The Impact of Visiting a Brand Website on Brand Personality

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INTRODUCTION

Developments in electronic technology have increased the exposure of consumers to websites and digital brands. Recently, much attention has been devoted to examining the effects of a website on price sensitivity (Shankar et al. 1998), shopping behaviour or satisfaction (Shankar et al. 2000; Szymanski and Hise 2000). Several researchers have attempted to construct tools for measuring the efficiency of a website (Eighmey 1997), its entertainment or informational value or even its interactivity (Wu 1999). But only a few studies have tried to emphasize the effects of a website on brand image. In fact, the Internet, representing a new channel of communication and distribution for a brand, offers a new context for an offline brand, which may have positive or negative effects for its brand image. ‘It may reveal that a well-known brand doesn’t have good performances on important attributes for the consumer, and in consequence deteriorate its image’ (Kapferer 2000: 99).

For a traditional brand, getting online is a perilous adventure, which may have positive or negative effects on its brand image. The effects may take different forms: from changes in brand associations to changes in overall attitude towards the brand. This explains the need to measure and understand the impact of a visit to a website on brand image. Up till now, only a few academic studies have dealt with this topic. Berthon et al. (1999), de Chernatony (2001), Dieutre and Granier (2000), Michon (2000), Nail (1998) and Travis (2001) think that classic brand management strategies are made obsolete by the Internet and must be reconsidered. Lehu (1996) argues for adaptation. For him, the strategic importance of branding increases with the Internet because it reduces reluctance to buy on the Internet, while Sealey (1999) and Sinha (2000) argue that the importance of a brand will diminish because consumers are more informed on competing products.

This study concentrates on the impact of website visits on brand image and investigates whether or not website exposure affects brand image, and more specifically brand personality. In addition, we introduce three covariates (attitude toward the site, enduring involvement in the product category and type of product) to test if website exposure has the same effects on brand personality regardless of product type, involvement or website attitude.

Abstract

What are the effects of forced exposure to the brand website on perceived brand personality? An experiment with random assignment to exposure vs. control (non-exposure) groups for ten websites is analysed. Three covariates are included to test their impact on brand personality after website exposure: product type (utilitarian/functional vs. auto-expressive), enduring involvement with the product category and attitude toward the website.

The results of this study show significant differences between exposed and non-exposed individuals. Two dimensions of brand personality (youthfulness/modernity and sincerity/confidence) increase after exposure to the brand website. In addition, the brand is perceived younger and more modern when a visitor to the site has a positive attitude toward the brand’s website than when s/he has a negative attitude toward the website. This reinforces the perception of the brand as being more sincere and trustworthy, which is particular important for e-commerce websites.

Keywords: brand image, brand personality, website exposure, attitude toward the site
First, we will review the concept of brand equity and brand image, and then describe the research on brand personality. Finally, we will present the research hypotheses and a model of the effects of website exposure on a brand’s perceived personality.

**LITERATURE REVIEW**

The conceptual framework will review the concepts of brand equity, brand image and brand personality. We will start with a definition of brand equity to show that brand image is one of the approaches used in the researches on brand equity. Then, we define the concept of brand image, because brand personality is one of the three components of brand image (Kapferer 1995; Plummer 2000).

**Brand equity**

The concept of brand equity appeared in the eighties and several definitions were proposed (Aaker 1991; Dyson et al. 1996; Kapferer 1995; Keller 1993). One of the first definitions of brand equity was given by the Marketing Science Institute (MSI) in 1988: ‘a set of associations and behavior of a brand’s consumers, of channels of distribution and the company of the brand, which allows the branded product to achieve volume and profit margins more important than without the brand’s name, and which gives them a sustained, strong and differentiated advantage regarding competitors’.

Beside purely financial approaches, studies on brand equity have followed two different directions:

1. **Consequences of brand equity**: revealed by the preferences (Park and Srinivasan 1994) or choice (Kamakura and Russell 1993) of the consumer. Park and Srinivasan (1994) measure brand equity as the ‘difference for the consumer between overall preference for the branded product and the preference due to objective features of the product’.
2. **Antecedents of brand equity**: a set of strong, positive and unique associations to the brand (Aaker 1991; Keller 1993).

