

EXPLORING THE CROSS-CULTURAL EFFECT ON CONSUMER-BRAND RELATIONSHIP AND ENGAGEMENT THROUGH SOCIAL MEDIA PLATFORMS: THE KERASTASE EXAMPLE.

Pedro Augusto Albano Nobre

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Supervisor:

Prof. Doutor Ricardo Godinho Bilro Invited Assistant Professor Departamento de Marketing, Operações e Gestão Geral ISCTE Business School

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Resumo

A presente dissertação tem como objetivo compreender e medir o impacto dos valores culturais e influência na relação entre o consumidor e as marcas nas redes sociais.

Primeiramente foi realizada uma análise netnográfica com objetivo de avaliar as interações entre a marca selecionada - a marca de luxo Kérastase - e a respectiva comunidade na rede social Facebook, em quatro países diferentes, durante um período de tempo definido. A recolha de conteúdos incidiu no processo de netnografia, que ocorreu nas comunidades online das marca definida e permitiu compilar um total de 1.547 interações. As interações dos membros da comunidade Kérastase foram analisadas considerando as publicações de janeiro de 2016 a agosto de 2018.

Os resultados do estudo revelaram que de uma forma geral os consumidores Kérastase apresentaram um nível semelhante de envolvimento e apresentaram um comportamento similar. Notavelmente, todos os consumidores mostraram estar familiarizados com o conteúdo partilhado pela marca, o que revela uma boa estratégia de marketing digital. Este estudo mostra também que os consumidores estão claramente interessados em receber conteúdo da marca e partilhar esse mesmo conteúdo. Por outro lado, os comentários menos positivos estavam relacionados com algumas questões mais operacionais do país específico (um novo canal de e-commerce, falta de produto, etc).

Os resultados apresentados mostram que as empresas que usam o Facebook devem aumentar o nível de envolvimento com os seus consumidores (1) através de estratégias de conteúdo, (2) partilha de informação relevante relacionada com a marca e (3) construir uma Base de Dados dos consumidores que mais interagem com a marca de forma a criar um Clube restrito, onde se encaixam os melhores clientes e um programa de afiliados.

O presente estudo apresenta algumas limitações uma vez que se baseia numa amostra de consumidores não muito extensa, tendo em conta que teve como análise alguns países e foi utilizada numa rede social. Para além disso, este estudo não considerou uma avaliação longitudinal. Assim e reconhecendo as limitações referidas, os próximos desenvolvimentos na área deverão aproveitar estas lacunas.

Abstract

The current dissertation aims to understand the impact of the cross-cultural effect on consumer-brand relationship and engagement through social media platforms.

A netnography analysis was conducted concerning the interactions between the selected brand - the luxury brand Kérastase - and the respective online brand community on the Social Networking Site Facebook, during a specific period of time defined, in four different countries. The content gathering from this netnography methodology took place on the online brand community defined, and it allowed the compilation of a total of 1,547 interactions. Kérastase community members' interactions were analysed considering these brand's publications from January 2016 to August 2018.

Our research findings revealed that all Kérastase Online Business Communities demonstrated a similar level of engagement towards the brand Social Network Site pages and seem to behave in an identical way. Notably, all countries consumers were shown to be particularly motivated by the brand overall posted content, thus suggesting a good digital marketing strategy. This research also shows that for a Luxury Brand such as Kérastase, information seeking, and people referral, emerge as the two most dominant reasons for the consumers to engage with the brand demonstrating a positive attachment. On the other hand, the less positive commentaries were related to some country operational aspects such as (new e-commerce channel, lack of product, etc).

The results presented show that Companies using Facebook should look to increase the level of engagement by (1) preparing clear engagement strategies, (2) focusing on the delivery of relevant brand-related information, and (3) using people referrals on the comment sections to build a CRM data able to feed a VIP Club and create an affiliates.

Despite the outcomes of the current research as well as the contributions it provides, there are some limitations that have to be considered such as a sample magnitude restricted, a limited number of Countries and social platform. In addition, this study did not a longitudinal evaluation. Acknowledging these limitations referred, the future studies should then consider them for the purpose of analysis.

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Abbreviations and Glossary Index

Abbreviation	Meaning
CE	Consumer Engagement
E.g.	Exempli Gratia
Et al.	Et alteri / and others
I.e.	id est
RM	Relational Marketing
OBC	Online Brand Communities
USA	United States of America
UK	United Kingdom
IND	India
SA	South Africa
SNS	Social Networking Site

1. Introduction

Since their introduction, social network sites have attracted millions of users, many of whom have integrated these sites into their daily day (Boyd and Ellison 2007). This consequently attracted the interest of companies who see the potential to transmit their marketing messages to the customers (Cvijikj and Michahelles 2013).

Nonetheless, social media has changed the way consumers relate with brands, as they are no longer passive message receivers (Men and Tsai 2014). Today, they use technology to start conversations with brands, build connections and are responsible for generating content within online communities.

For many marketers, this is a challenge as they keep struggling with using social media for marketing communication purposes, particularly with keeping consumers engaged (Sklar 2013). In addition, Global Brands face an upper challenge in a world where consumers' cross-cultural context is more determinant to their engagement are.

How does this apply to Luxury Brands? These brands have been used to have a "think global, act local" mindset. Now as they are entering the online world, to be where the consumer is, they must understand these new and empowered consumer motivations and the factors that drive their engagement.

With the aim of understanding the impact of the cross-cultural effect on consumer-brand relationship and engagement through social media a dissertation will be conducted along with an empirical research. This is the best model to sustain the research problem under analysis, having the purpose to answer to the following research questions: a) Does the content created by Kerastase on social media platforms affect the level of engagement differently according to culture? b) Are there differences in the relationship of consumers from different cultures to the different topics covered by luxury brands in their social media platforms?

Our research findings revealed that all Kérastase Online Business Communities demonstrated a similar level of engagement towards the brand Social Network Site pages and seem to behave in an identical way. This research also shows that for a Luxury Brand such as Kérastase, information seeking, and people referral, emerge as the two most dominant reasons for the consumers to engage with the brand demonstrating a positive attachment. On the other hand, the less positive commentaries were related to some country operational aspects such as (new e-commerce channel, lack of product, etc).

In order to achieve these goals, this thesis will start by developing a literature review that seeks to investigate the main (1) relationship marketing notions, evolving to the (2) customer engagement construct, then exploring the (3) user experience and website stimulus, analyzing the (4) cross-cultural effect and finally having an overview of the (5) luxury brands.

The subsequent section is the Methodology which considers a netnography process to identify consumers' interactions on four countries OBCs (online brand communities) of the selected brand: Kérastase (luxury cosmetic brand), through a text mining and data collection from those OBCs and (1) a consequent sentiment analysis to identify the polarity of consumers' interactions and (2) a topic sentiment analysis to understand the main concepts addressed by these communities' members. The following parts of this thesis consist of the netnography preliminary findings for each brand and OBC. Finally, the main results and conclusions are presented, along with the definition of the main theoretical contributions, managerial implications, limitations and suggestions for future research.

2. Literature Review

2.1. Relationship Marketing

During the late 1970s and early 1980s an interest in business relationships re-emerged. Some authors (Mulki and Stock, 2003) believe that happened as a result of firm's development in advanced economies, which lead them to grow globally, connecting with their customers through information technologies, while being service and inforiented. Hunt and Morgan (1994) point the rise of strategic network competition with companies competing within their value chain as responsible to the rise of this trend.

All this happened to capture academic attention (Anderson & Narus, 1984; Arndt, 1979; Frazier, Spekman, & O'Neal, 1988; Jackson, 1985). So in 1983, Leonard Berry, brought up for the first time the term "Relationship Marketing" (RM) to the services marketing literature, defining it as attracting, maintaining, and enhancing customer relationships. Since then, several authors presented distinct points of view on this subject. For some advocates, RM was a logical development of the marketing management tradition, involving only a minor shift in thinking from transactions to relationships (Berry, 1983, 1995, 2002; Parvatiyar & Sheth, 2000; Sheth & Parvatiyar, 1995, 2002). For others, however, relational perspectives offered a more radical shift in marketing thinking (Gronroos, 1994, 1997; Gummesson, 1996, 1997; Webster, 1992).

Despite a failure to agree on either its paradigmatic status or its appropriate domain, RM enjoyed such popularity that marketing practice shifted from the management of discrete exchanges towards the management of relationships over time (Dwyer, Scherer, & Oh, 1987, Kotler, 1991), having tremendous impact in theory and in the practice of marketing. Relationship strategies can produce many benefits for practicing firms, including high barriers to customer switching (Dwyer and others (et al) .1987), decreased customer price sensitivity (Beaton and Beaton, 1995; Gronroos, 1994; Perrien and Ricard, 1995), and economies in the form of lower marketing costs (Copulsky and Wolf, 1990; Gronroos, 1994; Gundlach et al., 1995; Pruden, 1995; Sheth and Parvatiyar, 1995). Thus, the development and refinement of relational concepts have continued since then as shown in the following sections of the literature.

2.2. Engagement

2.2.1. Consumer Engagement

In a world in which the competition is fierce, the "...winners are those brands able to successfully engage consumers, create loyalty and drive profitability across prespecified categories..." (Hollebeek, 2011:555).

Engagement undergoes enormous popularity among practitioners who have been examining it in a variety of different academic fields, such as sociology, psychology, educational psychology and organizational behaviour (Hollebeek, 2011b). However, it was only during the last years, that there has been a growing interest in the topic of engagement within marketing literature and the first definitions of engagement evolved (Brodie et al., 2011; Brodie et al., 2013) as engagement started to be regarded as core strategy and philosophy to create great value to a company.

In marketing literature the construct engagement is often used as "customer engagement" (Bowden, 2009; Verhoef, Reinartz, & Krafft, 2010; Brodie et al., 2011; Vivek, Beatty, & Morgan, 2012; De Vries & Carlson, 2014), "customer brand engagement" (Hollebeek, 2011a, Hollebeek, 2011b) or "consumer engagement" (Mollen & Wilson, 2010; Brodie et al., 2013; Dessart, Veloutsou, & Morgan-Thomas, 2015).

While a growing line of research continues to contribute to the development of the consumer engagement construct, several research streams have point it as emerging from an interactive relationship between a subject and a particular object, thus reflecting a motivational state of the subject (Hollebeek, 2011a). It is further understood as a dynamic, iterative and value co-creating process, as well as predictive of customer loyalty outcomes (Bowden, 2009; Brodie et al., 2011). The brand is usually seen as the object (Sprott, Czellar, & Spangenberg, 2009; van Doorn et al., 2010) and the customer as the subject, who purchases the brand (Bowden, 2009).

Nevertheless, an individual does not necessarily have to purchase a brand, in order to be engaged with it (van Doorn et al., 2010; Dessart, Veloutsou, & Morgan-Thomas, 2016). More precisely, engagement can be perceived as an interactive relationship,

which will develop before, during and last long after a transaction of goods (Vivek, Beatty, & Morgan, 2012). Based on this presumption, Vivek, Beatty, & Morgan (2012) argue that engagement even enhances the understanding of consumer brand relationships and is a relevant component of relationship marketing.

As customer engagement has been claimed to bring a new and broader understanding to value creation and is a new indicator for brand performance (Kumar et al. 2010), it should be noted at this point that engagement must not inevitably always be positive. For instance, a disappointed consumer might arrange public actions against the company or engage in negative online comments about the firm (van Doorn et al., 2010). According to Hollebeek & Chen (2014: 63), negative engagement is "(...) exhibited through consumers' unfavourable brand-related thoughts, feelings, and behaviours during focal brand interaction".

While previous studies have been dedicated to conceptualize the consumer engagement as construct, further developments for consumer engagement (CE) have been searching if it does it contribute to value a firm. Kumar et al. (2010), in this line of research, conceptualized the notion of CE, which believes to be composed by four components: purchases, referrals, influences and knowledge (Kumar and Pansari, 2016).

Some authors suggest that future research should address the concept in view of different settings and in the online context (Brodie et al., 2011). While some research streams are explicitly focused on the examination of engagement within brand communities (e.g. Dessart, Veloutsou, & Morgan-Thomas, 2015), other research led by Calder, Malthouse, & Schaedel (2009: 322), have been examining online engagement with a website.

2.2.2. Stakeholder Engagement

Stakeholder engagement has recently risen on the agenda of marketing studies due to the introduction of digital media. Following Hillebrand, Driessen and Koll (2015) the marketing discipline should expand its rather restrictive focus on customers toward a view of marketing that acknowledges the interrelatedness of stakeholders.

