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## **An interdisciplinary approach to brand association research**

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### **Abstract**

**Purpose** – The purpose of this paper is to discuss the current role of qualitative research in the analysis of the relations between brands and consumers in new market spaces, with particular reference to how it can be enhanced with quantitative techniques to study interactions in online communities.

**Design/methodology/approach** – The paper reviews key scientific contributions in the area of qualitative marketing research. Drawing from this theoretical background, the authors then propose the integration of digital ethnography (a qualitative approach) with quantitative text mining as an innovative approach to gain insights into perceptions of brand associations among online consumers.

**Findings** – The paper contributes to a greater awareness of both limitations and new perspectives in relation to qualitative market research, while suggesting innovative paths for future research.

**Practical implications** – The new methodological approach described can be used to better understand brand knowledge based on consumer brand associations. These insights can then be applied towards developing and implementing effective branding strategies.

**Originality/value** – The authors propose an interdisciplinary methodology to study consumer behaviour in online communities which incorporates digital ethnography and computer-assisted textual analysis.

Particularly the latter technique (borrowed from the field of linguistics) has not yet been exploited

extensively in marketing research, but is capable of offering new types of knowledge with important implications for strategic brand management.

Keywords Text mining, Online communities, Brand associations, Digital ethnography,

## **1. Introduction**

Both quantitative research and qualitative research are well established in management studies as alternative methodological approaches. They are expressions of two different paradigms and are grounded in positivism and interpretivism, respectively (Carson, 2001; Hanson and Grimmer, 2005). These concepts reflect two research philosophies that differ on three levels: ontological (reality), epistemological (the relationship between reality and researcher) and methodological (the way to discover reality) (Morgan and Smircich, 1980). Positivism considers reality as external and “given”, and “discovers and measures independent facts about a single reality which is assumed to exist driven by natural law and mechanism” (Carson, 2001, p. 5). The researcher is autonomous from reality which is discovered by using objective and accurate scientific methods. On the contrary, interpretivism views reality as created by the individual who lives within it (Filstead, 1979). From the epistemological perspective, here the nature of objectivity is rejected and emphasis is placed on “understanding human behaviour from the actor’s own frame of reference” (Bogdan and Taylor, 1975, p. 2). Moreover, the researcher is involved in gaining insight into reality and interpreting its complexity.

Qualitative research strategies can be usefully adopted by scholars to develop processes that build and reinforce the bridge that connects researchers, on the one hand, and professionals, on the other (Guercini, 2004). Reichardt and Cook (1979, p. 9) aptly characterize the distinction between quantitative and qualitative approaches as follows “the quantitative is said to have a positivistic, hypothetic-deductive, particularistic, objective, outcome-oriented and natural science world view. In contrast, the qualitative is said to subscribe to a phenomenological, inductive, holistic, subjective, process oriented, and social anthropological world view”. However, the two approaches are not

isolated, but rather express their analytic potentiality and increase their validity if combined in a process of triangulation (Deshpande, 1983), which results in an integration of quantitative and qualitative methods. In our opinion, this integral approach is particularly well suited to marketing research that is now oriented towards experimentation and often in search of an innovative “dialogue” between new research methods. The aim of this conceptual paper is to discuss the integrated use of qualitative and quantitative methods to study how consumers behave and interact with brands in a new market space represented by online communities. In particular, we propose an approach where the qualitative processes of digital ethnography and the quantitative techniques of text mining are combined to investigate brand associations perceived by consumers.

## **2. Brand association research: background and methodological approaches**

Although the strong influence of positivism has over time produced serious reservations about qualitative studies (Hunt, 1994), there has been growing interest in qualitative research in both academic and practical settings, where techniques such as case studies, focus groups and in-depth interviews are used to explore and investigate human behaviours (Catterall, 1998; Hanson and Grimmer, 2005). In the area of business marketing, qualitative methods support researchers in the study of consumer motivations by analysing both inner and outer perspectives of behaviour (Rist, 1977). In this context, human behaviour is viewed as a product of how consumers interpret their world, and qualitative methods aim to capture the underlying process of interpretation (Deshpande, 1983). If we consider a brand to be a relevant driver of consumer behaviour, qualitative research contributes to investigating the relationship between consumers and their interpretation of brand identity. The latter becomes a reality experienced by consumers where motivation, expectation and personality all converge. These constructs may be studied by means of introspection (Bogdan and Taylor, 1975) in order to produce a representation of the brand-consumer relationship. This representation can be built from brand associations as expressions of the personal meanings that consumers attribute to a brand

which form the brand's image. Strong, positive and unique associations strengthen a brand and increase its equity (Broniarczyk and Gershiff, 2003; Bridges et al., 2000; Chen, 2001); the equity which creates market leverage requires knowledge of the types of associations recognized in a brand.

