THE EFFECT OF CULTURE AND THE CULTURAL FRAMEWORK OF LANGUAGE ON ONLINE INFORMATION-PROCESSING

ABSTRACT

The present work examines the effect of the user's language, as a vehicle for cultural values, on their processing of the information contained within a website. A sample of 491 internet users from two different cultures (British and Spanish) was created. Half the users were asked to browse the experimental website in their mother tongue, while the other half browsed in their second language (British participants browsing in Spanish and the Spanish browsing in English). The key findings of the research demonstrate that information-processing is moderated by the user's culture and the language in which they process the information.

KEYWORDS

Perceived risk online, cultural dimensions, language, online information-processing

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1. Introduction

The Internet as a medium has achieved global reach, registering over 2,200 million users world-wide by the end of 2011 (Internet World Stats, 2012). Within this context, it is vital to take into account the cultural differences that exist in the different meta-markets, as well as the particular language that is most advisable for each context. As suggested by certain authors, the Internet may be considered to be the greatest contributor to the globalisation of markets and to the sophistication and growing power of the consumer (Constantinides, Lorenzo-Romero & Gómez, 2010), thanks to its capacity to give users of different cultural profiles the opportunity to interact with firms located anywhere in the world. What is more, within this overall scenario most of the inter-cultural contacts take place between users who speak different languages that also convey different cultural values. Tavassoli (2002) and Puntoni, Langhe, Stijn & Van Osselaer (2009) demonstrated the influence of language on the effectiveness of marketing communication. Depending on the language in which subjects processed information, the authors showed that consumer behaviour may vary. Language conveys cultural references that shape cognitive processing (Luna, Ringberg & Peracchio, 2008), such that users who share similar socio-demographic characteristics may respond differently depending on the language they use to process information (King, 2010). This opens up the possibility of communicating different cultural values via communications campaigns by deliberately using different languages.

The present research examines this question in some depth, with the principal goal of analysing how language moderates the influence of perceived risk online on attitudes towards a website and on loyalty towards the service offered by the website (in our case, a tourist destination).

2. Theoretical framework

Language is associated with cultural frameworks, in the same way that the symbolic construction of our world is linked to linguistic structures (Singh, 2002). For this reason, communicating in a given language can increase one's cognitive access to values associated with that language (Carroll & Luna, 2011; Ringberg, Teihlen, Luna & Peracchio, 2010). According to Marian & Kaushanskaya (2004), the language used by a bilingual subject influences their cognitive processing style. Hence it is likely that when processing information in a language that carries individualistic cultural values, bilingual subjects will process the information from a more individualistic perspective. On the one hand, Wyer (2002), in his research on the influence of the semantics and complexity of different languages, which was international in scope, concluded that language can generate different blocks of concepts to be taken into account when analysing information. For example, countries in the East tend to be more collectivistic and place greater emphasis on the group than on individual success. King (2010) undertook a study using a sample of bilingual students from the University of Hong Kong, taking language as a moderating factor and analysing the cultural dimension 'uncertainty avoidance' identified by Hofstede (2001). The experiment demonstrated that those subjects who had received their instructions in Chinese gave responses that were more in line with Chinese cultural values, whilst those using instructions in English presented values that were more in keeping with Western cultural norms. These conceptual links are closely related to the Conceptual Feature Model (DeGroot, 1992) which is based on the idea that the characteristics activated by a given word in one language are not necessarily the same as those triggered by the equivalent word translated into another language. For example, it could be said that although the English translation of the Spanish word '*cena'* is 'dinner', the concept evokes a different context which is entirely shaped by the cultural framework conveyed by the language being used. Taking the

Conceptual Feature Model into account, it can be affirmed that the cultural values of an individual are moderated by their level of fluency in a second language.