While consumer engagement has been shown to lead to sales growth, superior competitive advantage, and profitability (Bijmolt et al., 2010; Gambetti & Graffigna, 2010), it has not received the same attention from a stakeholder perspective. Greenwood (2007) defines stakeholder engagement as the practices an organization undertakes to involve stakeholders in a positive manner in its activities.

Why is it so important? Because Stakeholders relationships also constitute a source of competitive advantage (Surroca, Tribo & Waddock, 2010) as they generate financial benefits, protect the firm against hostility (such as product harm arises), favors corporate social responsibility (Barrena Lopez, & Romero, 2016) and contribute to firm survival (Choi & Wang, 2009).

Despite the growing importance of stakeholder integration in practice, academic discussion of stakeholder's inclusion remains at its infancy (Driessen, Kok, & Hillebrand, 2013). Within the literature, there is little empirical evidence substantiating how stakeholders engage in decision-making processes, more importantly, when took place online.

2.3. Website Stimulus

As mentioned previously the study of consumer engagement has been focused in conceptualize the construct and adequate scales to measure it (Van Doorn et al. 2010; Bolton 2011; Bijmolt et al. 2011; Hollebeck et al. 2014). Yet, research related to it has been evolving regarding the antecedents and outcomes of online consumer engagement.

Internet and virtual communities have transformed consumers, societies, and corporations with wide spread access to information, better social networking and enhanced communication abilities (Kucuk and Krishnamurthy, 2007). According to Deloitte USA, Consumers have started using social networks increasingly to learn more about brands as well as visit retail websites. A retail website constitutes an important touchpoint and a first online navigation can determine the future of a costumer's relationship.

Brodie et. al (2011) considered that consumer engagement happens by interactive and co-creative customer experience with the focal agent, therefore the stimuli of the

experience using websites may be a driver to customer engagement. In line, according to Demangeot and Broderick (2016) websites host complex interactions, with online customers where communication and relational elements are inseparably interwoven, and the website's stimuli can simultaneously activate communication and relational responses.

Concerning the online environment, the previous literature has yet not found a standard and commonly accepted method for accessing website features or attributes concerning stimuli of website experience. Consequently, academics choose the stream of research that seems most appropriate for their study (Ip et al., 2011; Law et al., 2010; Loureiro, 2015).

Nevertheless, we can find tree core concepts of consumer's stimuli of experience that are more used than other to evaluate website's features, and that are considered appropriate to assess stimuli of experience: (i) information/content, (ii) interactive features, and (iii) design-visual appeal (Han et al, 2006; Law et al., 2010; Loureiro, 2015).

In the context of environmental psychology, studies have shown that human judgements on diverse samples of stimuli can be characterized in terms of emotions, which, in turn, lead to response (Mehrabian & Russel, 1974). Mehrabian (1996) proposed three dimensions of emotions, designated as PAD (pleasure, arousal, dominance), to illustrate that when an individual enters an environment, the three emotions are induced and influence evaluation. Further studies are looking to explain the effect of website stimuli on these emotional responses and consequently their influence on attitudes and intentions.

2.4. Cross-Culture

2.4.1. Marketing Implications

Research has indicated that consumers differ in their service quality expectation based on their culture (Doonthu and Yoo, 1998). In general, consumer cultural values affect their expectations and perceptions of products and services (Kueh and Voon, 2007). Thus, given that culture may impact the way people behave and interact, it is imperative to examine cultures influence.

Culture has been shown to affect marketing, including advertising, marketing strategies and buying habits (Green, 1999; Grier and Brumbaugh, 1999; Simester et al., 2000; Taylor and Miracle, 1996; Ueltschy and Ryans, 1997b), but relatively little theoretical and empirical work is available in a cross-cultural adaption of emerging technology of social networking.

However Culture as a predictor for online purchase it is still not conclusive since it has resulted in mixed findings regarding its impact on online purchase behaviour (Kim et al. 2009). While some studies recommending online stores to adapt their atmospherics to the nuances of a given culture (Chau et al., 2002), Cole et al. (2000) felt cultural differences do not affect online retailers ability to attract and retain customers, citing that established online stores such as Amazon are globally successful using a standardized customer interface.

2.4.2. Hofstede's Model

When developing studies concerning cross cultural topics we must be aware that the research literature is dominated by two big trends – determining wider and more generic cultural dimensions or examining cross-cultural encounters in more subtle level.

Clustering countries and/or cultures based on their similarities or differences is carried out by different authors (e.g. Hofstede, Trompenaars). The clustering can be based on cultural dimensions, which have been developed by several authors and which aims to describe different cultures similarly, based on identifying some general similarities and differences. Despite the wide scope of the studies of cultural dimensions, those related theories are not able to define similarities and differences in more specific and subtle level - between two specific cultures.

As mentioned, the most well known empirical study involving cultural dimensions was carried out by Geert Hofstede in 1960s and 70s when he was involved in a survey conducted among IBM employees. Hofstede's study was in the beginning based on the data from 40 different countries, later it was expanded to 50.

Hofstede's research first identified four cultural dimensions (Power distance, Individualism, Masculinity and Uncertainty Avoidance) and later a fifth dimension

(Long-Term Orientation) was added. These dimensions, as described are presented below:

- Power Distance: also known as hierarchical distance, it is a measure of how much less powerful members of a civilization accept and expect unequal distribution of power in society. The Power Distance dimension is directly related to the form found by different societies to deal with the fundamental issue of managing inequalities between individuals.
- 2. Individualism vs Collectivism: is the degree to which individuals are integrated into groups, that is (i.e.), this dimension indicates whether a society is unrelatable, in which each one is supposed to be concerned only with itself, or a society where individuals are divided between members and non-members of groups and expect the group to which they belong to protect them.
- 3. Masculinity versus femininity: the extent to which a culture has more masculine values of dominance, assertiveness and acquisition of things versus a culture with more feminine values being more related with people, feelings, and quality of life. It also refers to the extent to which gender determines the roles of men and women in society.
- 4. Uncertainty avoidance: deals with a society's tolerance for uncertainty and ambiguity, i.e., it reflects the feeling of discomfort that people feel or insecurity with risks, chaos and unstructured situations. The opposite type, uncertainty accepting cultures, are more tolerant of opinions different from what they are used to.
- 5. Long-term versus short-term orientation: it indicates to what extent a society bases its traditions on past or present events. Therefore, long-term societies will be oriented towards the future, such as savings and persistence, while short-term ones will be to the past and the present, such as respect for tradition and fulfilment of social obligations.

2. 5. Luxury

2.5.1. Conceptualization

The luxury goods market is a relevant segment in today's marketplace. According to Bain Company, in its annual study of the luxury goods industry, this segment reported that in 2013 worldwide sales of luxury goods were as much as €217 billion. This market has been growing over the past 10 years, significantly outpacing that of other consumer goods categories. So, but what is Luxury?

Kapferer (1998) stated that it is eternally difficult to define and formulate a clear definition of the concept of "luxury". In fact, luxury can be considered a wide concept and as a result, there are several definitions available in the literature. In fact, according to different authors, there is no consensus regarding its definition, its products and brands in the literature (Heine, 2012) once the concept of luxury may change across time and culture and what one sees it, another may not be consider it, as it is referred in Park et al (2010).

According to Heine (2012) luxury can be characterized as "something more than necessary" or even be described as "non necessity and superfluity" (Heine, 2012, p. 39). It represents an "exclusivity of resources" and therefore, luxury products and services are only available to small number of consumers or even available only on rare occasions (Heine, 2012, p.39). Finally, luxury items are designed to "satisfy some human needs and desires". This author summarized the definition of luxury as "anything that is desirable and more than necessary and ordinary" (Heine, 2012, p. 40)

Recent development in marketing literature has approached the concept from both brand management as well as customer perspectives. For instance, Keller (2009), from the brand management perspective, identifies 10 characteristics of brand luxury: (1) maintaining a premium image, (2) creation of intangible brand associations, (3) aligned with quality, (4) tangible elements such as logos, symbols, and packaging design, (5) secondary associations with linked personalities or endorsers, (6) controlled distribution, (7) premium pricing, (8) careful management, (9) broad definition, and (10) legal protection of trademarks.

Other authors have focused on customers' perception of a luxury brand and develop a lengthy list of attributes to capture its characteristics such as quality, beauty, sensuality, exclusivity, history, high price, and/or uniqueness (Kapferer 1997, see Miller and Mills 2012, for a review). For instance, Miller and Mills (2012) define luxury as prestige, lavishness, and opulence in the context of fashion market.

Despite the inconsistent definitions of 'luxury,' certain convergence also emerges. Luxury has moved from being traditional to experiential (Atwal and Williams 2009) and the psychological benefits are considered as defining features of luxury brands (Godey, Lagier, and Pederzoli 2009; Nia and Zaichkowsky 2000). Some other scholars define luxury brands in terms of 'what they do' (Berthon et al. 2009), which is different from approaches that attempt to directly describe the characteristics of luxury brands.

Furthermore, it exists diverse categories of luxury, which suppose different strategies (Allérès, 1991). First, the inaccessible luxury characterized by a very small production: it implies a very restricted distribution and a very discreet communication. Then, the intermediate luxury characterized by highly selective products, distribution and communication. Finally, the accessible luxury characterized by a very wide distribution and communication: it implies goods of lower quality compared to the two previous categories.

In such a context, the brands play a fundamental role as they are "the ones who tell the stories, who are the vector of the values of uniqueness, rarity and selectivity and who maintain their inaccessible image" (Nyeck, 2004).

2.5.2. Luxury Online Brand Management

There was no love at first sight between luxury and digital. It was until short while ago that the vast majority of luxury brands were thinking of getting involved with online communication and sales (Geerts, 2013). That happened because selling luxury goods online may erode the perception of scarcity and therefore brand desirability (Kapferer and Bastien, 2012; Seringhaus, 2005). The apparent mismatch between a luxury brand's concept of exclusiveness and the mass medium Internet is often referred to as "Internet

dilemma" (Kapferer & Bastien, 2012, p. 247) or "love/hate relationship" (Chevalier & Gutsatz, 2012, p. 63).

Online it is imperative. The generation known as Y (aged 18–31), an extremely technological demographic segment (Djamasbia, Siegelb, and Tullis 2010) highly exposed to Internet usage, has become the most important economic force since the baby boomers. This generation accounts for as much as 'half the spending in the economy' or \$200 billion in annual spending (Waters 2006), and that is why luxury brands should be in the Internet to cater to this generation.

However, despite the digital gold rush, major sections of luxury brands still have not fully arrived in the digital world. Their sentiment increasingly shifts from "Do we need to be online?" to more complicated questions such as "How do we actually do it right?" and "How can we make better use of digital opportunities?" The latest existing research has concentrated on luxury website types (Geerts, 2013), features (Dall'Olmo Riley & Lacroix, 2003; Seringhaus, 2005) and on luxury consumers' social media behavior (Phan, 2011).

2. 5.3. Luxury Online Touchpoints: website

The website represents the heart of a luxury brand's digital presence. It is the most important digital asset (Galoway & Mullen, 2010), as it is the first stop for most affluent consumers when they search for information about a brand. In fact, all brand-related stimuli, such as brand design and identity, are presented and interactions occur through websites (Lee and Kozar 2009).

Aesthetics has been cited as the most expected aspect in a luxury website (Riley and Lacroix 2003). Therefore, since luxury brands are hedonic and beautiful in nature, their websites must seek to evoke similar responses when communicating their products through the website (Lopez and Ruiz 2011), through logo, graphics, multimedia, colour, shape, layout, news, and some relationship features (Rowley 2004).

However, according to Winter, Sounders, and Hart (2003) report that people readily form impressions solely based on websites, especially for some dimensions such as

experience and innovation. Past studies indicate that consumer perceptions towards a brand are dependent, not only on consumer perceptions about the brand and the delivery medium, but also on the perceived Congruence between the brand and the delivery medium (Morrison and Roberts 1998).

Regarding the functionality side, shopping online is the second most important feature of a luxury brand website (Roland Berger, 2013) whereas it was considered least important ten years ago (Riley and Lacroix, 2003).

2.6. Beauty / Haircare

Luxury Haircare Market can be described as a niche market segment of the total cosmetic market, which has a unique distribution channel. In this sense, luxury cosmetic brands are only presented within the selective distribution channel, which is composed, by perfumeries, department stores, hair salons and travel retail stores.

