consumption in affluent societies (Hirsch, 1976). The main changes to be considered regard the various stages of consumers’ decision-making processes, and are related to: the new company orientation to “customers as products” (Guido 1999b; Varaldo, Guido, 1997); the salience of marketing stimuli capable of influencing consumers’ expectations (Guido 2001; Pratkanis, Aronson, 1992); and the increasing integration between products and services (Varaldo, Fiorentino, 1996), which stimulate consumers’ search for intangible elements which could add value to their products and provide consumer experience (Pine, Gilmore, 1999; Schmitt, 1999).

This paper follows the research lines of the above-mentioned literature by proposing a different approach to customer satisfaction measurement. The nature of the concept is maintained as an evaluation deriving from a comparative process, but we change, or better, extend the terms to which expectations and desires are compared: from product performance alone to the entire consumption experience. Consumers develop expectations and desires with reference to many aspects of the consumption experience, not merely with the perceived product performance. If these

expectations are disregarded, this is reflected, in turn, on the satisfaction/dissatisfaction judgement. For example, the purchase of a small car is evaluated not only on the basis of experienced performance in comparison with expectancies (both rational expectations - if it uses only a little petrol, is easy to park, is easy to drive in traffic, etc. - and personal desires - if it looks, in some way, like the dreamed-of sportive car, if it helps socialise, etc.), but also with reference to all the stages that precede and follow purchase - if it was easy to find information about it, if the salesman was polite, if the car has a valid warranty, and so on.

The aim of the present work is to propose a scale to measure customer satisfaction with reference to product and services integrated (Varaldo, Fiorentino, 1996), in a broader context than simply evaluating product performance, *i.e.*, by measuring aspects involved in pre- and post-purchase stages. The proposed scale has three versions: for convenience, shopping, and specialty goods. The scale for shopping goods was also administered to a sample of buyers of a specific branded product (*i.e.*, a pair of jeans).

The paper is organised as follows. Section 1 briefly describes the main changes in relationships between customers and firms, which impose an extension of the traditional disconfirmation paradigm. Sections from 2 to 6 describe the steps along which the scale was built. Section 7 contains some concluding remarks and suggestions for future research.

## 2. A re-examination of the disconfirmation paradigm

A re-examination of the traditional disconfirmation paradigm should consider recent changes in affluent societies with reference to three main aspects: the role of *consumers as products* (Varaldo, Guido, 1997); the greater importance of the immaterial aspects of the companies' offers, which integrate services with products (Guido, 1999b; Varaldo, Fiorentino, 1996); and the increasing impact of experiential marketing (Pine, Gilmore, 1999; Schmitt, 1999).

Consumers are the real, "final product" of a company since the goods they consume shape their expectations and desires and, in turn, determine their satisfaction. Firms "produce" customers to the extent that they can modify both the salience of expectation contents and desire priorities (Guido 2001). By contributing towards forming expectations and desires, marketers can anticipate consumers' wants and, consequently, create satisfied customers.

In this context, the offer of intangible elements - *i.e.*, services integrated with products - may play a primary role. In affluent societies, the relationship between firms and customers is a kind of service relationship, mediated by the physical transfer of goods: the production of "utility" for customers is represented by integrated services, the use of which coincides with the consumption experience and on which they base their process of satisfaction evaluation.

Customers' experience, in all stages of the consumption process, becomes relevant for both expectation generation and benefit evaluation. The so-called *experiential marketing* approach stresses the role of experience as a fundamental element in the consumption process and defines the perceptive channels through which individuals undergo such experiences. All experiences which make consumers think, feel, act and react are considered, and may overcome the traditional five senses.

### 2.1. A new approach for measuring customer satisfaction

All the factors described in the previous paragraphs contribute to emphasizing the entire consumption experience over and above the mere perception of product performance. The aim of this work is to propose a scale to measure customer satisfaction that considers, in the context of the disconfirmation paradigm, all the different stages which precede and follow product use.

We propose three versions of the same scale: for convenience, shopping, and specialty goods. All of them are of Likert type: respondents are required to declare their agreement with items on a five-

point scale. Items are formulated according to a subjective approach, considering that satisfaction involves both cognitive and motivational considerations (Spreng, MacKenzie, Olshavsky, 1996).

The steps along which the scale was developed are the following:

- a. Definition of the concept to be measured and item generation.
- b. Item content validity evaluation.
- c. Selected item and scale reliability evaluation.
- d. Selected item criterion and concept validity evaluation.

The two versions of the scale for convenience and investment goods have been developed to step *b*. The scale to measure satisfaction of customers of shopping goods has undergone all steps (*a* to *d*) and has been administered to a sample of a branded product (jeans) purchasers.