Our study will focus on the second approach. Brand associations in the consumer’s mind form the perceptual dimension of brand equity (Kapferer 1998), in opposition to the behavioral dimension. The literature generally divides the perceptual dimension of brand equity into two components: brand awareness and brand image (Aaker 1991; Aaker and Keller 1990; Biel 1992; Keller 1993). The first component deals with the presence of the brand in the mind of the consumer (brand recognition and recall). Brand awareness or the attention accorded to the brand refers to the likelihood that the brand’s name comes to mind for the consumer (Keller 1993). It is composed of brand recognition (ability of the consumer to confirm a previous exposure to the brand) and brand recall or memorization (which asks the consumer to remember correctly brands and their attributes). The effects of website exposure on brand awareness will not be analysed in this paper. Instead, we will focus on the effects of exposure on brand image.

**Brand image**

This second component of brand equity is defined as ‘perceptions about a brand as reflected by the brand associations held in consumer memory’ (Keller 1993). Aaker (1991) defines ten dimensions of brand image, namely product attributes, intangible features, consumer benefits, relative price, places, moments and forms of utilization, buyers and consumers, stars and characters attached to the brand, brand personality, product category and competitors. Keller (1993) theorizes that the quality of a brand’s image depends on the favourable or unfavourable nature of that brand’s associations, their uniqueness, their strength, their cohesion and their level of abstraction. These associations constitute in the consumer’s mind the value of the brand.

Keller (1993) classifies associations in three groups: brand attributes, benefits and attitudes. Brand attributes include at the same time intrinsic indicators (factors connected to the product) and extrinsic indicators (factors not related to the product, such as advertising investments, price, etc.). Benefits are also classified into three types: functional, experiential and symbolic benefits.

Plummer (2000) considers that brand image is composed of three dimensions: product attributes, consumer benefits and brand personality. ‘Product attributes such as “miles per gallon” or “strong flavor”, and the consumer benefits such as “saves money” or “don’t have to wash hair so frequently” represent the means that can be used to achieve the desired ends’ [which are the personal values] (Aaker 1991: 145). Plummer (2000) argues that brand personality is a determining element in the comprehension of consumer choice.

For Kapferer (1995), it is preferable to use the concept of brand identity instead of brand image, because the second one is too ‘volatile and changeable: it worries too much about the appearing and not enough about the being of the brand’. He represents brand identity by a prism of six sides: physique, culture, relation, reflection, state of mind and brand personality. ‘The brand, when it communicates, acquires a character. The way of speaking about the products or services evokes a certain type of character, which it could incarnate if we would compare a brand to a person.’
The personality of a brand is one component of the definition of brand image (Kapferer 1995; Plummer 2000). "In the same way that every individual has his own personality, the brand can also be pictured from specific traits which define its identity ... If we consider that personality is inferred through observable behavior or by feelings in varying situations of everyday life, we can consider that every form of expression of the brand has an impact on the way it is perceived and contributes to allow the consumer to attribute it a personality" (Koebel and Ladwein 1999).

The idea of this measure is to evaluate the brand on comparable features for different product categories or for different brands inside the same product category. Aaker (1997) elaborated a brand personality scale in an American context and several French researchers have translated and tested this scale into a French context.

Aaker’s brand personality scale was developed by creating a list of 309 personality traits taken from ‘trait lists optioned from three sources: personality scales from psychology, personality scales used by marketers (academics and practitioners) and original qualitative research’ (Aaker 1997). Those 309 items were evaluated by 25 consumers, which reduced the number to 114 traits. The main study consisted in the evaluation of those 114 traits by 631 consumers on 37 brands, which were factor-analysed. The results show a five-dimension model composed of 42 items:

1. **Sincerity**: down-to-earth, family-oriented, small-town, honest, sincere, real, wholesome, original, cheerful, sentimental, friendly;
2. **Excitement**: daring, trendy, exciting, spirited, cool, young, imaginative, unique, up-to-date, independent, contemporary;
3. **Competence**: reliable, hard-working, secure, intelligent, technical, corporate, successful, leader, confident;
4. **Sophistication**: upper class, glamorous, good looking, charming, feminine, smooth; and
5. **Ruggedness**: outdoorsy, masculine, Western, tough, rugged.