This selective distribution allow brands to position itself as prestigious, high-end and exclusive (Walker, 2003). In fact, even if one cosmetic product has a low price and it is sold through a selective distribution, it is considered luxury cosmetic product (Chevalier and Mazzalovo, 2008).

Brands as Kérastase represent good examples of strong luxury cosmetic brands, once they offer customers high technological products in a distinguish and selective environment which provides to customers, a superior retail experience through advice and tailor made services.

These brands have different values, integrate a solid emotional brand image and have high quality products, high quality communication and exclusive distribution (Walker, 2003).

3. Methodology

In order to reach conclusions for the investigation problem it will be applied Netnography a methodology presented by Kozinets (2002: 61) "as an online marketing research technique for providing consumer insight" to Luxury Cosmetic Brand Communities.

This methodology is compared to ethnography, the study of cultures and societies, as it provides the necessary data to understand people's habits and lifestyle. However, it has been readjusted to online communities (Kozinets, 2002; Brown et al., 2003), which are characterized as group of people with similar interests, that interact, discuss and influence each other (Kozinets, 1999) while being at online platforms. Therefore, so it is possible to apply this netnography it will be required to define research questions (Kozinets, 2002), identify and select which Luxury Brand Platform will be used to gather pertinent information and then apply a text mining at the selected OBCs. Finally, we proceed with a sentiment analysis report of the community interactions with the selected brand.

The current investigation is constructed under a solid approach, already approved and tested by considerable authors such as Bilro et al. (2018), with the aim of understanding the impact of the cross-cultural effect on consumer-brand relationship and engagement through social media platforms throughout their reviews and interactions on the selected platforms. As so, to guarantee that luxury perspective and cross culture is represented on this netnography analysis, the selected cosmetic luxury brand to represent was: Kérastase – luxury Haircare brand - Online Brand Community in four different continents of English-speaking relevant countries to ease the comparison.

The most representative worldwide online communities for brands are the social networks Facebook and Instagram. However, only Facebook was considered since the Instagram account is global and this platform allowed a comparative study by country.

Founded in 2004 Facebook is the current leading Social Networking Site worldwide. It started as project developed by three college friends, Mark Zuckerberg included, from Harvard University to become the biggest Social Networking Site. Today is with more

than one billion active users, or one out of every seven people on the planet (Smith, Segall, and Cowley 2012).

Table 1 - Kérastase OBC's Members.

Brand	Facebook Fans	
Kérastase	3.533.508	
United Kingdom	69.221	
India	167.868	
South Africa	n/a	
Total	3.533.508	

Source: Own Elaboration

With the aim of collecting the data from this platform with large communities, it was necessary to proceed with a text mining technique able to extract, examine, and transpose the user's interactions on these OBCs into helpful insights (Fan et al., 2006). First, it was conducted a consumer data extraction with the support of a tool named Scraper (an extension for Google Chrome Web Browser) with all interactions on the communities selected (Table 1) into spreadsheets. Essentially, we extract the comments of these user communities on brands publication to a file that collect the following data: (i) Platform (Facebook); (ii) Brand Post/Publication Link; (iii) Post publication date; (iv) Username to identify the customer that interacted with the brand post; (v) the comment wrote by the user on the brand's post. This content collection was performed considering the following Facebook account order: Kérastase United States (US), Kérastase United Kingdom (UK), Kérastase India (IND) and Kérastase South Africa (SA) with all contents from January 2016 to August 2018.

Once it was collected four different files of data, one for each country community, the next stage of this netnography process was to develop a Sentiment Analysis to understand the users' feedback and feelings towards this brand. To carry on with a sentiment analysis, it was necessary to use a text-mining tool capable of examining an ample amount of data precisely: Meaning Cloud (https://www.meaningcloud.com), which is performed through an add-in at Microsoft Excel. This tool provided two investigations: Global Sentiment Analysis and Topic Sentiment Analysis. Both of them were essential to determine, through users' interactions, the impact of the Brand strategy towards the brand love of the selected OBCs.

The first investigation known as Global Sentiment Analysis allowed categorizing customer's comments at each brand community as having positive, negative or neutral sentiment, i.e., it granted the of what they have stated on the identification of the polarity associated to each interaction by detecting a certain sentiment of each sentence. On the other hand, this analysis performance was helpful to identify the (i) irony (when customers intend to say the opposite comment), (ii) agreement (identification of contradictory or ambiguous opinions) and (iii) subjectivity (whether the comment is a fact or an opinion) of each interaction. Each of users comments considered on this research was classified according to its sentiment scale, using meaning cloud tool, but since the scale defined was not numerical, a conversion was performed to allow going further with the investigation. As observed on Table 2, there are five levels on this scale that, according to Meaning Cloud, vary from N+ (strong negative) to P+ (strong positive). These values were replaced by a number from 1 to 5 respectively.

Table 2 - Polarity Scale Numerical Conversion

Polarity Tag	Sentiment	Conversion
P+	Strong Positive	5
P	Positive	4
NEU/NONE	Neutral	3
N	Negative	2
N+	Strong Negative	1

Source: Own Elaboration

With the numeric Polarity Scale defined, it was possible to determine the exact number of user's comments that are ironic/non-ironic, objective/subjective, agreement/disagreement (Table 3).

Table 3 - Examined Metrics at Global Sentiment Analysis

Metrics		
Irony	Subjectivity	Agreement
Ironic	Objective	Agreement
Nonironic	Subjective	Disagreement

Source: Own Elaboration

Concerning the second investigation, Topic Sentiment Analysis, it enabled to group the main topics addressed by the customers at the online brand communities into conversation clusters and to know its frequency. The same tool, Meaning Cloud, was used to perform this investigation as it allowed to identify organization names, products, people names, dates, contacts (emails, phone numbers), hashtags, among the comments of Kérastase brand communities' users. While analysing all comments from Kérastase Facebook pages through Meaning Cloud Output spreadsheet, there were a maximum of 250 different topics identified, whose number varied within OBCs as a sum of the individual themes on the four investigations – (Appendix 1).

In order to allow analysis within these topics, these contents were aggregated into similar topics and text directions (Fan et al., 2006). From the 119 different conversation topics discovered, there were 11 major groups and 25 clusters identified, while reviewing the spreadsheet, which were named considering the sensibility of the investigator and reviewed by a specialist (Table 4). This procedure was applied to the analysis, considering the number of interactions studied for each one of them and the topics generated, as explain onwards.

The definition of the Cluster titles represented on Table 4 implied the replacement of the 119 topics identified within the clusters to simplify the analysis, as can be confirmed from the Appendix 2. For the Topic Sentiment Analysis each concept was evaluated according to its polarity. Therefore, after allocating a Cluster to each topic, it was essential to replace the Polarity Scale using the same approach and conversion taken into the previous Global Sentiment Analysis (Table 2). Consequently, this allowed the determination of the Sentiment Polarity of each cluster.

The following report consists on the identification of the brand and its online communities under analysis, and it is meant to deliver a clear overview of all Netnography outputs from Data Mining and Sentiment Analysis. This data is essential to draw the main conclusions of exploring the cross- cultural effect on consumer-brand relationship and engagement with Kérastase through Facebook This study also aims to comprehend what customers' value the most on luxury consumption and how can those factors influence customer-brand relationship.

Table 4 - Topics defined by Clusters

Topic Identified	Clusters - Titles Definition		
Person	Person		
	Fashion Product (cosmetic, accessory, clothes, footwear or others)		
Product	Cultural Product (music, picture, show or others)		
Floduct	Other Products (food & beverages, electronic appliances, vehicles or others)		
	Services		
	Store		
Location	Nature (outdoor spaces or others)		
	Place (city, town, street or others)		
Other Entity	Entities (language, doctrine, religion, meanings or others)		
Other Entity Other Entity Vocation & Titles			
	Companies		
Organization	Public Organization (Government, Military, Education or others)		
Organization	Artistic & Sports Organizations		
	Group of People		
	Animals (design, texture or others)		
Living Thing	Nature (design, texture or others)		
	Body (or body parts)		
Id	Contacts		
Id	Hashtags		
Unit	Currency		
Cint	Other units (time, weight or others)		
Event	Social Events		
Lyont	Natural Phenomena		
Process	Process		
Timex	Time (period, date)		

Source: Own Elaboration

4. Kérastase Netnography Preliminary Results

The following part of this dissertation aims to understand the cross-cultural effect on consumer-brand relationship and engagement through social media platforms in the biggest four English-speaking countries from four different continents where the brand is present. For this reason, this investigation will be able to identify different perspectives regarding the topic under study. The Luxury Brand selected to be under this netnography process was Kérastase (Figure 1). Kérastase is a French-based international luxury haircare brand that forms part of the portfolio of the multi-national parent company the L'Oréal Group (Figure 2)

Figure 1 - Kérastase Logo.



Source: Kérastase

Figure 2 - L'Oréal Group Logo.



Source: L'Oréal

4.1. L'Oréal Group

L'Oréal Group is richly endowed with a portfolio of 34 international brands that is unique in the world and that covers all the lines of cosmetics in 150 countries. Estimated at more than 200 billion euros, the worldwide cosmetics market has grown steadily $(+4\%)^1$ and L'Oréal has maintained its leadership with 26,2 Bn \in 1 in sales in 2017.

L'Oréal flotilla of brands is organized in Divisions, which each develop a specific vision of beauty by consumption universe and distribution channel, being the following:

- 1. Consumer Products Division products distributed in retail channels.
- 2. L'Oréal Luxe –products available at department stores, cosmetics stores, travel retail, but also own-brand boutiques and dedicated e-commerce websites.
- 3. Professional Products Division products distributed in hair salons.
- 4. Active Cosmetics Division products sold in healthcare outlets, including, pharmacies, drugstores, and medi-spas.

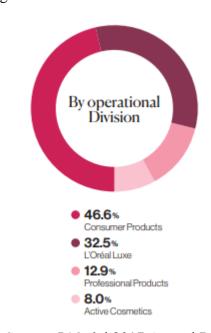


Figure 3 - Breakdown of 2017 sales (as %)

Source: L'Oréal 2017 Annual Report

Hand in hand with the obsession of innovation and superior quality of its products. L'Oréal's strategy for success is to continuously reinvent customer relationship and the marketing model.

According to **Lubomira Rochet's** L'Oréal Chief Digital Officer, "Digital technology has changed the way we do marketing. Our first challenge was to successfully transform our brands into digital "love brands", capable of creating rich and personalized relationships with their consumers and producing content that appeals to them, which they then share with others. Our brands are becoming ubiquitous on the web and are at the top of the rankings."

Therefore, L'Oréal has been focusing its digital spending around three numbers: 20 percent of total revenue to come from e-commerce, 50 percent of communications personalized using CRM, optimized content on owned channels and data and 100 percent of loved brands. To facilitate this transformation L'Oréal has upskilled 20,000 of its people and recruited 2,000 digital experts putting a focus on personalization.

4.2. Kérastase

Kérastase built a business with 500€ million in annual sales. The brand falls under the professional product division portfolio along with other ten brands - L'Oréal Profissionel, Matrix, Redken, Shu Uemura, Mizani, Pureology, Seed Phytonutrients, Biolage, Caritá and Decléor – weighing 15% of total division sales.

Established in 1964 and headquartered in Rue St-Honore, Paris France, by François Dalle (parent company CEO), the brand first expanded through Europe, followed by Japan in 1990 and in North America in 1999.

Since its early stages, Kérastase represents the finest in luxury care for hair, setting new standards in professional haircare products distributed through exclusively distributed through high-end hair salons and beauty suppliers, where hair is analysed in detail and the whole process becomes a ritual of beauty and well-being.

Kérastase meet the expectations of women as it reflects the latest research of L'Oréal laboratories into the field of haircare. Kérastase products are unique through avant-garde formulas with innovative ingredients. Women aspire to Kérastase for the ultimate in hair care and the ultimate in beautiful hair.

4.2.1. Kérastase Facebook

Facebook was the Kérastase platform analyzed during this research, on which this brand has a strong global presence with 3 Million members, as a sum of 72 countries accounts.

The Netnography Analysis on the Kérastase Online Brand Communities was performed during August and September 2018 and it considered the investigation of users' comments on both from January 2016 to August 2018. The data from this Online Brand Communities was retrieved by the Scraper Plug In and analyzed by Meaning Cloud Tool, as previously explained on the chapter number three, Methodology.

On Table 5, there is a resume of the Facebook Fans, Consumers' interactions (comments to brand's posts) and the respective number of Active users on each country during the research period defined. Kérastase USA Facebook page has the highest number of interactions per fan base (0,5%) when compared to other Countries, but similar engagement with 2 comments per active user.

