Does language matter? A cross-national comparison of the moderating effect of language on website information-processing

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ABSTRACT

The globalized nature of markets has provoked interest in whether cultural difference may affect how consumers process the information via websites. Language, as a vehicle for cultural values, is an important factor in their design and the messages they convey. The present study analyzes how language moderates the relationships between online perceived risk, perceived usability and satisfaction online. To fulfill the research aim, the work focuses on two languages that pertain to countries with markedly different cultural values. It employs a between-subjects experimental design, with the processing language (Spanish vs. English) as the independent variable. The study finds that online information-processing is moderated by the language in which users process information. It also demonstrates that firms can reduce the negative effect of perceived risk on perceived usability (and on satisfaction online) using the language known by the user that carries cultural values associated with a lower level of uncertainty avoidance.

1. Introduction

The globalized nature of markets has increased the importance of national cultural values in online consumer behavior (Seidenspinner & Theuner, 2007). By definition, the potential users of any website are international and intercultural. In the majority of inter-cultural interactions, the individuals concerned speak different mother tongues, which act as vehicles that convey different cultural values. Within this context, it is vital to take into account the cultural differences that exist among Internet users and endeavor to understand the effect of the language they use on how they process information (Azab & Clark, 2017; Li, Hess, McNab, & Yu, 2009; Puntoni, De Langhe, & Van Osselaer, 2009; Singh, Baack, Kundu, & Hurtado, 2008). Tenzer, Terjesen, and Harzing (2017) note that the issue of language has, for many years, been of enormous interest for international business, and that the relationship between language and culture represents a challenge for researchers in this field, while calling for further investigation. Such research would enable firms operating in international markets or with clients from different countries to be able to adapt their messages to the most appropriate language, in line with the cultural values of the client. Among the key languages worldwide as measured in terms of volume of Internet users, including first- and second-language users, are English (565 million users), Chinese (509 million) and Spanish (165 million) (Internet World Stats, 2016), these languages also being the most widely-spoken in the world in general.

Those organizations and individuals who successfully handle these languages are at a distinct advantage in terms of their capacity to undertake commercial or other dealings on a worldwide scale. So, why should marketers pay attention to the question of language in online services? There are two key reasons. First, the Internet is a global medium; and second, globalization of that medium leads to a multilingual environment. Those individuals and organizations that dominate foreign languages will have a competitive advantage in terms of being able to participate in trade and exchange on a worldwide level (Li & Kalyanaraman, 2012).

Different studies from the business and marketing arena have found that language is associated with cultural frameworks (De Angelis, Tassiello, Amatulli, & Costabile, 2017; Holmqvist, Van Vaerenbergh, & Grönroos, 2017; Luna, Ringberg, & Peracchio, 2008; Marian & Kaushanskaya, 2004; Tenzer et al., 2017; Wong & Hong, 2005; Zhang, Laroche, & Richard, 2017) and that, as such, it influences cognitive processing. Hence, it is important to consider this factor as part of business strategy development—particularly in those sectors such as tourism, characterized by an international client base comprising many different mother tongues.

The main objective of the present study is to examine how the language in which the information is presented on a website affects the relationship between perceived risk, perceived usability and user

satisfaction while browsing the website of a fictitious tourist destination. Given that language conveys cultural values, the present investigation employs a sample of users from two cultures—those of Spain and Britain—which present very different cultural values, according to the classic cultural framework developed by Hofstede (2001).

This article is set out as follows: first, we present a review of the literature on applied linguistics related to consumer behavior, its relationship to culture, and the capacity of language to convey cultural values. Second, we provide and justify in theoretical terms the proposed relationships between the dependent variables and the moderating effect of the language in which information is processed (mother tongue vs. second language). Third, we describe in detail the experimental design behind the study and examine: the selection of the independent variable (language type); the chosen cultures; the experimental website design and related stimuli; the sample description; and the dependent measures used in the study. Fourth, we provide an outline of the data analysis, testing of the hypotheses, and a discussion of the results. Finally, we consider the conclusions from the work, its limitations and future potential areas for investigation.

2. Theoretical background

2.1. The language and the cultural framework on information-processing

Of all the aspects of a national culture, language is a particularly critical element (Zhang et al., 2017), as the use of a language that is familiar to the consumer and coherent with his or her cultural values will improve their consumption experience. It may even help a firm avoid a break-down in customer service (Holmqvist et al., 2017; Touchstone, Koslow, Shamdasani, & D'Alessandro, 2017).