Koebel and Ladwein (1999) adapted Aaker’s scale to a French context by translating the 42 items. Then, 50 students evaluated 85 brands in different product categories. The result is a six-dimension scale composed of 30 items:

1. **Domination**: unique, independent, self-confident, contemporary, leader;
2. **Ability**: reliable, robust, technical, safe;
3. **Conscientious**: realistic, hard-working, organized, intelligent, honest;
4. **Masculine**: masculine, virile, rough;
5. **Expansive**: bold, imaginative, ardent, trendy, winning, cheerful; and
6. **Seduction**: bewitching, attractive, good-looking, sentimental, feminine, exciting, distinguished.

Ferrandi et al. (1999) also adapted Aaker’s scale to a French context: 165 students evaluated the 42 personality traits on 4 brands; the results of the factor analysis showed a five-factor model represented by 33 items:

1. **Sincerity**: sincere, honest, natural, trustworthy, safe, conscientious, healthy, realistic, intelligent, authentic;
2. **Excitement**: trendy, modern, young, imaginative, up-to-date, positive attitude, bold;
3. **Sophistication**: charming, attractive, elegant, gentle, feminine, sentimental, fascinating;
4. **Robustness**: robust, sturdy, charismatic, western; and
5. **Liking**: friendly, cheerful, family, nice, provincial.

The three scales presented above do not have the same number of dimensions or the same number of items. Several reasons could explain these differences: the problem of translation is difficult to resolve because ‘some items are specific to the American culture and are difficult to adapt to the French context’ (Koebel and Ladwein 1999). Another problem rests in the size and nature of samples, which are different in the three studies.

The difficulty of choosing between the three scales is due to the fact that none of them were specifically designed for an Internet context. Our study is based on the scale developed by Ferrandi et al. (1999), because it was validated using the biggest sample of students. The objective of the sponsor was to measure the impact of a website on modernity and sincerity of a brand. The adjunction of four adjectives (innovative, dynamic, unique and reliable) imposed by the sponsor to measure these two dimensions forced us to drop some of the dimensions identified in previous studies, and reduced the number of items to 15. Here are the 11 items of our scale (without the four additional items), classified according to the five dimensions of the scale constructed by Ferrandi et al. (1999):

1. **Sincerity**: sincere, authentic, trustworthy, safe;
2. **Excitement**: trendy, modern, bold, imaginative;
3. **Sophistication**: elegant;
4. **Robustness**: – (not included); and
5. **Liking**: cheerful, likeable.

We will check in which way our scale reproduces the dimensions of the scale constructed by Ferrandi et al. (1999).

Several other factors may influence perceived brand personality, such as website design, interactivity, prior knowledge of the brand and visit duration of the site. We will look now at the involvement in the product category, the attitude toward the site and the nature of the product.
OTHER FACTORS AFFECTING BRAND PERSONALITY

Enduring involvement in the product category

Lastovicka and Gardner (1979) conceptualized involvement as the familiarity or attachment to the product and the congruency between the product and the values of the individual. Zaichkowsky (1985) focused on the interest in the product category while Ratchford (1987) underlined the risk incurred or the importance of the decision. Laurent and Kapferer (1986) have proposed a multidimensional concept distinguishing five facets: interest, pleasure, value of the sign, risk importance; and the likelihood of making the wrong choice. For this study we needed a one-dimensional measure of enduring involvement. Therefore, we use the PIA scale developed by Strazzieri (1994). For methodological constraints (the length of the questionnaire could limit the number of respondents), we reduced the scale to two items, which correspond to two dimensions of the PIA scale.

Dijkstra and Van Raaij (2001) analysed the effects of unique or joint exposure to advertising in different media on the response of the consumer, with different levels of involvement. In that study, involvement in the product category was an important factor in media efficiency, because it influenced the level of attention to the messages. Media were classified into two categories: those under the control of the sender, called the ‘delivery media’ (television), and those under the control of the audience, the ‘extraction media’ (Internet, newspaper). Results show that the extraction media are more efficient at a high level of involvement, because they have a limited capacity to influence non-involved or passive consumers. Their study is limited in its application to the Internet because it examined only static websites. Nevertheless, we suppose that individuals involved in the product category are more likely to react positively to the brands’ website.