Table 5 - Kérastase OBC's Analysed Comments.

Kérastase OBC	Facebook Fans	#Comments Analyzed	Active Users	Period
USA	132.107	678	433	Jan 2016 to Aug 2018
UK	69.221	239	149	Jan 2016 to Aug 2018
IND	167.868	548	354	Jan 2016 to Aug 2018
SA	n/a	82	58	Jan 2016 to Aug 2018

Source: Own Elaboration

As the members of the selected OBCs and the respective interactions with Kérastase were accounted, it was possible to characterize the sample contemplated on this netnography process (see Table 6). Nonetheless, this characterization is superficial as it was only possible to extract particular data about the users (name, comment, date of interaction) during the text mining process.

Table 6 - Kérastase Netnography Sample Characteristics

Sample Size and Characteristics		
N=1,547 Comments		
Brand		
Kérastase		
Activity Sector		
Luxury Haircare Brand		
Online Brand Community		
Facebook		
Community Users		
Brand Followers on Kérastase selected OBC's that have interacted		
with the brand during the sample Research Period		
Sample Research Period		
From January 2016 to August 2018		

Source: Own Elaboration

4.2.2. Kérastase USA Facebook

Kérastase USA Facebook Online Brand Community was investigated using the netnography approach, considering the users' interactions from January 2016 until August 2018. There were accounted 678 users' interactions published by 433 different users during this period (Table 7).

Table 7 - Number of Interactions at Kérastase's USA Facebook Page by Users

Number of Interactions	Users
Between 1 and 10	428
Between 11 and 20	3
Between 21 and 30	1
Between 31 and 40	0
Between 41 and 50	0
Between 51 and 60	1
Between 51 and 60	0
Total	433

Source: Own Elaboration

With the help of Scraper Plug it was possible to extract this information to a worksheet and analyse the sample of interactions over the research period. The data shows that consumer interactions are not timely stable, as they did not show a regular evolution during the research period. However, both November, were the months with higher number of consumers interactions for two years, which happened to be the months of Christmas animation. Moreover, this analysis demonstrates growth on the number of consumers' interactions towards brands' Facebook posts – 2017 interaction' number grew 17% from 2016 which might suggest that social media strategy and investment may have been internally improved in order to achieve better engagement results.

Table 8 - Timely Distribution of Interactions on Kérastase's USA Facebook OBC

Year	Month	Interactions	%	Year Distribution %			
2016	January	21	3%				
2016	February	5	1%				
2016	March	9	1%				
2016	April	17	3%				
2016	May	19	3%				
2016	June	46	7%	39%			
2016	July	32	5%	39%			
2016	August	12	2%				
2016	September	18	3%				
2016	October	27	4%				
2016	November	41	6%				
2016	December	16	2%				
2017	January	33	5%				
2017	February	23	3%				
2017	March	20	3%				
2017	April	32	5%				
2017	May	19	3%				
2017	June	19	3%	46%			
2017	July	26	4%	4070			
2017	August	33	5%				
2017	September	17	3%				
2017	October	20	3%				
2017	November	48	7%				
2017	December	20	3%				
2018	January	10	1%				
2018	February	16	2%				
2018	March	12	2%				
2018	April	13	2%	15%			
2018	May	6	1%	13%			
2018	June	43	6%				
2018	July	3	0%				
2018	August	2	0%				
T	otal	678	100%	100%			

Source: Own Elaboration

After having these 678 comments of Kérastase USA Facebook brand followers collected and following the next stage of the netnography method it was developed a Sentiment Analysis using Meaning Cloud tool. This method aims to comprehend the feelings of the interactions between the community and the brand by identifying the polarity of each interaction, i.e., if the user's comment is positive, negative or neutral.

Table 9 - Kérastase's USA Facebook OBC's Interactions Polarity Scale

Interactions Polarity Scale						
	Scale	Sum	%	P-N%		
P+	5	163	24%	63%		
P	4	262	39%			
NEU/NONE	3	208	31%	31%		
N	2	44	6%	70/		
N+	1	1	0%	7%		
		678	100%	100%		

Note: P-N % aims to divide positive and negative interactions into groups. Source: own elaboration

On this specific case, it is visible that most of Kérastase USA Facebook Interactions' have a positive sentiment (Table 9) towards the brand's content during the research period established. Among the interactions analyzed, 63% disclose a positive sentiment, 31% are negative and only 7% of the data reveals a negative sentiment (Table 9).

This analysis also included the test to the degree of confidence linked to the polarity of user's interactions by attributing a value from 0 to 100 to each one of the 678 interactions. As it is visible on Table 10, the confidence associated to the polarity results of this investigation is substantial, 99.01, having a standard deviation of 2.82 which demonstrates a low dispersion of these confidence evaluations.

Table 10 - Confidence Analysis of Kérastase's USA Facebook OBC Polarity Interactions.

Polarity	Confidence Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}
Total	99,01	2,82	7,95

Source: Own Elaboration

Having the Polarity of the interactions identified among this investigation's sample, this Sentiment Analysis allows the determination of the irony, subjectivity and agreement of each Kérastase USA Facebook User comments. Concerning this community, its users barely adopt ironic comments; actually their interactions are 99% Nonironic (Table 11), and they are mainly subjective on their opinions (53%). Finally, concerning the level of agreement demonstrated, these users tend to agree (91%) on their interactions towards Kérastase's content posts at its Facebook Online Brand Community.

Table 11- General Sentiment Analysis at Kérastase's USA Facebook OBC Interactions

Metrics								
Irony	Value	%	Subjectivity	Value	%	Agreement	Value	%
Ironic	6	1%	Objective	316	47%	Agreement	617	91%
Nonironic	672	99%	Subjective	362	53%	Disagreement	61	9%
Total	678	100%	Total	678	100%	Total	678	100%

Source: Own Elaboration

The second stage of this analysis was the Topic Sentiment Analysis aiming to outline the major topics addressed by the users at Kérastase USA Facebook as well as the frequency that they are mentioned. It also enabled the polarity classification of each topic. While scrutinizing all of the 678 comments from Kérastase USA Facebook page, there were 839 sentiment topics identified from 119 different categories. As explained on this research's Methodology, these topics were aggregated by 25 clusters, according to the process exhibited on Appendix 2.

 Table 12 - Clusters' Frequency of Kérastase's USA Facebook OBC

Topic Sentiment Analysis - Clusters Frequency		
Clusters Defined	SUM	%
Person	276	33%
Other Products (food & beverages, electronic appliances, vehicles or others)	195	23%
Store	38	5%
Entities (language, doctrine, religion, meanings or others)	37	4%
Place (city, town, street or others)	36	4%
Group of people	31	4%
Fashion Product (cosmetic, accessory, clothes, footwear or others)	31	4%
Contacts	28	3%
Process	21	3%
Cultural Product (music, picture, show or others)	18	2%
Companies	18	2%
Nature (outdoor spaces or others)	17	2%
Social Events	14	2%
Vocation & Titles	11	1%
Hashtags	11	1%
Services	10	1%
Natural Phenomena	9	1%
Artistic & Sports Organizations	9	1%
Currency	8	1%
Body (or body parts)	7	1%
Nature (design, texture or others)	5	1%
Other Units (time, weight or others)	5	1%
Animals (design, texture or others)	2	0%
Public Organizations (Government, Military, Education or others)	1	0%
Time (period, date)	1	0%
Total	839	100%

According to the clusters defined and frequency, detailed on Table 12, the most mentioned topic is "Person" (33%) among 25 different entries. This cluster includes the references and mentions to a Person's first, last or full name. In Facebook, consumers who write others people name on the comment section wish to identify whoever they want to share the publication with. The second most mentioned topic is "Other Products food & beverages, electronic appliances, vehicles or others" (23%) which includes people product mentions and results, followed by "Store" (5%) with people requests for product info and store locations.

Performing a Topic Sentiment Analysis using Meaning Cloud tool enables us to evaluate the polarity of the topics and clusters defined. On the Table 13, it is possible to verify that 52% of the topics are neutral, while 41% are positive and only 6% negative.

Table 13 - Kérastase USA Facebook OBC's Clusters Polarity Scale

Interactions Polarity Scale							
	Scale	Sum	%	P-N%			
P+	5	87	10%	41%			
P	4	254	30%	41%			
NEU/NONE	3	439	52%	52%			
N	2	54	6%	7%			
N+	1	5	1%	7 %			
		839	100%	100%			

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

So it is possible to provide a deeper understanding of the Clusters' polarity, this analysis was performed individually for each cluster (Table 14). For the purposes of analysis only clusters with more than 10 comments where considered as relevant to extrapolate results, considered to be positive if the polarity mean is above 3,5 and negative if it is bellow 3.

The cluster with the highest polarity average score and with the strongest positive feeling associated - with a score of 4.00 – is the cluster "Vocation & Titles", which considers the interactions that mention a vocation of a person or even a job title (e.g. creative director, designer, model, monarch). Followed by the cluster "Other Products food & beverages, electronic appliances, vehicles or others" with a score of 3.61, and then "Store" with a polarity mean of 3.53

On the other hand the relevant cluster with the lowest polarity average and the only one to relevant for the research (Table 14) was "Services" (2.44) that concerns insatisfaction with brand customer service quality.

 Table 14 - Topic Sentiment Analysis Polarity for Clusters defined at K USA Facebook

Clusters Defined	Polarity Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}	Frequency
Vocation & Titles	4,00	0,77	0,60	11
Artistic & Sports Organizations	3,78	0,44	0,19	9
Natural Phenomena	3,67	0,71	0,50	9
Other Products (food & beverages,				
electronic app, others)	3,61	0,86	0,73	195
Store	3,53	0,73	0,53	38
Social Events	3,50	0,52	0,27	14
Person	3,47	0,73	0,53	276
Companies	3,44	0,78	0,61	18
Process	3,43	0,81	0,66	21
Body (or body parts)	3,43	0,53	0,29	7
Nature (outdoor spaces or others)	3,41	0,87	0,76	17
Other Units (time, weight or others)	3,40	0,89	0,80	5
Hashtags	3,36	0,81	0,65	11
Group of people	3,32	0,83	0,69	31
Fashion Product (cosmetic, accessory, clothes, others) Entities (language, doctrine, religion,	3,26	0,58	0,33	31
meanings or others)	3,24	0,93	0,86	37
Place (city, town, street or others)	3,22	0,68	0,46	36
Contacts	3,21	0,50	0,25	28
Cultural Product (music, picture, show or others)	3,06	1,00	1,00	18
Currency	3,00	0,00	0,00	8
Time (period, date)	3,00	0,00	0,00	1
Nature (design, texture or others)	2,60	0,55	0,30	5
Animals (design, texture or others)	2,50	0,71	0,50	2
Services	2,44	0,73	0,53	9
Public Organizations (Government, Military, others)	2,00	0,00	0,00	1
Grand Total	3,44	0,79	0,62	838

4.2.3. Kérastase UK Facebook

Kérastase UK Facebook Online Brand Community was investigated using the netnography approach, bearing in mind the users' interactions from January 2016 until August 2018. There were accounted 239 users' interactions published by 149 different users during this period (Table 15).

Table 15 - Number of Interactions at Kérastase's UK Facebook Page by Users

Number of Interactions	Users
Between 1 and 10	148
Between 11and 20	0
Between 21and 30	0
Between 31 and 40	1
Between 41 and 50	0
Between 51 and 60	0
Between 51 and 60	0
Total	149

Source: Own Elaboration

With the help of Scraper Plug, it was possible to extract this information to a worksheet and analyze the split of interactions over the research period. The data shows that consumer interactions are not timely stable, as they did not showed a regular evolution during the research period nor seasonality effect. However the analysis demonstrates an exponential growth on the number of consumers' interactions towards brands' Facebook posts – 2017 interaction' number grew 242% from 2016 which might suggest that social media strategy and investment may have been internally improved in order to achieve better engagement results.