An overview of the marketing literature focusing on brand associations shows how researchers have progressively shifted their interest from the analysis of single associations to combinations of associations in the consumer's mind. This new analytical perspective has not only identified important brand associations, but also shed light on how these associations are connected to the brand and to one another (Roedder et al., 2006). As a consequence, qualitative research on brand associations has gradually increased in terms of complexity. It follows that the traditional qualitative techniques of focus groups and in-depth interviews are now mostly combined and integrated with other specific disciplines of qualitative research (e.g. semiotics, cognitive neuroscience and psycholinguistics) (Maison et al., 2004). Examples are studies based on brand maps where the collection of pictures produced by consumers as representation of meanings connected to a brand is accompanied by in depth interviews to identify links between brand associations (Zaltman and Coulter, 1995). However, the need for more standardized techniques to represent brand maps has pushed researchers towards a combination of increasingly sophisticated qualitative and quantitative methods. More specifically, brand associations can be elicited from consumers, but precise analytical methods are needed to uncover the network of brand associations. For example, Roedder et al. (2006) derived the structure of brand associations from consumer perceptions by means of complex relational algorithms.

Recently researchers have focused their attention on the irrational nature of brand associations that may be perceived not only through verbal descriptions, but also through visual, sensorial and emotional impressions in the consumer's mind (Supphellen, 2000). The need to gain in-depth insight into unconscious brand associations has favoured qualitative research using methods from neuroscience, e.g. brand-imaging techniques of brain cortical activities during observation of brand

images (Plassmann et al., 2008). Cognitive neuroscience techniques have undoubtedly opened new research horizons, yet they require extensive experimentation to more strongly integrate marketing and medical languages, and also overcome technical limits, mainly the high costs and the invasiveness of the research instruments (Kenning et al., 2007). Such constraints have led researchers to take a different approach to study brand associations among groups of consumers which is based on a combination of verbalization (Supphellen, 2000) with observation (McElroy and Downey, 1982). Verbalization entails the analysis of linguistic expressions that convey the underlying brand associations stored in consumer memory, thus constituting an indirect way of observing and analysing consumer behaviour. The synergy between verbalization and observation can be useful to reduce divergences between the reality of the brand experienced by consumers and the reality of the brand studied by researchers. In our opinion, this approach would be significantly enhanced if applied to an increasingly important consumer market: online communities. In this paper, we focus on these new market spaces, proposing a “dialogue” between a qualitative approach for the observation of consumer behaviour through their online discourse (digital ethnography) and a quantitative method for analysing the verbalization of brand associations by automatically extracting linguistic expressions of brand-related perceptions (text mining). With respect to the various approaches that have been described in the preceding paragraphs, the integration of qualitative digital ethnography and quantitative text mining offers significant advantages, particularly in terms of the number of consumers that can be observed, as well as the quantity and types of verbalizations of brand associations that can be systematically analysed. In the next section, we briefly discuss the emerging role of online communities in qualitative research as the setting for the methodological approach we propose.

### **3. Online communities: a marketplace for investigating brand associations**

Online communities represent new market spaces that can be exploited for research. They constitute interactional social contexts based on digital platforms, among which are blogs, forums, wikis and

social networks, where consumers and users interact to produce and mutually exchange information (Schaub et al., 2009; Chan and Li, 2010).