Attitude toward the site

Chen and Wells (1999) have transposed studies on attitude toward advertising to the context of the Internet. They constructed a scale to measure the overall attitude toward a website, which is defined as ‘web surfers’ predispositions to respond favorably or unfavorably to web content in natural exposure situations’. We consider that attitude toward the site is likely to moderate the effect of exposure to the site on brand image. Bridging the studies on advertising in classical media and those on the Internet, Chen and Wells (1999), together with Bruner et al. (2000) and Bruner and Kumar (2000) suppose that the relation between attitude toward advertising and attitude toward the brand, found in classical media, is applicable in the context of the Internet. The authors show that a positive attitude toward the site results in positive attitudes toward the brand. Therefore, we consider that attitude toward the site is an important covariate that has to be taken into account when evaluating the effects of site exposure on brand personality.

The nature of the products

Several authors like Mittal et al. (1989) and Johar and Sirgy (1991) have sought to distinguish utilitarian products, which are defined by their functionality, and auto-expression products, which are defined by their social and emotional values. Degeratu et al. (2000) measured the importance of a brand in traditional and online markets according to the product category. The authors demonstrated that branding had more value for the consumer when little information was available on the product’s features. To summarize: for products with few sensory attributes, the brand name is not very important. Similarly, for functional products (computers, fax, etc.) the brand name is not very important because much information exists or is available. On the contrary, for products that are difficult to evaluate online (e.g., fashion products), the brand name is more important. Donthu and Garcia (1999) found similar results in their study comparing buyers and non-buyers on the Internet. Our study uses ten brands, two for each of five product categories: cleaning products, mobile phones, luxury clothes, household electrical appliances and food.

Following the model of Degeratu et al. (2000) and Mittal et al. (1989), we divided our products into two categories: on the one hand, functional/utilitarian products (household electrical appliances, mobile phones) for which much factual information is available online, and on the other hand, auto-expressive products (cleaning products, luxury clothes and food). We expect a stronger effect of site exposure on functional/utilitarian products.

MODEL AND HYPOTHESIS

The research model that we will evaluate is presented in Figure 1.

Chang et al. (2002) showed in a qualitative research that ‘the web design elements may influence consumers’ perceptions of the brand … Out of the 32 web visits studied, in 9 visits, the participants’ perception of the company changed after visiting the site.’ Compared to other media, the Internet is characterized by young audiences. This fact is well known by Internet users themselves. They might think that a brand using this media chooses to target young people and therefore
they might see this brand as being younger and more modern than other brands that do not use the Internet. Therefore, we suggest that:

**Hypothesis 1**: Individuals exposed to a brand website will perceive the brand as:

- a: having a younger and more modern personality than those not exposed to the website; and
- b: more sincere and trustworthy than those not exposed.

Chen and Wells (1999), Bruner *et al.* (2000) and Bruner and Kumar (2000) showed that positive attitudes toward the website results in positive attitudes toward the brand. Therefore, we suggest that:

**Hypothesis 2**: Individuals who have a more favourable attitude toward the website will perceive the brand as:

- a: younger and more modern; and
- b: more sincere and trustworthy.

Degeratu *et al.* (2000) demonstrated that for functional products, the brand name is less important than for non-functional products. Therefore, we suggest that:

**Hypothesis 3**: The effect of exposure to a website on brand personality depends on the product type. For functional/utilitarian products the effect of website exposure:

- a: on youthfulness and modernity will be superior to the effect on auto-expressive products; and
- b: on sincerity will be superior to the effect on auto-expressive products.

Dijkstra and Van Raaij (2001) argued that extraction media are more efficient at a high level of involvement. This leads us to suggest that:

**Hypothesis 4**: The higher the involvement with the product category, the larger the positive effect of website exposure on brand personality.

**RESEARCH METHODOLOGY**

Our sample was drawn from an online panel, representative of the active Internet population. At the first stage, panel members were invited, by email, to visit a first site (called support site) in order to participate in a game. After the visit to the first site, respondents were invited, randomly assigned, to visit one of the ten brand websites. All websites used in this research were the existing websites of the brands, without any modification. Ten minutes after the beginning of the visit, a message appeared, asking the respondents not to forget to fill in the questionnaire at the end of their visit. When the respondents left the website, they were automatically directed to the online questionnaire, which was measuring their attitude toward the website, their involvement with the product category, and brand personality. Figure 2 describes the design of the experience for two brands (the sample sizes refer to initial objectives):

Here is the definition of two cells of the experimental design for two brands A and B:

- **Cell 1**: Visit to the site of brand A. Evaluation of brand personality for brands A and B. This cell serves as a non-exposed control group for brand B.
- **Cell 2**: Visit to the site of brand B. Evaluation of brand personality for brands A and B. This cell serves as a non-exposed control group for brand A.