Table 16 - Timely Distribution of Interactions on Kérastase's UK Facebook OBC

Year	Month	Interactions	%	Year Distribution %
2016	January	7	3%	
2016	February	10	4%	
2016	March	1	0%	
2016	April	4	2%	
2016	May	4	2%	
2016	June	1	0%	1,60/
2016	July	3	1%	16%
2016	August	1	0%	
2016	September	0	0%	
2016	October	2	1%	
2016	November	1	0%	
2016	December	4	2%	
2017	January	0	0%	
2017	February	14	6%	
2017	March	13	5%	
2017	April	8	3%	
2017	May	12	5%	
2017	June	10	4%	54%
2017	July	9	4%	34%
2017	August	9	4%	
2017	September	6	3%	
2017	October	20	8%	
2017	November	17	7%	
2017	December	12	5%	
2018	January	15	6%	
2018	February	14	6%	
2018	March	13	5%	
2018	April	5	2%	200/
2018	May	8	3%	30%
2018	June	8	3%	
2018	July	8	3%	
2018	August	0	0%	
T	otal	239	100%	100%

After having these 239 comments of Kérastase UK Facebook brand followers collected and following the next stage of the netnography method it was developed a Sentiment Analysis using Meaning Cloud tool. This method aims to comprehend the feelings of the interactions between the community and the brand by identifying the polarity of each interaction, i.e., if the user's comment is positive, negative or neutral.

 Table 17 - Kérastase's UK Facebook OBC's Interactions Polarity Scale

Interactions Polarity Scale					
	Scale	Sum	%	P-N%	
P+	5	43	18%	65%	
P	4	113	47%		
NEU/NONE	3	56	23%	23%	
N	2	23	10%	110/	
N+	1	4	2%	11%	
		239	100%	100%	

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

On this specific case, it is visible that most of Kérastase UK Facebook Interactions' have a positive sentiment (Table 17) towards the brand's content during the research period established. Among the interactions analyzed, 65% disclose a positive sentiment, 23% are negative and only 11% of the data reveals a negative sentiment (Table 17).

This analysis also included the test to the degree of confidence linked to the polarity of user's interactions by attributing a value from 0 to 100 to each one of the 239 interactions. As it is visible on Table 18, the confidence associated to the polarity results of this investigation is substantial, 98.91, having a standard deviation of 2.99 which demonstrates a low dispersion of these confidence evaluations.

Table 18 - Confidence Analysis of Kérastase's UK Facebook OBC Polarity Interactions

Polarity	Confidence Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}
Total	98,91	2,99	8,94

Source: Own Elaboration

Having the Polarity of the interactions identified among this investigation's sample, this Sentiment Analysis allows the determination of the irony, subjectivity and agreement of each Kérastase UK Facebook User comments. Concerning this community, its users barely adopt ironic comments; actually their interactions are 98% Nonironic (Table 19), and they are mainly subjective on their opinions (64%). Finally, concerning the level of agreement demonstrated, these users tend to agree (92%) on their interactions towards Kérastase's content posts at its Facebook Online Brand Community.

Table 19- General Sentiment Analysis at Kérastase's UK Facebook OBC Interactions

	Metrics							
Irony	Value	%	Subjectivity	Value	%	Agreement	Value	%
Ironic	5	2%	Objective	87	36%	Agreement	220	92%
Nonironic	234	98%	Subjective	152	64%	Disagreement	19	8%
Total	239	100%	Total	239	100%	Total	239	100%

The second stage of this analysis was the Topic Sentiment Analysis aiming to outline the major topics addressed by the users at Kérastase Facebook as well as the frequency that they are mentioned. It also enabled the polarity classification of each topic. While scrutinizing all of the 239 comments from Kérastase UK Facebook page, there were 307 sentiment topics identified from 119 different categories. As explained on this research's Methodology, these topics were aggregated by 25 clusters, according to the process exhibited on Appendix 2.

Table 20 - Clusters' Frequency of Kérastase's UK Facebook OBC

Topic Sentiment Analysis - Clusters Frequency				
Clusters Defined	SUM	%		
Person	91	30%		
Other Products (food & beverages, electronic appliances, vehicles or others)	58	19%		
Place (city, town, street or others)	26	9%		
Entities (language, doctrine, religion, meanings or others)	16	5%		
Contacts	15	5%		
Group of People	14	5%		
Fashion Product (cosmetic, accessory, clothes, footwear or others)	14	5%		
Nature (outdoor spaces or others)	13	4%		
Store	11	4%		
Services	10	3%		
Cultural Product (music, picture, show or others)	8	3%		
Companies	8	3%		
Social Events	7	2%		
Vocation & Titles	5	2%		
Body (or body parts)	5	2%		
Process	2	1%		
Nature (design, texture or others)	1	0%		
Hashtags	1	0%		
Natural Phenomena	1	0%		
Time (period, date)	1	0%		
Public Organization (Government, Military, Education or others)	0	0%		
Artistic & Sports Organizations	0	0%		
Animals (design, texture or others)	0	0%		
Currency	0	0%		
Other units (time, weight or others)	0	0%		
Grand Total	307	36%		

Source: Own Elaboration

According to the clusters defined and frequency, detailed on Table 20, the most mentioned topic is "Person" (30%) among 25 different entries. The second most mentioned topic is "Other Products food & beverages, electronic appliances, vehicles or others" (19%), followed by "Place" (9%) which includes people requests for product info and store locations.

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Performing a Topic Sentiment Analysis using Meaning Cloud tool enables us to evaluate the polarity of the topics and clusters defined. On the Table 21, it is possible to verify that 54% of the topics are neutral, while 35% are positive and only 10% negative.

Table 21 - Kérastase UK Facebook OBC's Clusters Polarity Scale

Interactions Polarity Scale					
	Scale	Sum	%	P-N%	
P+	5	23	8%	36%	
P	4	86	28%		
NEU/NONE	3	166	54%	54%	
N	2	26	8%	100/	
N+	1	6	2%	10%	
		307	100%	100%	

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

So it is possible to provide a deeper understanding of the Clusters' polarity, this analysis was performed individually for each cluster (Table 21). For the purposes of analysis only clusters with more than 10 comments where considered as relevant to extrapolate results, considered to be positive if the polarity mean is above 3,5 and negative if it is bellow 3.

The cluster with the highest relevance and polarity average score - with a score of 3.58 – is the cluster "Place" followed by "Other Products food & beverages, electronic appliances, vehicles or others" with a polarity mean of 3.50.

On the other hand the clusters with the lowest polarity average value (Table 22) were "Group of People" with a score of 2.93 associated with people thoughts towards the brand and "Services" (2.13).

Table 22 - Topic Sentiment Analysis Polarity for Clusters defined at K UK Facebook

Clusters Defined	Polarity Mean	Confidence Standard Deviation {SD}	Confidenc e Variance {Var [x]}	Frequenc y
Natural Phenomena	4,00	0,00	0,00	1
Body (or body parts)	3,60	0,89	0,80	5
Vocation & Titles	3,60	0,89	0,80	5
Place (city, town, street or others)	3,58	0,64	0,41	26
Other Products (food & beverages, electronic appliances, vehicles or others)	3,50	1,01	1,03	58
Companies	3,38	0,52	0,27	8
Cultural Product (music, picture, show or others)	3,38	0,92	0,84	8
Person	3,37	0,74	0,55	91
Social Events	3,29	0,76	0,57	7
Entities (language, doctrine, religion, meanings or others)	3,25	0,77	0,60	16
Fashion Product (cosmetic, accessory, clothes, footwear or others)	3,21	0,70	0,49	14
Nature (outdoor spaces or others)	3,15	0,69	0,47	13
Contacts	3,13	0,52	0,27	15
Store	3,09	0,30	0,09	11
Hashtags	3,00	0,00	0,00	1
Nature (design, texture or others)	3,00	0,00	0,00	1
Process	3,00	0,00	0,00	2
Group of people	2,93	0,73	0,53	14
Services	2,13	0,83	0,70	10
Time (period, date)	2,00	0,00	0,00	1
Grand Total	3,31	0,80	0,64	307

Source: Own Elaboration

4.2.4. Kérastase INDIA Facebook

Kérastase India Facebook Online Brand Community was investigated using the netnography approach, bearing in mind the users' interactions from January 2016 until August 2018. There were accounted 548 users' interactions published by 354 different users during this period (Table 23).

Table 23 - Number of Interactions at Kérastase's INDIA Facebook Page by Users

Number of Interactions	Users
Between 1 and 10	353
Between 11and 20	0
Between 21and 30	0
Between 31 and 40	0
Between 41 and 50	0
Between 51 and 60	1
Total	354

With the help of Scraper Plug, it was possible to extract this information to a worksheet and analyze the split of interactions over the research period. The data shows that consumer interactions are not timely stable, as they did not showed a regular evolution during the research period. However, both November, were the months with higher number of consumers interactions for two years, which happened to be the months of Christmas animation. Moreover this analysis demonstrates growth on the number of consumers' interactions towards brands' Facebook posts – 2017 interaction' number grew 37% from 2016 which might suggest that social media strategy and investment may have been internally improved in order to achieve better engagement results.

Table 24 - Timely Distribution of Interactions on Kérastase's INDIA Facebook OBC.

Year	Month	Interactions	%	Year Distribution %
2016	January	3	1%	
2016	February	2	0%	
2016	March	5	1%	
2016	April	12	2%	
2016	May	0	0%	
2016	June	42	8%	250/
2016	July	28	5%	35%
2016	August	20	4%	
2016	September	21	4%	
2016	October	22	4%	
2016	November	33	6%]
2016	December	6	1%	
2017	January	8	1%	
2017	February	16	3%	
2017	March	31	6%	
2017	April	6	1%	
2017	May	38	7%	
2017	June	41	7%	400/
2017	July	18	3%	49%
2017	August	10	2%	
2017	September	23	4%	
2017	October	20	4%	
2017	November	25	5%	
2017	December	31	6%	
2018	January	5	1%	
2018	February	2	0%	
2018	March	13	2%	
2018	April	17	3%	16%
2018	May	25	5%	10%
2018	June	15	3%]
2018	July	8	1%]
2018	August	2	0%]
Т	Cotal	548	100%	100%

After having these 548 comments of Kérastase India Facebook brand followers collected and following the next stage of the netnography method it was developed a Sentiment Analysis using Meaning Cloud tool. This method aims to comprehend the feelings of the interactions between the community and the brand by identifying the polarity of each interaction, i.e., if the user's comment is positive, negative or neutral.

Table 25 - Kérastase's INDIA Facebook OBC's Interactions Polarity Scale.

Interactions Polarity Scale						
	Scale	Sum	%	P-N%		
P+	5	49	9%	52%		
P	4	237	43%	32%		
NEU/NONE	3	231	42%	42%		
N	2	31	6%	60/		
N+	1	0	0%	6%		
		548	100%	100%		

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

On this specific case, it is visible that most of Kérastase India Facebook Interactions' have a positive sentiment (Table 25) towards the brand's content during the research period established. Among the interactions analyzed, 52% disclose a positive sentiment, 42% are negative and only 11% of the data reveals a negative sentiment (Table 25).

This analysis also included the test to the degree of confidence linked to the polarity of user's interactions by attributing a value from 0 to 100 to each one of the 548 interactions. As it is visible on Table 26, the confidence associated to the polarity results of this investigation is substantial, 99.00, having a standard deviation of 2.88 which demonstrates a low dispersion of these confidence evaluations.

Table 26 – Confidence Analysis of Kérastase's IND Facebook OBC Polarity Interactions.

Polarity	Confidence Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}
Total	99,00	2,88	8,29

Source: Own Elaboration

Having the Polarity of the interactions identified among this investigation's sample, this Sentiment Analysis allows the determination of the irony, subjectivity and agreement of each Kérastase India Facebook User comments. Concerning this community, its users barely adopt ironic comments; actually their interactions are 99% Nonironic (Table 27), and they are mainly objetive on their opinions (61%). Finally, concerning the level of agreement demonstrated, these users tend to agree (91%) on their interactions towards Kérastase's content posts at its Facebook Online Brand Community.

Table 27- General Sentiment Analysis at Kérastase's IND Facebook OBC Interactions

	Metrics								
Irony	Value	%	Subjectivity	Value	%	Agreement	Value	%	
Ironic	6	1%	Objective	336	61%	Agreement	496	91%	
Nonironic	542	99%	Subjective	212	39%	Disagreement	52	9%	
Total	548	100%	Total	548	100%	Total	548	100%	

The second stage of this analysis was the Topic Sentiment Analysis aiming to outline the major topics addressed by the users at Kérastase India Facebook as well as the frequency that they are mentioned. It also enabled the polarity classification of each topic. While scrutinizing all of the 548 comments from Kérastase Facebook page, there were 985 sentiment topics identified from 119 different categories. As explained on this research's Methodology, these topics were aggregated by 25 clusters, according to the process exhibited on Appendix 2.

Table 28 – Clusters' Frequency of Kérastase's IND Facebook OBC.