The majority of cross-cultural studies in the field of marketing draw on the cultural framework developed by Hofstede (2001), as identified in various different works (Craig & Douglas, 2011; Engelen & Brettel, 2011). With regard to the validity of Hofstede's framework (2001), Taras, Steel & Kirkman (2011) analysed 451 studies covering over half a million individuals from 49 different countries and regions, and arrived at the conclusion that his model continued to be useful over 30 years after it was first proposed. The model classifies cultures into five dimensions: a) *power distance* – the degree to which less powerful members of a society expect there to be differences in levels of power; b) *uncertainty avoidance* – the extent to which a society accepts uncertainty and risk; c) *individualism* – the extent to which people from a given society create strong or weak links with each other; d) *masculinity* – depending on the role of women in a given society; and e) *long-term orientation* – depending on whether individuals seek success in the short or long term. In light of this classification, it is to be expected that purchasing behaviour on the Internet should be moderated by the country – and therefore the culture – to which the subject belongs.

Within the classic approach to information-processing in which attitudes are a key antecedent of consumer behaviour (this being measured in terms of loyalty), various different studies in the online field have highlighted the essential role of perceived risk in this processing (Wakefield & Whitte, 2006). This perceived risk online will be significantly affected by the culture of the individual concerned, via the 'uncertainty avoidance' dimension (Frost, Goode & Hart, 2010; Lee, Joshi & Bae, 2009), as will the degree to which they welcome new technologies (Li, Hess, McNab & Yu, 2009). It is to be expected that societies with a higher uncertainty avoidance (UA) value will also score higher in terms of perceived risk online and lower in terms of acceptance of new technologies.

In light of these issues we submit the following research hypotheses:

H_1: There is a negative relationship between perceived risk and attitude towards the website, which will be greater amongst users from cultures with a high level of uncertainty avoidance who are browsing in their mother tongue, compared to users from that same culture who are browsing in a language from a culture with low uncertainty avoidance.

H_2: There is a positive relationship between attitude towards the website and loyalty, which will be lesser amongst users from cultures with a high level of uncertainty avoidance who are browsing in their mother tongue, compared to users from that same culture who are browsing in a language from a culture with low uncertainty avoidance.

H_3: There is a negative relationship between perceived risk and attitude towards the website, which will be lesser amongst those users from cultures with a low level of uncertainty avoidance who are browsing in their mother tongue, compared to users from that same culture who are browsing in a language from a culture with high uncertainty avoidance.

H_4: There is a positive relationship between attitude toward the website and loyalty, which will be greater amongst users from cultures with a low level of uncertainty avoidance who are browsing in their mother tongue, compared to users from that same culture who are browsing in a language from a culture with high uncertainty avoidance.

3. Methodology

In order to test the proposed hypotheses, a 2x2 between-subjects experimental design was chosen, using two independent variables with two levels each, namely: culture (Spanish *vs*. British) and processing language (Spanish *vs*. English). The choice of cultures for the experiment was based on cultural differences distinguished by using Hofstede's indices (Hofstede, 2001). Spain and Great Britain were selected due to their differences in the UA dimension (Spain, 86 *vs.* Great Britain, 35). This decision shaped the treatment of the second independent variable, the processing language. In order to control this factor the sample

subjects were randomly assigned to the experimental website that was presented either in their mother tongue (that is, in Spanish for the Spanish and in English for the British – denominated as L_1), or in a second language (English for the Spanish and Spanish for the British – denominated as L_2).

The experiment required a professional website to be purpose-built, with its own domain name, providing information on a fictitious tourist destination called Buyuada (www.buyuada.org). Two versions of the site were created – one written in Spanish and the other in English. The subjects were selected by an external company commissioned to establish an online survey panel for the experiment. Internet users from Great Britain and Spain were invited to participate.

The final sample comprised 491 Internet users, of whom 46% were Spanish (227) and 54% British (264). The final sample was distributed by treatment as follows: T1 (Spanish browsing in Spanish) 118 subjects; T2 (Spanish browsing in English) 104 subjects; T3 (British browsing in English) 196 subjects; and T4 (British browsing in Spanish) 68 subjects. The sample was well balanced in gender terms, comprising 53% men (258) and 47% women (233). Finally, the sample represented an average age of 38.66 years. The external company made email contact with each panel member and asked them to complete a filter questionnaire to establish their level of competence in their second language. Once the language filter was complete, the subjects were sent a link to the appropriate version of the website, together with instructions. The users were to browse through the website and put together their own tourism package based on an outward flight, a return flight, hotel accommodation, and a restaurant, from the multiple options on offer. Once browsing was complete, subjects were redirected to a questionnaire.