The random assignment of respondents to the cells respects the constraint that two brands of a same product category are not in the same cell. This gives us 90 pairs of brands. Table 1 shows sample sizes for each product category according to the random assignment of respondents to the questionnaire.

We obtained on average 90 respondents per cell. The allocation by brand is quite homogeneous: about 170 respondents for a brand. As a result of the random assignment of respondents, 901 respondents were exposed to the website of one of the ten brands under study and
874 respondents were not exposed to the website of one of the ten brands.

Our study includes three covariates: enduring involvement, type of product, and attitude toward the site. Enduring involvement is measured by two items of the PIA scale. Nine items, rated on a seven-point agreement scale, measure attitude toward the site. Three items were taken from the literature, the other six were chosen in collaboration with the sponsor of the study:

- I like this website (Stevenson et al. 2000).
- The content of this site is very rich.
- This site is helpful.
- This site is really different than the other sites of the product category.
- feel comfortable surfing on this website (Chen and Wells 1999).
- would like to visit this website again in the future (Chen and Wells 1999).
- The website is entertaining.
- When exploring this website, I was absent-minded.
- When exploring this website, I felt in control of the situation.

### RESULTS OF THE STUDY

#### Sample description

Our sample comprised 1254 men (70.6%) and 521 women (30.4%). The age of respondents varied between 15 and more than 65 and the average is in the 25–34 years old category. The sample is biased toward frequent users, 85% of them using the Internet every day. The respondents are experts with this media because 60% of them have used the Internet for five years or more (since 1998 or before).

#### Reliability analysis of the scales

**The brand personality scale.** For the perceived brand personality scale, we have 15 items rated on a seven-point scale, going from ‘very slightly associated’ to ‘very deeply associated’. First, we verify that we find the same groups of items as Ferrandi et al. (1999). A principal component analysis of the covariance matrix cumulated over the ten brands and the 15 items, followed by a Varimax rotation, shows a three-factor model, corresponding to three dimensions out of the five obtained by Ferrandi et al. (1999). The KMO Measure of Sampling Adequacy is highly satisfactory (0.93) and the three factors explain 72% of the total variance. The three factors explain more than 50% of every item variance and the average variance extracted by each factor on its corresponding items is greater than 50%. Table 3 gives us the correlations of the items with the factors found by Ferrandi et al. is indicated by an asterisk.

### Table 1. Sample sizes by product category

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Cleaning products</th>
<th>Mobile phones</th>
<th>Luxury clothes</th>
<th>Household electrical appliance</th>
<th>Food</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non exposure</td>
<td>161</td>
<td>186</td>
<td>173</td>
<td>164</td>
<td>190</td>
<td>874</td>
</tr>
<tr>
<td>Website exposure</td>
<td>184</td>
<td>166</td>
<td>174</td>
<td>194</td>
<td>183</td>
<td>901</td>
</tr>
<tr>
<td>Total</td>
<td>345</td>
<td>352</td>
<td>347</td>
<td>358</td>
<td>373</td>
<td>1775</td>
</tr>
</tbody>
</table>

### Table 2. Respondent’s age, frequency of Internet use and familiarity with the Internet

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency (%)</th>
<th>Frequency of Internet use</th>
<th>Frequency (%)</th>
<th>Familiarity with the Internet</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–18 years</td>
<td>55 (3.1)</td>
<td>Every day</td>
<td>1501 (84.6)</td>
<td>Since 2001</td>
<td>33 (1.9)</td>
</tr>
<tr>
<td>18–24 years</td>
<td>396 (22.3)</td>
<td>4–6 times a week</td>
<td>198 (11.2)</td>
<td>Since 2000</td>
<td>296 (16.7)</td>
</tr>
<tr>
<td>25–34 years</td>
<td>712 (40.1)</td>
<td>1–3 times a week</td>
<td>71 (4.0)</td>
<td>Since 1999</td>
<td>363 (20.5)</td>
</tr>
<tr>
<td>35–44 years</td>
<td>340 (19.2)</td>
<td>1–3 times a month</td>
<td>5 (0.3)</td>
<td>Since 1998</td>
<td>369 (20.8)</td>
</tr>
<tr>
<td>45–54 years</td>
<td>191 (10.8)</td>
<td></td>
<td></td>
<td>Before 1998</td>
<td>714 (40.2)</td>
</tr>
<tr>
<td>55–64 years</td>
<td>70 (3.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 65 years</td>
<td>11 (0.6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1775 (100)</td>
<td>Total</td>
<td>1775 (100)</td>
<td>Total</td>
<td>1775 (100)</td>
</tr>
</tbody>
</table>
change the name of the excitement factor of Ferrandi et al. (1999) to ‘youthfulness’, because we think this name is better adapted to the items.