Topic Sentiment Analysis - Clusters Frequency						
Clusters Defined	SUM	%				
Person	204	21%				
Currency	193	20%				
Other Products (food & beverages, electronic appliances, vehicles or others)	124	13%				
Place (city, town, street or others)	99	10%				
Contacts	79	8%				
Store	67	7%				
Nature (outdoor spaces or others)	34	3%				
Companies	28	3%				
Entities (language, doctrine, religion, meanings or others)	28	3%				
Hashtags	18	2%				
Body (or body parts)	16	2%				
Vocation & Titles	15	2%				
Services	14	1%				
Process	14	1%				
Fashion Product (cosmetic, accessory, clothes, footwear or others)	13	1%				
Other units (time, weight or others)	13	1%				
Social Events	9	1%				
Cultural Product (music, picture, show or others)	7	1%				
Public Organization (Government, Military, Education or others)	6	1%				
Nature (design, texture or others)	1	0%				
Time (period, date)	1	0%				
Artistic & Sports Organizations	1	0%				
Animals (design, texture or others)	1	0%				
Natural Phenomena	0	0%				
Group of People	0	0%				
Total	985	100%				

According to the clusters defined and frequency, detailed on Table 28, the most mentioned topic is "Person" (21%), followed by the cluster "Currency" (20%) referring to pricing requests, followed by "Other Products food & beverages, electronic appliances, vehicles or others" (13%).

Performing a Topic Sentiment Analysis using Meaning Cloud tool enables us to evaluate the polarity of the topics and clusters defined. On the Table 29, it is possible to verify that 66% of the topics are neutral, while 29% are positive and only 4% negative.

Table 29 – Kérastase IND Facebook OBC's Clusters Polarity Scale.

Interactions Polarity Scale						
	Scale	Sum	%	P-N%		
P+	5	34	3%	29%		
P	4	254	26%			
NEU/NONE	3	654	66%	66%		
N	2	42	4%	40/		
N+	1	1	0%	4%		
		985	100%	100%		

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

So, it is possible to provide a deeper understanding of the Clusters' polarity polarity for the Kérastase India Facebook interactions, this analysis was performed individually for each cluster (Table 30). For the purposes of analysis only clusters with more than 10 comments where considered as relevant to extrapolate results, considered to be positive if the polarity mean is above 3,5 and negative if it is bellow 3.

The cluster with the highest relevance and polarity average score with a score of 3.73 is the cluster "Vocation & Titles", followed by "Nature" (3.50) comprising mainly natural product range questions and then "Person" with 3.50.

On the other hand the clusters with the lowest polarity average (Table 30), value were "Other Units" (2.92" that aims to aggregate price questions and product diagnosis, followed by "Companies" (2.87) which is associated with questions concerning which companies(e.g. Amazon) are selling Kérastase products and then"Hashtags" (2.78) referring to internet trend topics using the symbol "#" followed by a specific trend.

 Table 30 - Topic Sentiment Analysis Polarity for Clusters defined at K IND Facebook

Clusters Defined	Polarity Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}	Frequency
Time (period, date)	5,00	0,00	0,00	1
Artistic & Sports Organizations	4,00	0,00	0,00	1
Nature (design, texture or others)	4,00	0,00	0,00	1
Public Organizations (Government, Military, others)	3,83	0,98	0,97	6
Vocation & Titles	3,73	0,59	0,35	15
Nature (outdoor spaces or others)	3,50	0,62	0,38	34
Person	3,45	0,69	0,47	204
Other Products (food & beverages, electronic app.,				
others)	3,45	0,73	0,54	124
Process	3,43	0,51	0,26	14
Body (or body parts)	3,38	0,62	0,38	16
Entities (language, doctrine, religion, meanings or				
others)	3,36	0,56	0,31	28
Social Events	3,33	0,71	0,50	9
Store	3,24	0,58	0,34	67
Group of people	3,23	0,73	0,53	13
Fashion Product (cosmetic, accessory, clothes, others)	3,23	0,44	0,19	13
Currency	3,19	0,39	0,15	193
Cultural Product (music, picture, show or others)	3,14	0,38	0,14	7
Services	3,14	0,36	0,13	14
Place (city, town, street or others)	3,12	0,54	0,29	99
Contacts	3,10	0,38	0,14	79
Other Units (time, weight or others)		0,28	0,08	13
Companies	2,87	0,35	0,12	15
Hashtags	2,78	0,55	0,30	18
Animals (design, texture or others)	1,00	0,00	0,00	1
Grand Total	3,31	0,80	0,64	985

4.2.5. Kérastase South Africa Facebook

Kérastase SA Facebook Online Brand Community was investigated using the netnography approach, bearing in mind the users' interactions from January 2016 until August 2018. There were accounted 82 users' interactions published by 58 different users during this period (Table 31).

Table 31- Number of Interactions at Kérastase's SA Facebook Page by Users

Number of Interactions	Users
Between 1 and 10	58
Between 11 and 20	0
Between 21 and 30	0
Between 31 and 40	0
Between 41 and 50	0
Between 51 and 60	0
Between 51 and 60	0
Total	58

With the help of Scraper Plug it was possible to extract this information to a worksheet and analyzese the split of interactions over the research period. The data shows that consumer interactions are not timely stable, as they did not show a regular evolution during the research period nor seasonality effect. However the analysis demonstrates a same number of consumers' interactions towards brands' Facebook posts – 2017 interaction' and 2016 which might suggest that social media strategy and investment was not a priority.

Table 32 - Timely Distribution of Interactions on Kérastase's SA Facebook OBC.

Year	Month	Interactions	%	Year Distribution %
2016	January	2	2%	
2016	February	1	1%	
2016	March	4	5%	
2016	April	2	2%	
2016	May	0	0%	
2016	June	0	0%	220/
2016	July	0	0%	32%
2016	August	1	1%	
2016	September	9	11%	
2016	October	7	9%	
2016	November	0	0%	
2016	December	0	0%	
2017	January	0	0%	
2017	February	0	0%	
2017	March	3	4%	
2017	April	5	6%	
2017	May	1	1%	
2017	June	2	2%	29%
2017	July	7	9%	29%
2017	August	0	0%	
2017	September	0	0%	
2017	October	1	1%	
2017	November	4	5%	
2017	December	1	1%	
2018	January	1	1%	
2018	February	6	7%	
2018	March	0	0%	
2018	April	0	0%	2004
2018		14	17%	39%
2018	June	5	6%	
2018	July	3	4%	
2018	August	3	4%	
T	otal	82	100%	100%

After having these 82 comments of Kérastase SA Facebook brand followers collected and following the next stage of the netnography method it was developed a Sentiment Analysis using Meaning Cloud tool. This method aims to comprehend the feelings of the interactions between the community and the brand by identifying the polarity of each interaction, i.e., if the user's comment is positive, negative or neutral.

Table 33 - Kérastase's SA Facebook OBC's Interactions Polarity Scale.

Interactions Polarity Scale						
	Scale	Sum	%	P-N%		
P+	5	8	10%	55%		
P	4	37	45%			
NEU/NONE	3	31	38%	38%		
N	2	5	6%	7%		
N+	1	1	1%	/%		
		82	100%	100%		

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

On this specific case, it is visible that most of Kérastase SA Facebook Interactions' have a positive sentiment (Table 33) towards the brand's content during the research period established. Among the interactions analyzed, 55% disclose a positive sentiment, 38% are negative and only 7% of the data reveals a negative sentiment (Table 34).

This analysis also included the test to the degree of confidence linked to the polarity of user's interactions by attributing a value from 0 to 100 to each one of the 82 interactions. As it is visible on Table 34, the confidence associated to the polarity results of this investigation is substantial, 99.71, having a standard deviation of 1.78 which demonstrates a low dispersion of these confidence evaluations.

Table 34 – Confidence Analysis of Kérastase's SA Facebook OBC Polarity Interactions.

Polarity	Confidence Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}
Total	99,71	1,78	3,17

Source: Own Elaboration

Having the Polarity of the interactions identified among this investigation's sample, this Sentiment Analysis allows the determination of the irony, subjectivity and agreement of each Kérastase SA Facebook User comments. Concerning this community, its users barely adopt ironic comments; actually their interactions are 100% Nonironic (Table 35), and they are mainly objective on their opinions (54%). Finally, concerning the level of agreement demonstrated, these users tend to agree (99%) on their interactions towards Kérastase's content posts at its SA Facebook Online Brand Community.

Table 35- General Sentiment Analysis at Kérastase's SA Facebook OBC Interactions

	Metrics								
Irony	Value	%	Subjectivity	Value	%	Agreement	Value	%	
Ironic	0	0%	Objective	44	54%	Agreement	81	99%	
Nonironic	82	100%	Subjective	38	46%	Disagreement	1	1%	
Total	82	100%	Total	82	100%	Total	82	100%	

The second stage of this analysis was the Topic Sentiment Analysis aiming to outline the major topics addressed by the users at Kérastase SA Facebook as well as the frequency that they are mentioned. It also enabled the polarity classification of each topic. While scrutinizing all of the 82 comments from Kérastase SA Facebook page, there were 101 sentiment topics identified from 119 different categories. As explained on this research's Methodology, these topics were aggregated by 25 clusters, according to the process exhibited on Appendix 2.

Table 36 – Clusters' Frequency of Kérastase's SA Facebook OBC.

Topic Sentiment Analysis - Clusters Frequency						
Clusters Defined	SUM	%				
Person	24	24%				
Other Products (food & beverages, electronic appliances, vehicles or others)	23	23%				
Contacts	9	9%				
Place (city, town, street or others)	8	8%				
Entities (language, doctrine, religion, meanings or others)	7	7%				
Store	6	6%				
Nature (outdoor spaces or others)	6	6%				
Fashion Product (cosmetic, accessory, clothes, footwear or others)	4	4%				
Other Units (time, weight or others)	3	3%				
Vocation & Titles	2	2%				
Process	2	2%				
Group of People	2	2%				
Services	1	1%				
Cultural Product (music, picture, show or others)	1	1%				
Currency	1	1%				
Hashtags	1	1%				
Companies	1	1%				
Natural Phenomena	1	1%				
Social Events	0	0%				
Public Organization (Government, Military, Education or others)	0	0%				
Nature (design, texture or others)	0	0%				
Time (period, date)	0	0%				
Animals (design, texture or others)	0	0%				
Artistic & Sports Organizations	0	0%				
Total	102	100%				

Source: Own Elaboration

According to the clusters defined and frequency, detailed on Table 36, the most mentioned topic is "Person" (24%), followed by "Other Products food & beverages, electronic appliances, vehicles or others" (23%) and then the cluster "Contacts" (9%) referring to product requests and store locations.

Performing a Topic Sentiment Analysis using Meaning Cloud tool enables us to evaluate the polarity of the topics and clusters defined. On the Table 37, it is possible to verify that 62% of the topics are neutral, while 35% are positive and only 3% negative.

Table 37 – Kérastase SA Facebook OBC's Clusters Polarity Scale.

Interactions Polarity Scale						
	Scale	Sum	%	P-N%		
P+	5	10	10%	35%		
P	4	26	25%	33%		
NEU/NONE	3	63	62%	62%		
N	2	2	2%	20/		
N+	1	1	1%	3%		
		102	100%	100%		

Note: P-N % aims to divide positive and negative interactions into groups.

Source: own elaboration

So it is possible to provide a deeper understanding of the Clusters' polarity for the Kérastase SA Facebook interactions, this analysis was performed individually for each cluster (Table 38). For the purposes of analysis only clusters with more than 10 comments where considered as relevant to extrapolate results, considered to be positive if the polarity mean is above 3,5 and negative if it is bellow 3.

Therefore the cluster with the highest relevance and polarity average score with a score of 3.83 is the cluster "Other Products food & beverages, electronic appliances, vehicles or others" then followed by the cluster "Person" (3.50). For this country there were no topic clusters with negative polarity.