These virtual settings can generate a rich source of data, reflecting a convergence of actors who may assume a variety of roles, e.g. consumers, current or potential customers, enthusiasts, experts (Cova, 1997). It is thus possible to study the complex interactions of consumers with the market and, in particular, with brands and companies (De Valck, 2005). Moreover, since online communities enable consumers to communicate and exchange information with each other, they contribute to increasing the value that a brand can produce. Brands, in fact, generate a linking value (Cova and White, 2010), i.e. the value of the brand and its related products and services, which leads to the construction, development and maintenance of the interpersonal link between consumers. Because this value resides in the online interactions of consumers, the analysis of these interactions can be an instrument to investigate the associations consumers attribute to a brand (De Valck, 2005). We propose online communities for the study of brand associations based on an innovative methodological concept in which the qualitative technique of digital ethnography is reinforced by the integration the quantitative text mining. In the following section, we review these two methodologies in the context of consumer research and then discuss the potential for “dialogue” between the two.

#### **4. Consumer research: new methodological perspectives.**

##### *4.1 Digital ethnography*

In recent years qualitative research in the social sciences has tapped into new opportunities triggered by the explosion of technology-mediated social interaction. This is clearly reflected in emergence of new methodologies that allow qualitative researchers to access information without physical and temporal constraints (Masten and Plowman, 2003). Indeed, digital technologies have the potential to transform traditional processes for collecting and analysing data, particularly in the context of ethnographically inspired research (Dicks et al., 2005). A variety of terms have been used to

characterize this trend, including digital ethnography (Murthy, 2008), virtual ethnography (Dominnguez et al., 2007), online ethnography (Catterall and Maclaran, 2002), cyberethnography (Rybas and Gajjala, 2007) and netnography (Kozinets, 2002). However, the common thread that links all of them is the “rethinking” of conventional ethnographic principles and methods for application in IT-mediated research contexts.

The digital approach to ethnography has seen fruitful application in the field of market research to gain insights into consumer behaviours and attitudes, with particular reference to internet and specifically to brand communities. An important strand of research in this area is reflected in the work of Kozinets (2002, 2006, 2010) who first coined the term “netnography” (i.e. ethnography on the internet) to describe a qualitative research methodology that adapts ethnographic concepts and techniques to study consumer behaviours that emerge from the texts they produce during online interactions. More specifically, netnography may be seen as an instrument to understand “tastes, desires, relevant symbol systems, and decision-making influences of particular consumers and consumer groups” (Kozinets, 2002, p. 61). In contrast to traditional ethnography where data is collected during face-to-face encounters, netnography makes use of the computer-mediated discourse produced by participants during virtual interactions. As instances of spontaneous communication, such interactions are not contrived for the purpose of observation by external parties and can thus be considered naturalistic (Rheingold, 2000). As a consequence, they are well suited to a less obtrusive form of data collection such as netnography. In addition, the netnographic approach significantly reduces time and cost factors involved in collecting data with traditional ethnographic methods. At the same time, it greatly expands the researcher-observer’s access to potential participants (Kozinets, 2006).

Following Kozinets’ (2002) pioneering study of the meanings, symbolisms and consumption patterns of an online newsgroup of coffee consumers and connoisseurs, other researchers have applied

netnography to investigate diverse interactional contexts where communities of consumers converge to discuss issues of common interest. This type of research provides important information about consumer preferences and behaviours, and especially how they may change over time. Marketers can then use this input to appropriately position products and establish effective branding strategies. Netnography has been used to understand more about attitudes and behaviours in online consumer communities in a variety of different settings, including food culture (De Valck, 2005), open source community products (Hemetsberger and Reinhardt, 2006), luxury watches (Broillet and Dubosson, 2008), fashion (Kretz and De Valck, 2010; Xun and Reynolds, 2010) and the Napster online music store (Giesler, 2006). Moreover, as an unobtrusive technique, netnography can be seen as a way to observe or interact with-brand communities that are often problematic due to the sensitive nature of the interaction. In virtual chatting, in fact, inhibitions may often be perceived as lower than in physical face-to-face interactions. This seemed to be the case in Langer and Beckman's (2005) netnographically inspired study of an internet message board community dedicated to consumers' experiences with cosmetic surgery.