We examine the reliability of the three dimensions identified:

- For the youthfulness/modernity factor (eight items): Cronbach’s alpha is very good (0.923).
- For the sincerity/trust factor (five items): Cronbach’s alpha is also very good (0.906). By suppressing the item ‘sincere’, the alpha increases very little (0.91), which is why we will keep this item.
- For the sophistication factor (two items): Cronbach’s alpha is not very good (0.72), but this may be due to the fact that we only have two items on that dimension.

The third dimension of brand personality represents only 14.5% of the variance. It will not be included in our analysis.

To determine the effects of website exposure on the dimensions of youthfulness/modernity and sincerity/trust, we ran two separate analyses of variance with three covariates. This analysis is done for all ten brands aggregated together.

The attitude toward the site scale (ATTsite). After deleting two items of our ATTsite scale (absent-minded and control of the situation), the seven items have a Cronbach alpha of 0.883. The principal component analysis gives us a one-factor model, explaining 60% of total variance (see Table 4).

We obtained a one-dimensional concept. We added up the seven items to compute attitude toward the site.

Enduring involvement in the product category. Our scale is only composed of two items, which have a Cronbach alpha of 0.853. The two items are added together to create the involvement scale.

Type of product. We distinguish two types of products, functional/utilitarian products and auto-expressive products. This covariate is introduced in the analysis as a fixed factor.

Effects on brand personality

Youthfulness/modernity. Covariance analysis shows that our three covariates have a positive effect on youthfulness except enduring involvement. Attitude toward the site explains 16% of total variance. Enduring involvement explains 3.3%, but with a negative sign, the opposite of that expected. The distinction between functional/utilitarian and auto-expressive products has also a significant effect but explains only 0.9% of total variance. The effect of website exposure is significant, but explains only 0.7% of total variance (see Table 5).

We observe a significant interaction between site exposure and product type (F(1.1767) = 10.9, p = 0.001). As shown in Figure 3, website exposure has no impact for auto-expressive products (luxury clothes, food, cleaning products). On the contrary, it has a positive effect for functional/utilitarian products (household electrical appliance, mobile phone) for which youthfulness/modernity of the brand personality increases.
from 31.6 to 34.7. For all those effects, the strength of the tests is significant. On the whole, our model explains 22.1% of total variance of the youthfulness/modernity dimension.

Sincerity/trust. For this second dimension of brand personality, the covariates ‘enduring involvement’ and ‘attitude toward the site’ have a significant effect ($F(1.1769) = 25.5, p = 0.001$ and $F(1.1769) = 212.4, p = 0.001$). Attitude toward the site explains 10.8% of total variance and involvement 1.4%. But the product type does not have a significant effect. Similarly, the interaction between product type and website exposure is not significant.

The effect of website exposure is significant but weak (0.4% of variance). The marginal mean for the sincerity/trust dimension increases from 21.6 to 22.5. On the whole, our model explains 13.5% of total variance of the sincerity/trust dimension.

As we have seen, website exposure has a positive and significant effect on the dimensions of brand personality, although the variances explained are weak. However, the analyses were made on an aggregate level, which are the dimensions of youthfulness/modernity and sincerity/trust. We will now examine the effects of website exposure at a detailed level, on the fifteen items, using a multivariate analysis of the variance with our three covariates (Mancova).

Multivariate analysis of covariance for the fifteen items. Taking into account the effect of the three covariates, the marginal means graphic of the 15 items of brand personality (Figure 4) shows clearly the impact of website exposure. Exposed individuals have higher scores on all items than unexposed individuals.

The multivariate analysis of covariance shows significant results at the 5% level for the three covariates. The observed power of the experiment is satisfactory. Website exposure has a positive and significant effect on all brand personality items (see Table 6).