Table 38 - Topic Sentiment Analysis Polarity for Clusters defined at K SA Facebook

Clusters Defined	Polarity Mean	Confidence Standard Deviation {SD}	Confidence Variance {Var [x]}	Frequency
Currency	5,00	0,00	0,00	1,00
Hashtags	4,00	0,00	0,00	1,00
Other Products (food & beverages, electronic appliances, vehicles or others)	3,83	1,07	1,15	23,00
Nature (outdoor spaces or others)	3,67	0,82	0,67	6,00
Person	3,46	0,66	0,43	24,00
Store	3,33	0,52	0,27	6,00
Other Units (time, weight or others)	3,33	0,58	0,33	3,00
Fashion Product (cosmetic, accessory, clothes, footwear or others) Entities (language, doctrine, religion, meanings)	3,25	0,50	0,25	4,00
or others)	3,14	0,38	0,14	7,00
Companies	3,00	0,00	0,00	1,00
Contacts	3,00	0,00	0,00	9,00
Process	3,00	0,00	0,00	2,00
Services	3,00	0,00	0,00	1,00
Cultural Product (music, picture, show or				
others)	3,00	0,00	0,00	1,00
Vocation & Titles	3,00	0,00	0,00	2,00
Group of people	3,00	0,00	0,00	2,00
Natural Phenomena	3,00	0,00	0,00	1,00
Place (city, town, street or others)	3,00	0,00	0,00	8,00
Grand Total	3,44	0,79	0,62	102,00

5. Results

The present investigation and the outcomes provided by the netnography analysis allow the understanding of the impact of Kérastase cross-cultural effect on consumer-brand relationship and engagement in each (1) country OBC and the differences and similarities between (2) these countries interactions.

Table 39 - Topic Sentiment Analysis Polarity for the Clusters defined

Netnography Analysis					
Brand	Kérastase				
OBC	USA	UK	IND	SA	

Source: Own Elaboration

In order to simplify the analysis of the outcomes, all the data extracted concerning the Kérastase social networks was compiled in one unique table (Table 40) figuring the General Analysis, Global Sentiment and Topic Sentiment Analysis per country.

Table 40 - Kérastase: Facebook USA OBC vs Facebook UK OBC vs Facebook IND OBC vs Facebook SA OBC

Analysis		FB Kérastas e USA	%	FB Kérastase UK	%	FB Kérastase IND	%	FB Kérastase SA	%
<i>a</i> ,	N. of interactions	678		239		548		82	
General	Period Analyzed	Jan 2016 to Aug 2018	-	Jan 2016 to Aug 2018	-	Jan 2016 to Aug 2018	-	Jan 2016 to Aug 2018	-
Analysis	Unique Users	433	Ī	149		354	Ī	58	Ī
	Ironic	6	1%	5	2%	6	1%	0	0%
	Non-Ironic	672	99%	234	98%	542	99%	82	100%
	Agreement	617	91%	220	92%	496	91%	81	99%
	Disagreement	61	9%	19	8%	52	9%	1	1%
	Objetive	316	47%	87	36%	336	61%	44	54%
Global	Subjetive	362	53%	152	64%	212	39%	38	46%
Sentiment	Polarity Average	3,80		3,70		3,55		3,56	
Analysis	Polarity Scale 1 (N+)	1	0%	4	2%	0	0%	1	1%
	Polarity Scale 2 (N)	44	6%	23	10%	31	6%	5	6%
	Polarity Scale 3 (NEU/N)	208	31%	56	23%	231	42%	31	38%
	Polarity Scale 4 (P)	262	39%	113	47%	237	43%	37	45%
	Polarity Scale 5 (P+)	163	24%	43	18%	49	9%	8	10%
	Confidence Avg.	99,01		98,91		99,00		99,71	
	Topics identified	839		307		985		102	
	Concept	573	I	195		663		71	
	Entity	255	Ī	110		322		31	
	Polarity Avr.	3,44	-	3,31	-	3,28	† -	3,41	-
	Polarity Standard	0,79	Ī	0,80	Ī	0,60	Ī	0,74	Ī
	Polarity Variance	0,62	Ī	0,64	İ	0,36	Ī	0,54	Ī
	Polarity Scale 1 (N+)	1	0%	6	2%	1	0%	1	1%
	Polarity Scale 2 (N)	54	6%	26	8%	42	4%	2	2%
	Polarity Scale 3 (NEU/N)	439	52%	166	54%	654	66%	63	62%
	Polarity Scale 4 (P)	254	30%	86	28%	254	26%	26	25%
	Polarity Scale 5 (P+)	87	10%	23	7%	34	3%	10	10%
Topic Sentiment Analysis	Top 3 Clusters with high frequency	Person, Other Products, Store		Person, Other Products, Place		Person, Currency, Other Products		Person, Other Products, Contacts	
	Relevant Clusters with positive polarity avg.	Vocation & Titles, Other Products, Store, Social Events, Person	-	Place, Other Products	-	Vocation & Titles, Nature, Person, Other Products	-	Other Products, Person	-
	Relevant Clusters with negative Polarity avg.	Services		Services, Group of People		Hashtags, Companies, Other Units		-	

5.1. General Analysis

Despite the discrepancy between active user numbers per OBC, the user engagement (comments per user) in the online communities is similar. Studies led by Tsai and Men (2014) on Consumer engagement with brands (in general) on social network sites showed that Chinese consumers' present greater SNS engagement (Social Network Sites) with brands than American consumers. Therefore it would be interesting to compare Kérastase China OBC and then to understand if Chinese consumers would engage more with Kérastase content than the countries above. On the other hand, Kérastase provides a very particular and specific content plan shared for all countries to promote equality and at the same time, so we might suggest the possibility for this market segment consumers to find these contents equally engaging.

5.2. Global Sentiment Analysis

Kérastase consumers from all OBCs showed to agree (~93%) with what the brand was publishing and put no irony in their comments (~99%). However, it happens that consumers in USA and UK had a more subjective emotional tone in this answers to the

brand, while countries in development INDIA and SA consumer interactions were mostly objective.

While exploring the subjectivity versus objectivity analysis, we see that the subjectivity for USA and UK seems to be correlated with positive interactions (*86%), while the objectivity for IND and SA seems to be strongly attached to the lack of opinion or neutrality of the commentaries (*64%). According to Wilson et al. (...) expressing a neutral opinion (giving it a midpoint score) for rating inference does not equal classifying that piece of text as objective (lack of opinion) as one can have a strong opinion that something is "mediocre" or "so-so.", which is not the case. This finding might suggests that USA and UK Kérastase OBCs find the content more interesting.

In regard to the general sentiment analysis, it was concluded that all consumer communities interact with positive sentiments associated to their comments, i.e, the average polarity associated to the interactions of each community is positive (abose 3.5). This is an excellent result for Kérastase as it is aligned with the 100% love brand objective, which is measured through high levels of positive engagement and supported through an always-on structured content strategy plan. Late studies have shown that content planning is definitely proving to be an important element of the posting strategy which significantly increases the level of engagement (Pletikosa and Michahelles 2013).

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5.3. Topic Sentiment Analysis

The higher number of interactions on Kérastase US Facebook OBC generated, as well, a higher number of topics identified when compared to the other Countries under analysis (US:678; UK:239; IND:548; SA:82).

These topics were also subjected to a topic sentiment analysis and, as it was previously mentioned, the polarities associated to the topics identified for the four countries of analysis are neutral (US:3,44; UK:3,31; IND:3,28; SA:3,41), although US and UK facebook topics have slightly higher polarity average. When taking a closer look to the frequency of each polarity scale, it is visible that USA and UK accounted for more positive interactions, thus might suggest again that the content produced by Kérastase brand is more relatable possibly to Western cultures as it has French-origins.

Tsai and Men (2014) research on USA and China relation to brand SNS pages showed that information seeking and entertainment emerged as the two most dominant reasons for consumers to engage, with both culture respondents regarding brand SNS pages as an important source for product, promotional, and company information. According to Pletikosa and Michahelles (2013) Entertainment content does achieve the highest level of engagement at three individual levels —liking, commenting, and sharing, followed by brand-related Information which increases the number of likes and comments, as well as, achieve longest interaction duration, and finally remuneration content which increases the number of comments among the fans.

This research shows that Kérastase consumers in all four countries spend most of their time sharing the brand content with other users (e.g. colleagues, friends, family members) as well as, talking about their relationship with the brand products.

As Kérastase content plan is mainly focused in Posts offering brand-related information, this seems to be in line with the findings of Tsai and Men (2014) and Pletikosa and Michahelles (2013) on engagement level. What its curious here is that sharing does happen and a lot, but in the comment section, but this consumers do not have any particular reason to do it since this brand does not create remuneration content and at least two of this countries (US and UK) have strong individualistic values, according to Hofstede's, which emphasizes 'being the best', uniqueness, and independence, does not fit in.

A possible explanation for this could be that consumer luxury brands pay high prices not for the products but for results and experience. They seem to be so in love with what the product brought up to them, as we can see in the comments displayed, that they become authentic brand ambassadors and feel they need to share their results. Additionally, we have to consider that this network does include Kérastase distributors (hairdressers) who might take this chance to share content with their clients.

While looking at what the consumers value the most when interacting with the Brand, we see that in all countries these fans not only mention Kérastase products the vast majority of the time, as they actually attach positive sentiments to these interactions and its sharing, thus supporting the previous idea that their relationship with the brand products is way beyond the product functionality, it is a real deep connection, thus resulting in share. This might be explained with the brand focus in having the best haircare products with unparalleled results.

It would be important to understand if the reason why these countries use their Kérastase Online community serves the same purpose, thus suggesting that a certain market segment is above the cultural roots or if and according to Tsai and Men (2014) research some cultures such as Chinese seem to look for brand pages mainly for social purposes, while Americans look for economic benefits, such as coupons, awards, and free samples, as the chief rationale.

Finally, we have what some consumers found to be less positive towards the brand which seems to be very specific to each country operations. In the case of USA and UK, the Kérastase consumers mentioned the topic services as something that was not satisfying. This can be explained as these two countries recently implemented direct online sales in a company whose customer care structure is not adapted to e-commerce, thus resulting in complaints. In IND the negative responses were related with units and company thus suggesting product unavailability and the lack of point of sales. For SA surprisingly there were no negative interactions to consider which might be explained with the brand being developed recently.

6. Conclusions

We need to be where the consumer is and it seems that he is most of the times online and in SNS. The fact that social media is changing marketing communications by enabling consumers to become influential gatekeepers and producers of brand-related content (Muntinga, Moorman, and Smit 2011) is obligating the brand to become more relevant.

Literature does not have yet addressed many important theoretical considerations regarding the factors that drive consumers' interactions with businesses on brands' SNS pages. This means understanding what really motivates consumers to visit, 'like', and use brand pages so it is easier to provide relevant and engaging content.

For global brands this is even a bigger challenge. They do not have just one new consumer empowered by social media, they have as many as the countries where they are selling. Tsai and Men (2014) provided empirical support that the overarching influence of culture indeed plays a critical role in driving consumers' engagement activities on brand Social Networking Site pages applied to China and USA culture, thus suggesting that future research can amplify this conclusion.

Kérastase, as many luxury brands, is facing a major shift (Brun and Castelli, 2013) towards democratization, as online is imperative (Djamasbia, Siegelb, and Tullis 2010). Therefore, and according to L'Oréal Group strategy, it needs to position its brands in the digital as "love brands", capable of creating rich and personalized relationships with consumers which suggest understanding what one culture values over another.

6.1 Theoretical contributions

The current dissertation goals are to understand the cross-cultural effect on consumerbrand relationship and engagement through social media platforms, based on Kérastase example.

In this sense, the first research questions that we define was: Does the content created by Kérastase on social media platforms affect the level of engagement differently according to culture? Kérastase, being a Luxury Brand, has an always-on content being distributed worldwide to deliver the same message of new launches and animations at the same time.

The following research shows that Kérastase levels of consumer engagement (posts per user) are similar in all countries and show identical behaviour. Concerning Kérastase consumer engagement, it is possible to conclude that the brand content posted in all four countries of analysis resulted in a positive relationship between the brand and its consumers, which is aligned with its main digital priority of being considered a love brand.

Moreover, in all countries, Kérastase Consumers showed to agree with what the brand was publishing and shown no irony in their comments. However, it happens that in USA and UK Kérastase consumers were more positive and emotionally attached to the brand content, while in IND and SA the users showed more indifference.

The available data and the latest studies are not sufficient to explain this last finding of how the consumers choose to communicate with the brand, from an objective or subjective way. So, it was not possible to understand whether it affects positively, negatively or if it is irrelevant for the consumer brand love, from a culture point of view.

Secondly, we pretend to understand if there are differences in the relationship of consumers from different cultures to the different topics covered by luxury brands in their social media platforms. The findings show that Kérastase consumers from all OBCs invest most of their time sharing the brand content with other users (e.g. colleagues, friends, family members), as well as, talking about their relationship and expressing their love for the brand products.

Actually these fans not only mention Kérastase products the vast majority of the time, as they actually attach positive sentiments to these interactions and share it among their peers, thus suggesting that they really engage with content that presents brand products, which lead them to share.