## 2.2. Concept definition and items generation

The traditional disconfirmation paradigm defines customer satisfaction as the result of an evaluation which compares product performance, as perceived by customers, with their expectations and desires (*e.g.*, Spreng, MacKenzie, Olshavsky, 1996). In the present paper, the nature of the concept is maintained as an evaluation deriving from a comparative process, but the terms to which expectations and desires are compared are extended: from product performance to consumption experience. Thus, the new concept to be measured becomes: *customer satisfaction is the result of a comparison between expectancies (expectations plus desires) and the perceived performance of consumers' relevant aspects in all stages of the consumption experience.*

The most accredited literature on consumer behaviour distinguishes five stages in the consumption experience (Wilkie, 1994): 1. Need recognition; 2. Information search; 3. Evaluation of alternatives; 4. Purchase decision; 5. Product consumption and post-purchase evaluation.

Items forming the scale were suggested by a review of the literature on consumer behaviour (*i.e.*, Ajzen, 1991; Wilkie, 1994; Spreng, MacKenzie, Olshavsky, 1996; Dalli, Romano, 2000), on scales measuring concepts closely related to the topic of our analysis (Bearden, Netemeyer, 1999); and by an exploratory study.

Items were generated for each of the five stages constituting the consumption experience. Overall, a review of the literature suggested 95 different items. Company communication policies concentrate in the stage of need recognition, characterised by aspects which contribute to determining consumers' desired situation. In the information search stage, it is important to understand both what constitutes relevant information for consumers and how it is collected and judged (with reference, for example, to information availability, clearness, reliability, and so on). In the alternative evaluation stage, attention focuses on elements which guide consumers while comparing alternatives, such as measures of utility and benefits deriving from competing products, in relation to product differentiation. In the fourth stage, the important elements to be considered are those which determine the purchase decision: prices, terms of payment, point-of-sale characteristics, etc. Lastly, in the final stage, product performance criteria and other post-purchase aspects are evaluated.

The exploratory survey consisted of a questionnaire administered to a convenience sample of 50 consumers (27 males), aged between 18 and 50. Respondents were required to recall, or imagine, the consumption experience of an article, choosing among washing machine detergents (convenience goods), shoes (shopping goods), and cars (specialty/investment goods). Referring to the product chosen (11 respondents chose the detergent, 20 the shoes and 19 the car), each respondent answered five open questions (one for each stage of the consumption experience) about: (i) the reasons leading them to consider the product; (ii) information on the product considered useful, and how they could obtain it; (iii) criteria on which to evaluate alternatives; (iv) elements influencing purchase decision; (v) aspects considered important after purchase and consumption. Although many aspects were taken into account while considering specialty/investment goods (as they could be anticipated before running the test), for the other two types of goods, the respondents also reported several elements for all stages of the consumption experience. This confirmed the

hypothesis that, if the respondents' involvement with the product is high (Zaichowsky, 1985), consumption experience is a complex and articulated process, no matter what the type of purchased product is. We assumed that respondents answered with reference to the product category with which they were most greatly involved.

### 2.3. Item content validity evaluation

The representativeness and significance of the items generated by the literature review and the exploratory survey were evaluated using two criteria (Tull, Hawkins, 1984), based on the concept to be measured: a subjective evaluation, to eliminate absolutely not representative items; and a comparison between aspects emerging from the literature and aspects emerging from the exploratory analysis, assuming that elements from both sources were the most representative.

On the basis of the selected items, three versions of the scale were developed. The scale to measure customer satisfaction for shopping goods was administered to a convenience sample of 103 purchasers of branded jeans (i.e., 56 male and 47 female undergraduate students, average age = 23.92). Since we wanted respondents refer to a personal consumption experience, the brand was not specified in the measurement scale: we asked respondents to refer to a product characterised by an intensive advertising campaign. The resulting scale contained 25 items (see Appendix): items 1-2 refer to need recognition, items 3-10 to information search, items 11-14 to alternative evaluation, items 15-19 to purchase decision, and 20-25 to consumption and post-purchase evaluation.

### 2.4. Reliability evaluation

Item internal reliability was evaluated by comparing scores obtained into two random samples of items. Measures of four coefficients – Split-half R (.6708), Spearman-Brown Y (.8030), Guttman G (.8027), and Cronbach  $\alpha$  (.8736) – indicate a good level of item reliability (Litwin, 1995). Correlation coefficients between total score and single items scores were also calculated. All coefficients were significantly different from zero and most of them had values higher than .5. Correlation coefficients lower than .4 were obtained for items 5, 6, 16 and 23.