With regard to measurement, 7-point Likert scales were used, on which 1 equalled *totally disagree* and 7 equalled *totally agree*. Specifically, attitude towards the website was measured using the scale adapted from Chen, Clifford & Wells (2002): *After having browsed the website I think that . . . (1) this website is convenient; (2) this website saves me time: (3) this website is not secure.* To measure behaviour, we based this on loyalty towards the tourist destination, using the scale developed by Zeithaml, Berry & Parasuraman (1996): *After coming across the tourist destination on the website, it is likely that . . . (1) I will say positive things about the destination to other people; (2) I will recommend the location to anyone who asks for my advice; (3) I will encourage my friends and family to visit this location; and (4) I will visit this destination for a future holiday.* The risk perceived online by the individual when processing the information on the experimental website was measured using the scale proposed by Wakefield & Whitten (2006): *Whilst I was browsing this website, and due to its characteristics I felt that: (1) other people might be able to access information about me if I make a reservation via this site; (2) there is a high risk of loss if I make a reservation via this site; (3) there is a major risk involved in making a reservation via this site; (4) making tourism reservations via this site is risky.* The study also measured variables of a socio-demographic nature such as gender and age, together with the cultural dimensions using the scale VSM94 developed by Hofstede (2001).

4. Findings

The cultural scores obtained for the sample revealed that, overall, the difference in cultural dimensions held true when compared to Hofstede's (2001) original study. The Spanish sample obtained a score of 80.62 and the British, 48.39.

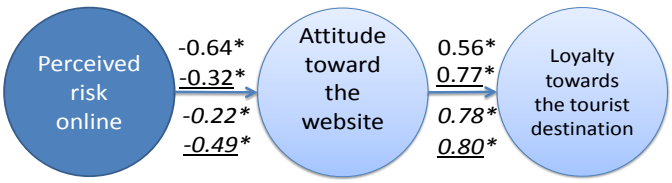
Testing the proposed hypotheses required us to estimate the proposed causal model (Perceived risk online → Attitude towards the website →Loyalty towards the tourist destination) by means of a multigroup SEM analysis for each of the four treatments. To this end, we used the programme LISREL 8.8. The measurement model was found to be

satisfactory, with all the items presenting individual reliability (R^2) above 0.05, and composite reliability and variance extracted values for the three scales being above recommended values (0.7 and 0.50, respectively) (Hair et al., 1995). Likewise, the discriminant validity of the three constructs in each group was tested following the procedure proposed by Fornell & Larcker (1981), according to which the square root of the extracted variances must be greater than the correlations between constructs. Finally, the goodness-of-fit indicators revealed that the estimated multigroup model was quite acceptable (Satorra-Bentler Scaled Chi-Square: 215.35; DF: 171; p-value: 0.012; RMSEA: 0.046; NFI: 0.97; NNFI: 0.99; Critical N: 491.59). The testing of H_1 and H_2 required us to compare the estimated parameters for the Spanish sample browsing in L_1 (Spanish – high uncertainty avoidance) and in L_2 (English – low uncertainty avoidance). H_1 proposed a negative effect of perceived risk online on attitude towards the website, this being greater for the sample group browsing in L_1 than for those browsing in L_2. As can be seen in Table 1 and Figure 1, the coefficients were negative, significantly different between both groups and in the expected direction (p=0.00); hence H_1 is confirmed. With regard to the relationship between attitude towards the website and loyalty towards the tourist destination, H_2 proposed that the relationship is positive and lesser for the sample browsing in L_1 compared to the sample browsing in L_2. The results showed coefficients in the expected direction although the differences were only significant to 6%, thus confirming this hypothesis. Confirmation of both hypotheses was due to the fact that the Spanish language registers a higher score for the cultural dimension 'uncertainty avoidance' than the English language. Meanwhile H_3 and H_4 propose basically the same relationships as for H_1 and H_2, except for the fact that in the British sample, L_1 and L_2 refer to English and Spanish, respectively. Referring once again to the results outlined in Table 1, H_3 is confirmed, as in the case of British users who are browsing in L_1 the negative effect of perceived risk on attitude towards the tourist destination is lower than when they are browsing in L_2. Finally, H_4 is not confirmed as no significant differences were observed between the coefficients of the relationship between attitude towards the website and loyalty towards the tourist destination (p=0.43). It would seem, therefore, that language does not moderate this relationship amongst individuals from the British culture.