However, the items of brand personality are not affected in the same way by our fixed factors, website exposure and product type. In Table 7, we can see that every item with a significant difference has a higher mean for website exposure (nine items out of 15: sincere, imaginative,
Figure 4. Marginal means graphic of the 15 items of brand personality according to website exposure

Table 6. Analysis table of multivariate tests

<table>
<thead>
<tr>
<th>Effect</th>
<th>$F$</th>
<th>$df$</th>
<th>Sig.</th>
<th>$\eta^2$</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>7.28</td>
<td>15</td>
<td>0.000</td>
<td>0.059</td>
<td>1</td>
</tr>
<tr>
<td>Attitude</td>
<td>28.69</td>
<td>15</td>
<td>0.000</td>
<td>0.197</td>
<td>1</td>
</tr>
<tr>
<td>Functional products</td>
<td>11.42</td>
<td>15</td>
<td>0.000</td>
<td>0.089</td>
<td>1</td>
</tr>
<tr>
<td>Website exposure</td>
<td>1.98</td>
<td>15</td>
<td>0.014</td>
<td>0.017</td>
<td>0.962</td>
</tr>
<tr>
<td>Exposure * funct.products</td>
<td>1.24</td>
<td>15</td>
<td>0.231</td>
<td>0.011</td>
<td>0.792</td>
</tr>
</tbody>
</table>

Table 7. Marginal means of the 15 items of brand personality and significance level

<table>
<thead>
<tr>
<th>Website exposure</th>
<th>Type of Product</th>
<th>Exposure * funct. products</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marginal Means</strong></td>
<td><strong>Sig.</strong></td>
<td><strong>Auto-expressive</strong></td>
</tr>
<tr>
<td><strong>Non exposed</strong></td>
<td><strong>exposed</strong></td>
<td></td>
</tr>
<tr>
<td>Sincere</td>
<td>3.82</td>
<td>4.08</td>
</tr>
<tr>
<td>Imaginative</td>
<td>3.91</td>
<td>4.18</td>
</tr>
<tr>
<td>Innovative</td>
<td>4.07</td>
<td>4.41</td>
</tr>
<tr>
<td>Bold</td>
<td>3.69</td>
<td>3.88</td>
</tr>
<tr>
<td>Authentic</td>
<td>4.05</td>
<td>4.22</td>
</tr>
<tr>
<td>Trustworthy</td>
<td>4.54</td>
<td>4.75</td>
</tr>
<tr>
<td>Dynamic</td>
<td>3.99</td>
<td>4.18</td>
</tr>
<tr>
<td>Cheerful</td>
<td>3.72</td>
<td>3.81</td>
</tr>
<tr>
<td>Modern</td>
<td>4.24</td>
<td>4.38</td>
</tr>
<tr>
<td>Safe</td>
<td>4.57</td>
<td>4.72</td>
</tr>
<tr>
<td>Likeable</td>
<td>4.02</td>
<td>4.19</td>
</tr>
<tr>
<td>Trendy</td>
<td>3.82</td>
<td>4.00</td>
</tr>
<tr>
<td>Elegant</td>
<td>3.91</td>
<td>4.06</td>
</tr>
<tr>
<td>Unique</td>
<td>3.57</td>
<td>3.63</td>
</tr>
<tr>
<td>Reliable</td>
<td>4.59</td>
<td>4.74</td>
</tr>
</tbody>
</table>
innovative, bold, authentic, trustworthy, dynamic, likeable and trendy) and for functional/utilitarian products (nine items out of 15: imaginative, innovative, bold, authentic, dynamic, cheerful, modern, trendy and unique).

For the interaction between website exposure and product type, the means of the eight items of the youthfulness/modernity dimension of the brand increase significantly for functional/utilitarian products. On the other hand, no item of the sincerity/trust dimension differs significantly, which confirms our prior results.

Our results can be summarized as follows:

• on the one hand, a visit to a website has a positive impact on youthfulness and modernity of the brand’s personality; and
• on the other hand, a positive attitude toward the website plays a fundamental role in the construction of trust towards the brand, a fact particularly important for an e-commerce website.

CONCLUSION
This study demonstrates the influence of a forced visit to a website on brand personality. Table 8 summarizes our hypothesis and the results of our tests.

Results show that visiting a website has a positive impact on the youthfulness and sincerity of a brand. The means of nine items out of 15 are modified significantly (at a significance level of 5%) by a forced visit to a website. In addition, we have shown that attitude toward the site has an important effect on brand personality. The brand is perceived younger and more modern when the visitor to the site has a positive attitude towards the brand website than when (s)he has a negative attitude. Furthermore, this positive attitude reinforces the perception of the brand as more sincere and trustworthy, which is particularly important for e-commerce websites.