However, for better understanding of the role of low correlated items, a factorial analysis was conducted on all items scores: one latent factor emerged explaining 26% of total inertia and correlated with all items except 5 and 6. Following this result, we decided to keep in our final scale items 16 (sales personnel helpfulness) and 23 (product capability of saving original characteristics) and decided to discard items 5 (information on product washing conditions) and 6 (information on colour). After eliminating these two items, the reliability coefficients increased: R = .7199; Y = .8370; G = .3460;  $\alpha$  = .8770.

In order to evaluate scale reliability (Guido 1999a), the sample of 103 respondents were randomly divided into two groups, and their scores were compared with t-tests which did not find significant differences, denoting a good level of reliability. In addition, for the two sub-samples (composed, respectively, of 51 and 52 respondents), reliability coefficients did not differ significantly: first group, R = .7, Y = .817, G = .8016,  $\alpha$  = .8427; the second group, R = .7555, Y = .86, G = .8607,  $\alpha$  = .9023.

### 2.5. Item criterion and concept validity evaluation

Validity may be defined as the degree to which differences in measures reflect real differences among object characteristics. Criterion validity, specifically, evaluates results obtained in relation to measures of variables assumed as criteria, i.e., alternative ways of measuring the same concept (French, Michael, 1966). In order to verify this property, an additional item was inserted in the questionnaire, asking respondents to express their overall judgement of satisfaction with the consumption experience, on a 5-point scale, from totally dissatisfied to totally satisfied. The correlation coefficient between average scale score and score on this additional item was .75, showing a high association.

An analysis of variance (ANOVA) was conducted in order to evaluate differences among scores obtained with the scale for individuals in the five groups defined by the criterion variable ( $P_1 = 46.33$ ,  $P_2 = 56.43$ ,  $P_3 = 67.72$ ,  $P_4 = 74.27$ ,  $P_5 = 85.67$ ; where  $P_1$ , for example, was the average score obtained for individuals in the first category of the criterion variable – i.e., totally dissatisfied). Average scores increased with the overall level of satisfaction and were significantly different ( $F = 32,7052$ , with observed significance level = 0).

Concept validity is the capability of the scale to measure the object of the study; it may be evaluated by exploring the relation between the score obtained with the measurement instrument used to evaluate (i.e., the scale) and phenomena closely related to the referred concept (De Vellis, 1991). Three additional items were introduced in the questionnaire in order to evaluate concept validity: respondents were asked to declare their degree of agreement, according to the usual 5-point scale, with aspects theoretically associated with satisfaction deriving from the purchase of a pair of jeans: “I intend to buy the product again”, “I will speak well about the consumption experience”, “I do not have any complaint about the consumption experience”.

Correlation coefficients between each of these three additional items and overall scores were, respectively, .639, .587, and .435, all significantly different from zero.

In order to investigate concept validity further, overall satisfaction was re-coded in three score categories: low  $\leq 64$ ; medium  $\leq 76$ , and  $\geq 65$ ; and high  $\geq 77$  (the average value of scores in the total sample was 69,7379; the 25<sup>th</sup> percentile was 63; the median value was 71; and the 75<sup>th</sup> percentile was 77). Average scores for respondents in the three categories of the re-coded variable were compared by means of three single ANOVA and MANOVA, which differed significantly across the three newly defined satisfaction levels (for MANOVA,  $F = 8,993$ , with observed significance level = 0).

### 3. Concluding remarks

The proposed scale shows that customer satisfaction depends not only on product performance, but also on many other aspects involved in the consumption experience, important in all stages preceding and following purchase. This evidence obviously affects the way in which customer satisfaction is measured and also marketing strategies. Customer satisfaction measures, in order to be unbiased, must extend the terms to which expectations and desires are compared above product performance. If customer satisfaction depends on management ability to implement marketing strategies, neglecting important satisfaction determinants in designing such strategies may result in unsatisfied customers.

The proposed three versions of the scale suggest that the consumption experience must be viewed as a complex phenomenon. Successful implementation of the scale for shopping goods also establishes good premises for positive reliability and validity evaluations for the other two scales. Possible extension of this study could verify the basic assumptions behind many items in the three scales, *i.e.*, if customer involvement with the product is high, the decision-making process is complex and well articulated. It may be useful, for example, to measure consumer involvement (through the scale proposed by Zaichowsky, 1985) in order to evaluate whether consumption experience is intensely perceived in all its stages. The emotional component of involvement (Zaichowsky, 1986) could also be measured in the same way. Another extension of this study could be evaluation in the time of the customer satisfaction construct.