Table 1. Testing for significant difference between coefficients (non-standardised coefficients)

Culture	Spanish						British					
Language	Spanish (L1)		English (L1)		t	p-value	English (L1)		Spanish (L2)		t	p-value
	Coef.	S.E.	Coef.	S.E			Coef.	S.E	Coef.	S.E		
Per.Risk→ Att.	-0.67	0.09	-0.33	0.1	2.53	0.00*	-0.23	0.08	-0.51	0.14	1.74	0.04**
Att. → Loy	0.53	0.07	0.67	0.06	1.52	0.06***	0.73	0.06	0.75	0.1	0.17	0.43

(*) p<0.01; (**) p<0.05; (***) p<0.1



Spanish sample browsing in Spanish: Normal letters
Spanish sample browsing in English: Normal letters underlined
British sample browsing in English: *Italicised letters*
British sample browsing in Spanish: *Italicised letters underlined*

(*) → p<0.001

Figure 1. Estimated structural model (Common Metric Completely Standardized Solution)

5. Conclusions and implications

The originality of the contribution made by the present research lies in its cross-cultural analysis pertaining to the development of attitudes and loyalties on the Internet as moderated by language as a vehicle for cultural values, including the direct influence of perceived risk online on attitude towards the website and its indirect influence on loyalty towards the tourist destination offered on that site.

Analysis of the results reveals that the language in which the user processes the information (L_1 or L_2) is a key moderator of user behaviour on the Internet. Using Hofstede's cultural dimensions (2001) as a reference point, it can be concluded that the differences found in the uncertainty avoidance dimension explain in part the user's behaviour. Those languages associated with a lower uncertainty avoidance value help the user to perceive less risk when browsing than do those languages associated with higher values, a fact that also influences the relationship between attitudes towards the website and loyalty towards the tourist destination. For this reason it is recommended that those firms with an international orientation that wish to translate the content of their websites into other languages should pay attention not only to the message they wish to convey but also the language in which it is to be conveyed, recognising the importance of the cultural values that a given language puts across. According to the findings of our study, even if the information contained within the firm's website remains in the original language, their slogan could be translated into a second language so as to be understood by users, with a view to ensuring that they associate it with cultural values that generate positive attitudes for them (Puntoni et al., 2009). One example of this approach would be the classic advertising campaign launched by Nike, which used the slogan '*Just Do It'* across all countries regardless of their native language. Being in English, the slogan achieved the characteristics of freedom by means of the 'individualism' dimension, the notion of triumph by means of the 'masculinity' dimension, and the sense of freedom from the bonds of hierarchy, via the low 'power distance' index of the British culture. Had the slogan been translated into Spanish ('*Hazlo'*), for example, it would have conveyed a sense of obligation (power hierarchy), with no connotations of freedom or triumph, as the Spanish language would not succeed in conveying these values in its structure.

In view of these conclusions, it is recommended that firms study such cultural differences when designing their websites and selecting a suitable language therein. This issue is of particular interest for the tourism sector as in the majority of destinations, potential clients come from different cultural backgrounds, and thus it would be advisable to ensure that any commercial strategies are segmented by types of culture and language.

Looking to the future, an interesting line of research would be to examine this question in more depth by including other cultures and languages so as to establish whether the moderating effect of language on online information-processing continues to hold true.

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