As a form of qualitative research, the adaptation of ethnography to digital platforms entails important ethical considerations involving the covert vs overt nature of the research, as well as the passive vs active observation of participants (Murthy, 2008). To what extent should digital ethnographers be "visible" to online communities? Should the researcher act as a passive observer of the online community or actively participate within it? These are questions that are still being debated within the qualitative research community. Interestingly, Kozinets (2002, p. 65) affirms that "netnographers are professional 'lurkers': the uniquely unobtrusive nature of the method is the source of much of its attractiveness and its contentiousness". While some scholars recommend active participation of the researcher in the online community, full disclosure of researcher presence, obligation to obtain informed consent and member checks of research findings (Kozinets, 2002, 2006;



Schrum, 1995), others prefer a more covert approach. For example, Langer and Beckman (2005) maintain that covert online research is legitimate and ethical, particularly when using data that can be classified as public communication which is freely accessible without registration or passwords, and thus knowingly rendered public by the online participants. In addition, the passive observation of online communities guarantees the unobtrusiveness of the research. Indeed, active participation of researchers can be perceived by the online community as intrusive, and thus become a hindrance (cf. Hudson and Bruckman, 2004). The decision to adopt a more or less overt approach to digital ethnography will likely be impacted by the research aims. If the objective is an in-depth understanding of the overall culture, beliefs and values of a particular community of consumers, then an active approach may be desirable. If instead the objective is to gain insights into particularly sensitive issues or specific product-related perceptions, then a passive approach may be appropriate, although care should always be taken to protect the identities of participants. To conclude this section, Table I provides an overview of key research studies that have contributed to conceptualizing the digital approach to ethnography.

(Insert Table I about here)

The digital ethnographic approach greatly expands opportunities to observe consumer behaviours and their interactions with brands. It can also provide valuable insights into the beliefs and values of online communities. However, it cannot be used to systematically analyse the language used by the participants to reveal specific brand associations. In the next subsection, we introduce a research technique that can be implemented towards this goal.

#### *4.2 Text mining*

While data mining refers to the extraction of knowledge from databases that contain various types of information (e.g. numerical, multimedial, hypertextual), text mining – also known as text data mining (Hearst, 1999) – instead focuses on extracting and elaborating information from strictly textual sources (Witten, 2005). Text mining is closely linked to the relatively new fields of natural language

processing and computational linguistics which develop and implement computer software programmes for the purpose of generating, analysing and manipulating electronically stored texts. These processes have led to numerous applications that are commonly used today by vast numbers of people, including machine translation, speech recognition and automatic summarization.

As with data mining, the distinctive feature of text mining is the capacity to extract new and previously unknown information from textual data, thus offering far more than simple information retrieval (Hearst, 1999). To achieve this, metadata (i.e. data about data) is automatically inserted into text files, often in the form of tags that label items according to specific criteria, such as part-of-speech category, thematic area or semantic domain. This makes it possible to reveal trends and patterning across textual data that could not otherwise be discovered, particularly when dealing with relatively large amounts of text. Examples of text mining are becoming increasingly visible on web sites, for example tag or word clouds that provide a visual summary of the thematic content of web texts, or graphical visualizations of the news cycle of given topic over time produced by meme-tracking software.

Market researchers have begun to show interest in the potential of text mining to shed new light on consumer behaviours and brand perceptions. With reference to trend forecasting, Rickman and Cosenza (2007) discuss the use of text mining tools to track “buzz” in fashion weblogs (i.e. by extracting key words and phrases), which can help marketers understand changing dynamics in the fast-paced fashion industry. Similarly, text mining was used by Chen (2009) to analyse an online complaint forum in order to determine what consumers perceived as key issues and reasons for dissatisfaction.

Text mining has recently been used in the context of sentiment analysis, using consumer review web sites as sources of data. Lee and Bradlow (2011) exploited automatic Pro and Con lists to analyse favourable vs unfavourable assessments of the attributes of digital cameras for purposes of market

structure analysis. In a study of consumer reviews of electronic products, Archak et al. (2007, p. 56) were able to “extract actionable business intelligence from the data and better understand the consumer preferences and actions” through the systematic identification of words that expressed the level of satisfaction of selected product features. Similarly, by extracting co-occurring mentions of brands and adjectives that consumers used to describe sentiments, Feldman et al. (2008) studied consumer preferences to gain a better understanding of the car market. Table II provides an overview of consumer research studies that have applied text mining methods.