Concerning enduring involvement in the product category, we obtain results opposite to our hypothesis, i.e. we found that the more involved someone is in a product category, the more negative is the impact of website exposure on brand personality. This negative result could be explained by the fact that for some of the brands in our sample, being perceived as young and modern is not an advantage.

Limits and further research
Our research has several limitations. First, our sample is principally composed of males, expert in Internet usage (experienced and frequent users). This characteristic could have influenced our results. In addition, participants in the experiment were recruited to participate to a game. Our experimental design was a forced visit with control group. The measure of the effect of website exposure took place after exposure only. It may also have been important to measure pre-exposure brand and site awareness. Another limitation of this study is that we did not control for whether or not the respondents had prior experience with the brand (outside its website). In addition, we did not distinguish between different types of websites and the visit duration was not taken into account. Also, the effect of repeated website exposure was not examined. These limits will be taken into account in a later research, using an experimental design with repeated website exposure (going from no exposure to three exposures). In addition, brand image will be measured through brands’ associations and we will take into account measures of website’s quality.

Finally, this study only examined the effects of website exposure using a reduced scale of brand personality. It

Table 8. Summary of research hypothesis and their results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Individuals exposed to a brand’s website will perceive a younger and</td>
<td>Confirmed</td>
</tr>
<tr>
<td>more modern personality than those not exposed.</td>
<td></td>
</tr>
<tr>
<td>H1b: Individuals exposed to a brand’s website will perceive the brand as</td>
<td>Confirmed</td>
</tr>
<tr>
<td>more sincere and trustworthy than those not exposed</td>
<td></td>
</tr>
<tr>
<td>H2a: Individuals who have a more favourable attitude towards the website</td>
<td>Confirmed</td>
</tr>
<tr>
<td>will perceive the brand as younger and more modern.</td>
<td></td>
</tr>
<tr>
<td>H2b: Individuals who have a more favourable attitude towards the website</td>
<td>Confirmed</td>
</tr>
<tr>
<td>will perceive the brand as more sincere and trustworthy.</td>
<td></td>
</tr>
<tr>
<td>H3a: The effect of exposure to a website on a brand’s personality depends</td>
<td>Confirmed</td>
</tr>
<tr>
<td>on the product category. For functional/utilitarian products, the</td>
<td></td>
</tr>
<tr>
<td>effect of exposure on youthfulness and modernity will be superior</td>
<td></td>
</tr>
<tr>
<td>than for auto-expressive products.</td>
<td></td>
</tr>
<tr>
<td>H3b: For functional/utilitarian products, the effect of site exposure on</td>
<td>Confirmed</td>
</tr>
<tr>
<td>sincerity will be superior than the effect on auto-expressive products.</td>
<td></td>
</tr>
<tr>
<td>H4: The highest the involvement with the product category, the largest the</td>
<td>Not confirmed</td>
</tr>
</tbody>
</table>
would be interesting to replicate this study taking into account the effects of a website visit on brand personality, using all the items of the brand personality scale of Ferrandi et al. (1999).

ACKNOWLEDGMENT

The authors thank Wanadoo Régie and IPSOS ASI for their collaboration in this study.

Notes

1. Instructions: ‘After some intermediary questions, you’ll be invited to visit a second site. To better appreciate the general ergonomics of the second site, we’ll ask you to visit this site in a free manner, as if it would be your first visit. You’ll have to navigate and click on several pages, as you would do by yourself to discover a new site, during about ten minutes’.

2. We’ll not cite the brand names for confidential reasons.

3. I feel particularly attracted by the products of type X.

4. Considering the effects of covariates, they are evaluated at their means.

5. This methodology was necessary to provide us with an adequate response rate (the questionnaire would have been too long). This is particularly important when it is an online questionnaire without interviewer. In addition, unless ensuring a questionnaire in two separate steps, questioning individuals concerning their attitude before exposure would have biased results.

6. There exist several typologies classifying websites according to their objectives, their activity or their audience. According to Gerbert et al. (2000), the ten sites of our study are company websites, having one or several objectives. The objectives of a company could be: presence site, image site, marketing site, retailing site or e-commerce site.

References