## References

- Ajzen I. (1991) "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Process*, 50, 1-33.
- Bearden W., Netemeyer R. (1999) *Handbook of Marketing Scales, Multi-Item Measures for Marketing and Consumer Behavior Research*, Newbury Park, Sage.
- Dalli D., Romani S. (2000) *Il Comportamento del Consumatore*, Milano, Franco Angeli.
- De Vellis R.F. (1991) *Scale Development, Theory and Applications*. Newbury Park, Sage.
- French J.W., Michael W.B. (1966) *Standards for Educational and Psychological Tests and Manuals*, Washington, American Psychological Association.
- Guido G. (1999a) *Aspetti Metodologici e Operativi del Processo di Ricerca di Marketing*, Padova, Cedam.
- Guido G. (1999b) "Il Ruolo dei Servizi nel Nuovo Orientamento al Consumatore", *Finanza, Marketing & Produzione*, 17 (1), 169-199.
- Guido G. (2001) *The Saliency of Marketing Stimuli*, Boston, Kluwer Academic Publishers.
- Hirsch F. (1976) *Social Limits to Growth*, London: Routledge.
- Litwin M.S. (1995) *How to Measure Survey Reliability and Validity*, Newbury Park, Sage.
- Oliver R. (1993) *Satisfaction: A Behavioral Perspective on the Consumer*, Boston, McGraw-Hill.
- Pine B.J., Gilmore J.H. (1999) *The Experience Economy*, Boston, Harvard Business School Press.
- Pratkanis A., Aronson E. (1992) *Age of Propaganda*, New York, Freeman.
- Schmitt B. (1999) *Experiential Marketing. How to Get Customers to Sense, Feel, Think, Act, Relate to Our Company and Brand*, New York, The Free Press.
- Spreng R.A., MacKenzie S.B., Olshavsky R.W. (1996) "A Re-examination of the Determinants of Consumer Satisfaction", *Journal of Marketing*, 60, 15-32.
- Tull S.D., Hawkins D.L. (1984) *Marketing Research: Measurement and Method*, New York, Free Press.
- Varaldo R., Fiorentino F. (1996) "L'Integrazione Prodotto-Servizio nella Prospettiva del Marketing Neo-industriale", *Micro & Macro Marketing*, 2, 197-262.
- Varaldo R., Guido G. (1997) "Il Consumatore come Prodotto: *Customer Satisfaction* come Qualità del Cliente", *Micro & Macro Marketing*, 6, 9-40.
- Wilkie W.L. (1994) *Consumer Behaviour*, New York, Wiley.
- Zaichowsky J.L. (1985) "Measuring the Involvement Construct", *Journal of Consumer Research*, 12, 341-352.
- Zaichowsky J.L. (1986) "The Emotional Aspect of Product Involvement", *Advances in Consumer Research*, Vol. 13, eds. R.L. Lutz, Provo, UT, Association for Consumer Research.



## Appendix: Scale measuring satisfaction of jeans buyers

Consider the personal experience of purchasing a pair of branded jeans with an intensive advertising campaign. Express a judgement, referring to your expectations and desires, on the following aspects related to consumption experience, according to the following scale: 1= much less than expected; 2 = less than expected; 3 = as expected; 4 = more than expected; 5 = much more than expected.

1. How the intensive advertising campaign attracted your attention to the product.
2. Product style: to what extent it follows new fashions and trends.
3. Collection of information on product manufacture through commercial sources.
4. Collection of information on aesthetic characteristics of product (line and colour) through commercial sources.
5. Collection of information on washing conditions through labels/instructions.
6. Collection of information on care and precautions to maintain colour.
7. Ability of advertisement to attract your attention (making me think or communicating sensations).
8. Sales personnel expertise on product characteristics.
9. Clearness of information contained in the label.
10. Information deduced with reference to the brand image (*e.g.*, if the brand is associated with an image of quality products).
11. Product quality estimation compared with available alternatives.
12. Presence in the product of desired qualities compared with available alternatives.
13. Brand image compared with available alternatives.
14. Estimated performance of product (wearability) compared with available alternatives.
15. Point-of-sale modernity and warmth.
16. Sales personnel helpfulness.
17. Estimated quality/price ratio.
18. Image projected by the product.
19. Price in relation with overall offer (*i.e.*, also considering warranty, brand image, etc.)
20. Product performance (wearability).
21. Confirmation of collected information.
22. Tested brand reliability
23. Capability of product of maintaining original characteristics: colour, line, dimensions, etc.
24. Product cheapness.
25. Validity of the quality certification given by the manufacturer.

Overall, to what extent do you feel satisfied with the entire consumption experience?

1=Not at all satisfied, 2=Moderately dissatisfied, 3=Neither satisfied, nor dissatisfied, 4=Moderately satisfied, 5=Very satisfied.

Express your degree of agreement or disagreement with the following, on a scale from 1 to 5:

1=Absolute disagreement, 2=Disagreement, 3= Neither agreement, nor disagreement, 4= Agreement, 5= Absolute agreement:

- C1. I will buy the product again.
- C2. I will speak well about the consumption experience.
- C3. I do not have complaints about any of the aspects of the consumption experience.

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