Symbolic construction of the world is linked to linguistic structures at the perceptual level, which is the primary level within the development of the identity of a culture (Singh et al., 2008). The observable differences in the way in which different languages divide reality, depending on their distinct connotations, have led some authors to assert that highly tangible connections exist between language and thought (Alcántara-Pilar, Del Barrio-García, Crespo-Almendros, & Porcu, 2015; Puntoni et al., 2009). For Sapir (1949), language is an exclusively human method that is formed quite deliberately as the product of social habit and molds human thought. Even as early as the 1940s, this author emphasized the notion of language as the shaper of how we perceive reality. The concept of 'linguistic relativity' emerged out of this stance on the relationship between language and reality. The linguistic relativity concept was developed by Whorf (1956) and subsequently evolved into the Sapir-Whorf hypothesis. In its most radical reading it holds that a language determines a person's world-view and entirely shapes the thinking of those who speak it, meaning that only those thoughts that fit the categories offered by the language in question will be possible. Years later, Hunt and Agnoli (1991) re-conceptualized the Sapir-Whorf hypothesis in terms of how linguistic forms affect the process of conception. In their modern version of the hypothesis, the correlation between language and thought is less black-and-white: language influences thought, but our cognitive capacities are, in part, quite independent of linguistic formulations. Current studies on linguistic relativity draw on this later expression of the hypothesis (Alvarez, Taylor, & Gomez, 2017; Cleveland, Laroche, & Papadopoulos, 2015; De Mooij, 2011). Other studies that draw on Hunt and Agnoli's definition of the hypothesis (Gudykunst, Ting-Toomey, & Chua, 1988) hold that, when an individual expresses themselves in a language other than their first language, provided they have reached a degree of competence and fluency in the second language, they will automatically and unconsciously adapt to the cultural values of that language.

According to Carroll and Luna (2011), Noriega and Blair (2008) and Puntoni et al. (2009), language plays a highly important role in expressing cultural norms and beliefs. When people use a language, they construct a reality, using the necessary words to describe the context they find themselves in. It is this latter factor—context—that makes those mental constructions differ from place to place, culture to culture (Lowrey, 2013; Marian & Neisser, 2000). Other authors consider language to be inherent to a specific culture and an embodiment of it (Welch & Welch, 2008). We should understand language not just as a simple vehicle for carrying meaning but rather as a medium that activates cultural meaning systems; not only as a means to communicate but also as a tool of thought (Alvarez et al., 2017; Cleveland et al., 2015). As Hofstede (2001: 21) suggested, "*language is the most clearly recognizable part of culture*".

There are two perspectives that emerge from linguistic relativity: the psycholinguistic and the sociolinguistic. The former, based on the Conceptual Features Model (CFM) (De Groot, 1992) and the Revised Hierarchical Model (Kroll & Stewart, 1994), studies how, when individuals are processing information in a language other than their native tongue (L2), they adopt L2's cultural values. That is, a person processing proficiently in L2 will quite naturally draw on the cultural context of that second language in their manner of thinking, interpreting and expressing themselves. This is known as cultural frame-switching, which has been described as a specific type of priming that changes a person's ability to identify, produce or classify an item as a result of a previous encounter with that, or a related, item (Schacter, Dobbins, & Schnyer, 2004). By activating certain associations in memory, an individual is more likely to think about those associated concepts, ideas, or beliefs and/or to behave in a way that is consistent with those ideas and beliefs, when asked to process information (Noriega, 2015). According to the concept of cultural frame-switching, individuals who speak two languages fluently develop conceptual structures that enable them to automatically switch between the different cultural identities associated with each language and use the corresponding semantic structure when they change the language in which they are processing information (Ross, Xun, & Wilson, 2002). This theoretical approach has been corroborated empirically both through classic behavioral studies (Schacter et al., 2004), as well as by brain-imaging studies (Kim, Relkin, Lee, & Hirsh, 1997; Perani et al., 1998). Other studies in the field of psychology have shown that bilingual individuals can activate different cultural frameworks depending on the language they are using (Lowrey, 2013; Marian & Neisser, 2000).

According to CFM (De Groot, 1992), the formation of two distinct knowledge structures in the brain enables an individual to develop dual cultural identities, each of them with a different semantic understanding that may be more strongly associated with distinct languages. Further, this construction of two different semantic structures arises both in the case of those who learn L2 from birth and among those who achieve fluency in L2 later in life (Kim et al., 1997; Silverberg & Samuel, 2004). The hypotheses derived from CFM that consider language to be a vehicle for cultural values have been corroborated by brain-imaging studies (Kim et al., 1997; Noriega, 2015; Perani et al., 1998) and by various behavioral studies (Alcántara-Pilar, Del Barrio-García, Porcu, & Crespo-Almendros, 2017; Alvarez et al., 2017; Li, 2010; Touchstone et al., 2017).

2.2. Cross-cultural research in management and marketing

Since the 1980s, there has been an on-going debate regarding which approach is the most appropriate for studying and comparing cultures. Among other approaches in the literature, the cultural dimensions model developed by Hofstede (2001) is the most widely accepted such framework among researchers, particularly in the business sphere (Taras, Steel, & Kirkman, 2011).

Between 1967 and 1973, Hofstede used data from over 116,000 IBM employees in > 60 countries to derive relevant cultural value dimensions: Power Distance (PD), expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally; Uncertainty Avoidance (UA), deals with a society's