(Insert Table II about here)

While the studies described above have used text mining techniques to understand consumer attitudes towards brands, particularly in terms of positive vs negative sentiment, they do not distinguish perceptions of various attributes that may come together to form unique brand associations. In the following subsection, we propose an innovative integration of methodologies that moves in this direction.

#### *4.3 Establishing a “dialogue” between digital ethnography and text mining to investigate brand associations*

Previous research that has utilized techniques derived from qualitative digital ethnography on the one hand, and quantitative text mining on the other, has suggested that both can be used in concomitance with other methodologies. From the qualitative perspective, Kozinets (2010) affirms that netnography is complementary with other methods such as surveys, interviews and focus groups, to provide additional input about the perceptions of online communities that would further illuminate findings. From the quantitative perspective, Lee and Bradlow (2011) recommend text mining not only as an instrument to discover new product attributes, but also to complement existing methods of market structure analysis, such as expert buying guides, user surveys and proprietary market research reports.

We continue in this direction by proposing an interdisciplinary “dialogue” between digital ethnography and text mining as two radically different research methodologies that are not mutually exclusive and can be used in a complementary way to study brand associations. Digital ethnography processes can be used to collect and code data based on texts produced by online consumers of brands, which provides insights into their behaviour. Then, text mining can be applied to perform linguistic analyses for a deeper understanding of brand associations that emerge from the collected texts.

In an experimental application of this methodology, Crawford Camiciottoli et al. (2012) analysed the brand associations of three leading fashion brands using texts produced by an online community of fashion bloggers. Digital ethnography processes were first used to identify and collect appropriate texts. Then, text mining software was applied to automatically extract semantic fields from the texts, as a way to discover broad categories of brand associations. This resulted in three major categories: product-related attributes, non-product-related attributes and designer identity. These categories were then identified and manually coded in the textual data to understand trends across the three brands. Finally, text mining techniques were utilized to reveal descriptive adjectives frequently used by bloggers to characterize the brand association categories. This led to the identification of well-articulated and unique associations for each of the three brands. Figure 1 illustrates this dialogic back-and-forth between qualitative digital ethnography and quantitative text mining that can clearly offer new insights into brand associations that could not otherwise be achieved.

(Insert Figure 1 about here)

## **5. Discussion and conclusions**

### *5.1 Managerial implications*

The integrated research methodology proposed in this study has important implications for management professionals who need to have a greater understanding of brand associations. It is based on the “dialogue” between the techniques of qualitative netnography and quantitative text mining to

analyse texts produced by an online community, without directly involving the consumer or requiring the use of complex mathematical and statistical techniques (cf. Roedder et al., 2006). In other words, it provides managers with a more accessible method for analysing brand associations and understanding more about how they are stored in the consumer's memory. This knowledge can then be used to fine tune or redefine branding strategies, thereby having a positive impact on brand equity (Keller, 2003). In particular, our methodological approach drives researchers to strength brand associations and to refresh and identify new ones. However, a small caveat is in order here. To effectively apply this method, it is necessary to integrate marketing competencies to analyse consumer behaviours with linguistic competencies to analyse the language that consumers produce. The level of "dialogue" between digital ethnography and text mining can be articulated into different levels of complexity, thus allowing managers to choose the desired degree of depth for analysing brand associations. Irrespective of the level of complexity preferred, the integration of quantitative and qualitative techniques proposed in this methodology has the potential to both strengthen existing brand associations and discover new ones. Other useful applications include the analysis of brand associations in relation to competitive positioning and the identification of extensions to other product categories based on new attributes signalled by online communities. It follows that our multifaceted methodology can also offer valid support for the study of the dynamics of brand associations; in particular it can reveal the impact that new brand associations have on existing brand representations, useful for deciding how to transfer specific attributes from an existing brand to new types of products/services. This method can also allow managers to perform multiple analyses of brand associations compared to competitors by exploiting the possibility to access information easily and at relatively low costs. Moreover, as a flexible approach, it can be useful for companies that are developing or consolidating their processes of internationalization in different foreign markets, especially when deciding whether to define specific branding strategies for markets characterized by different tradition, culture and consumption patterns.

Even if our approach reflects an innovative synergy between digital ethnography and text mining, it could also be integrated with more traditional qualitative and quantitative research methodologies which would serve to further enhance findings. In particular, it would be useful to carry out more refined studies on the relationship between brands and consumption behaviour, particularly to investigate in greater depth the specific reasons underlying consumption and the relationship with the brand. We believe that another useful application of the methodology, albeit somewhat more complex, would be to analyse brand associations from two different perspectives: the consumer and the company. This would lead to the definition of a concise indicator of the degree of correspondence (i.e. match or mismatch) between consumer and company-defined brand associations. The constructive relationship between digital ethnography and text mining not only opens new research horizons, but also shows how quantitative research, as the positivist approach that underlies it, is able to handle a variety of elements and variables, but remains insufficient for dealing with new and complex issues.

### *5.2 Research limitations and conclusions*

In our opinion, the complexity of markets in which today's companies operate favours a promising comparison of different methodological tools for the production of new research approaches. In this conceptual paper, we have proposed one such integration. However, the method would need to be tested in concrete studies of brand associations. It could also benefit from the use of other qualitative and quantitative methodologies, beyond digital ethnography and text mining. In addition, while our combined approach offers new insights into the phenomenon of brand associations, the two research techniques that are utilized remain distinct. Thus, further empirical work of this nature would require teams of researchers with diverse areas of competence.

To conclude, all the recent changes in qualitative research lead the researcher to question whether it is necessary to re-examine the fundamental principles on which qualitative theory and practice have been built. Qualitative research is generally defined in terms of knowing the “meaning of

behaviour: understanding why individuals and groups think and behave the way they do lies at the heart of qualitative research” (Keegan, 2009, p. 11). From recent literature, it seems that qualitative research has become almost synonymous with the word “insight”: its aim is to gain insight into human behaviour, developing its strengths from complexity and becoming increasingly interdisciplinary. Indeed, qualitative research is now often the result of a combination of different and also innovative disciplines. All these disciplines, both inside and outside the social sciences, become part of the qualitative research approach, contributing to develop a research methodology that substitutes or integrates the traditional focus group discussion and in-depth interview. Ultimately, it is necessary to ask if both the positivistic and the interpretivism philosophies, which are, respectively, at the base of quantitative and qualitative research approach, are now still valid paradigms for the interpretation of reality, especially when it is a virtual one. Nevertheless, the available tools of marketing research that have been influenced by qualitative and quantitative models are indispensable instruments for conducting marketing research. Yet perhaps researchers no longer pursue a process of triangulation (Deshpande, 1983), considered as a combination of different research methods, but rather the development of a “bricolage”. Such a multi-strand research approach can enable researchers to have different perspectives on a specific problem. We believe that the “dialogue” between digital ethnography and text mining described in this paper represents a way to integrate qualitative and quantitative research methods that achieves this objective.

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Table 1. Key contributions to consumer research based on digital ethnography

Reference	Research context	Research/conceptual focus
Kozinets, 2002	Internet newsgroup	Adaptation of ethnographic research for Internet communities (netnography)
Catterall and Maclaren, 2002	Virtual communities	Integration of online ethnography and discourse analysis
Masten and Plowman, 2003	Chatrooms, online interviews	Reinterpretation of ethnographic principles and methodologies through digital platforms
Langer and Beckman, (2005)	Internet message boards	Definition of covert approaches to netnography
Murthy, 2008	Blogs, social networks	Discussion of ethical issues relating to covertness vs. overtness in digital

## ethnographic research

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Table 2. Key contributions to consumer research based on text mining

Reference	Research context	Research focus	Text mining instrument
Rickman and Cosenza, 2007	Blogs	Trend forecasting	Nielsen BuzzMetrics' BlogPulse
Archak <i>et al.</i> , 2007	Online consumer reviews	Identification of customer opinions	Stanford NLP tool kit
Feldman <i>et al.</i> , 2008	Product discussion boards	Comparative analysis of consumer sentiment	Automatic term extraction (Conditional Random Fields model)
Chen, 2009	Complaint forum	Effectiveness and implications of text mining for market research	TextAnalyst 2.3 (Megacomputer Intelligence)
Lee and Bradlow, 2012	Online consumer reviews	Identification of product attributes for market structure analysis	Automatically generated Pro/Con lists

Figure 1. The dialogic interaction between qualitative digital ethnography and quantitative text mining