Concerning the less positive commentaries it is found that whatever is share has to do with very specific problems that can be found in each country. For instance, for USA and UK, consumers highlight service as an issue, which has to do with their recent online store not being able to satisfy the current needs of consumers who already purchase online. In IND there were some unavailability for some products.

6.2 Managerial implications

The current dissertation reveals practical implications for marketing managers who are working strategically on luxury brands' segment for the mentioned countries, or who might be operating directly in one them.

As previously referred, the communities on Social Networking Sites are strong channels to reinforce and sustain the relationships between customers and the brands. Since this networks for luxury brands are a necessary evil is of utmost importance to know how to effectively develop a consumer-brand relationship and engagement.

According to latest papers, culture does play a critical role in driving consumers' engagement activities on brand Networks. However, this research did not show evident results on how that it is true for Luxury Brands relationship. Nevertheless there are some lessons that could be retrieved on how to increase the engagement in this platform.

First of all, content planning is shown to be an important, if not critical, part of the posting strategy which immediately contributes to the increase of the level of engagement.

Secondly, while it is true that entertaining content, not necessarily branded, is found to be the most influential, as it increase the engagement on all three individual levels—liking, commenting, and sharing – it seems that for Luxury brand Posts offering brand-related information actually work. Luxury Brand are designed to be special and to deliver higher quality to its customers. Therefore it might be expected that when sharing content related with the brand best products or new offers many of the existing clients feel the need to show their love towards the brand and end up sharing its content it with their peers.

Following this idea, Luxury Brands could use a text mining tool and collect information about which customers do actually engage with the brand more often and which ones are likely to share the most. This would work as an easy and fast way of building a CRM database. From here, crossing with current sales info, the brand could build a VIP Club (increasing customer frequency or average order ticket through launching special-editions, birthday or exclusive offers) as well as creating an affiliation programme (promoting discounts or other offers while to clients who could bring new ones).

6.3 Limitations

Despite the outcomes of the current research as well as the contributions it provides, there are some limitations that have to be considered.

In first place, the sample magnitude is relatively restricted, since the analysis considered the investigation of only four countries and one social network. Therefore to consider a representative part of the population and to allow easier generalization of the results, we could consider including more countries, as well as, other platforms.

Secondly, the Netnography performed on this research did not considered longitudinal evaluation of results, which means consider the comparison between similar time ranges. Thus, we could provide more insights about the constancy, stability and strength of the results obtained if we compare the results from the research period extracted.

Finally, other external aspects were not present, such as the types of content posted by the brand, the posting time, at the user level the membership and affiliation of each community, and other demographic characteristics (e.g. education level, social class and age).

6.4 Future research

Acknowledging the limitations referred previously, the future studies should then consider the analysis of more relevant Kérastase Countries than the current research, as well as to include other social networking sites such as Youtube in order to reach and retrieve data from broader audiences.

Additionally, forthcoming studies should focus on longitudinal analysis to be able to compare results on longer period of time and to analyze the evolution of consumers responses towards Kérastase campaigns and its impact on the brand love.

As this study is based on cross culture effect on a Luxury brand, whose concept, as stated on the Literature Review, varies according to authors, market and culture, we could add variables such as age, social class, income and education level so we could provide deeper insights and answer towards the research question established.

Last but not least, we only used netnography as a methodology and performed it by using a specific text mining tool (Scraper Plugin) and a specific Sentiment Analysis program (Meaning Cloud). To enable a wider perspective and a more confident and reliable conclusion we could run some complementary qualitative studies such as interviews and user other text mining and Sentiment Analysis tools for the research.

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Appendix 1- Topic Sentiment Analysis Topics Output

Main Topic	Sub Topic
Top	Тор
Event	Top>Event
	Top>Event>NaturalDisaster
	Top>Event>NaturalPhenomena
Lvent	Top>Event>Occasion
	Top>Event>Occasion>Games
	Top>Event>War
	Top>Id
	Top>Id>Email
	Top>Id>Hashtag
Id	Top>Id>Nickname
	Top>Id>PhoneNumber
	Top>Id>PostalCode
	Top>Id>Url
	Top>LivingThing
Living	Top>LivingThing>Animal>Invertebrate>Insect
Thing	Top>LivingThing>BodyPart
Timig	Top>LivingThing>Flora
	Top>LivingThing>Flora>FloraPart
	Top>Location
Location	Top>Location>Address
	Top>Location>AstralBody
	Top>Location>AstralBody>Planet
	Top>Location>Facility

Top>Location>Facility>Line
Top>Location>Facility>Market
Top>Location>Facility>Park
Top>Location>Facility>StationTop>Station
Top>Location>GeographicalEntity>LandForm>Beach
Top>Location>GeographicalEntity>LandForm>Mountain
Top>Location>GeographicalEntity>WaterForm>Lake
Top>Location>GeographicalEntity>WaterForm>Ocean
Top>Location>GeographicalEntity>WaterForm>River
Top>Location>GeoPoliticalEntity
Top>Location>GeoPoliticalEntity>Adm1
Top>Location>GeoPoliticalEntity>Adm2
Top>Location>GeoPoliticalEntity>City
Top>Location>GeoPoliticalEntity>Country
Top>Location>GeoPoliticalEntity>District
Top>Organization

	Top>Organization>Company
	Top>Organization>Company>ConsumerGoodsCompany>Discretionary>ConsumerDurablesCompany
	Top>Organization>Company>ConsumerGoodsCompany>Discretionary>ConsumerServicesCompany>Hotels
	Top>Organization>Company>ConsumerGoodsCompany>Discretionary>ConsumerServicesCompany>MediaCompany
	Top>Organization>Company>ConsumerGoodsCompany>Discretionary>RetailingCompany
	Top>Organization>Company>FinancialCompany>BankingCompany>BankingServices>Bank
	Top>Organization>Company>HealthcareCompany
Organizatio	Top>Organization>Company>HealthcareCompany>PharmaCompany>BiotechCompany
n	Top>Organization>Company>IndustrialCompany
11	Top>Organization>Company>IndustrialCompany>IndustrialServicesCompany>ConstructionServices
	Top>Organization>Company>TechnologyCompany>SoftwareCompany
	Top>Organization>Company>TelcoServicesCompany
	Top>Organization>EducationalOrganization
	Top>Organization>EducationalOrganization>School
	Top>Organization>Government
	Top>Organization>Institute
	Top>Organization>SportsOrganization>SportsTeam
	Top>OtherEntity
	Top>OtherEntity>Award
	Top>OtherEntity>Class
	Top>OtherEntity>Color
	Top>OtherEntity>Disease
Other Entity	Top>OtherEntity>Doctrine>Academic
	Top>OtherEntity>Language
	Top>OtherEntity>MethodSystem
	Top>OtherEntity>Offence
	Top>OtherEntity>Rule
	Top>OtherEntity>Rule>Contract

	Top>OtherEntity>Title
	Top>OtherEntity>Vocation
Person	Top>Person
	Top>Person>FirstName
	Top>Person>FullName
	Top>Person>LastName
	Top>Process
Process	Top>Process>IntentionalProcess>IntentionalPsychologicalProcess
	Top>Process>Motion>Translocation>Transportation
	Top>Product
	Top>Product>Cosmetic
	Top>Product>CulturalProduct
	Top>Product>CulturalProduct>Broadcast
	Top>Product>CulturalProduct>Movie
	Top>Product>CulturalProduct>MusicalProduct
	Top>Product>CulturalProduct>Picture
	Top>Product>CulturalProduct>Printing
	Top>Product>CulturalProduct>Printing>Book
Product	Top>Product>CulturalProduct>Printing>Document
	Top>Product>CulturalProduct>Printing>Magazine
	Top>Product>Food
	Top>Product>Food>Beverage
	Top>Product>Food>CookedPlate
	Top>Product>Food>DairyProduct
	Top>Product>Food>FruitOrVegetable
	Top>Product>Food>OilOrGrease
	Top>Product>Machine>ElectricalAppliance
	Top>Product>Machine>ElectronicAppliance>ElectronicDevice

	Top>Product>Machine>Instrument	
	Top>Product>Machine>Vehicle	
	Top>Product>Machine>Vehicle>Ship	
	Top>Product>Machine>Weapon	
	Top>Product>ProfessionalService	
Top>Product>ProfessionalService>TelecommunicationsService		
	Top>Product>Substance	
	Top>Product>Substance>ChemicalCompound	
	Top>Product>Substance>ChemicalElement	
	Top>Product>Substance>Fuel	
	Top>Product>Textile>Accessory	
	Top>Product>Textile>Clothes	
	Top>Product>Textile>Fabric	
	Top>Product>Utensil>Container	
Timex	Top>Timex	
Timex	Top>Timex>Date	
	Top>Unit>Currency	
Unit	Top>Unit>IntensityUnit	
	Top>Unit>PhysicalExtentUnit	
	Top>Unit>TimeUnit>Day	
	Top>Unit>TimeUnit>Era	
	Top>Unit>VolumeUnit	
	Top>Unit>WeightUnit	

Source: Own Elaboration

Appendix 2 - Conversion form Topics to Clusters

Appendix 2 - Conversion form Topics to Clusters

All Topics	Cluster Associated
Тор	Others
Top>Event	Social Events
Top>Event>NaturalDisaster	Natural Phenomena
Top>Event>NaturalPhenomena	Natural Phenomena
Top>Event>Occasion	Social Events
Top>Event>Occasion>Games	Social Events
Top>Event>War	Social Events
Top>Id	Contacts
Top>Id>Email	Contacts
Top>Id>Hashtag	Hashtag
Top>Id>Nickname	Contacts
Top>Id>PhoneNumber	Contacts
Top>Id>PostalCode	Contacts
Top>Id>Url	Contacts
Top>LivingThing	Animals (design, texture or others)
Top>LivingThing>Animal>Invertebrate>Insect	Animals (design, texture or others)
Top>LivingThing>BodyPart	Body (or body parts)
Top>LivingThing>Flora	Nature (design, texture or others)
Top>LivingThing>Flora>FloraPart	Nature (design, texture or others)

Top>Location	Place (city, town, street or others)
Top>Location>Address	Place (city, town, street or others)
Top>Location>AstralBody	Nature (outdoor spaces or others)
Top>Location>AstralBody>Planet	Nature (outdoor spaces or others)
Top>Location>Facility	Store
Top>Location>Facility>Line	Place (city, town, street or others)
Top>Location>Facility>Market	Place (city, town, street or others)
Top>Location>Facility>Park	Place (city, town, street or others)
Top>Location>Facility>StationTop>Station	Place (city, town, street or others)
Top>Location>GeographicalEntity>LandForm>Beach	Nature (outdoor spaces or others)
Top>Location>GeographicalEntity>LandForm>Mountain	Nature (outdoor spaces or others)
Top>Location>GeographicalEntity>WaterForm>Lake	Nature (outdoor spaces or others)
Top>Location>GeographicalEntity>WaterForm>Ocean	Nature (outdoor spaces or others)
Top>Location>GeographicalEntity>WaterForm>River	Nature (outdoor spaces or others)
Top>Location>GeoPoliticalEntity	Place (city, town, street or others)

Top>Location>GeoPoliticalEntity>Adm1	Place (city, town, street or others)
Top>Location>GeoPoliticalEntity>Adm2	Place (city, town, street or others)
Top>Location>GeoPoliticalEntity>City	Place (city, town, street or others)
Top>Location>GeoPoliticalEntity>Country	Place (city, town, street or others)
Top>Location>GeoPoliticalEntity>District	Place (city, town, street or others)
Top>Organization	Group of People
Top>Organization>Company	Companies
Top>Organization>Company>ConsumerGoodsCompany>Discretionary>ConsumerDurablesCompany	Companies
Top>Organization>Company>ConsumerGoodsCompany>Discretionary>ConsumerServicesCompany>Hote	
ls	Companies
Top>Organization>Company>ConsumerGoodsCompany>Discretionary>ConsumerServicesCompany>Med	Companies
iaCompany Tana Organizationa Companya Consumary Consumary Discretion and Detailing Company	Companies
Top>Organization>Company>ConsumerGoodsCompany>Discretionary>RetailingCompany	Companies
Top>Organization>Company>FinancialCompany>BankingCompany>BankingServices>Bank	Companies
Top>Organization>Company>HealthcareCompany	Companies
Top>Organization>Company>HealthcareCompany>PharmaCompany>BiotechCompany	Companies
Top>Organization>Company>IndustrialCompany	Companies
Top>Organization>Company>IndustrialCompany>IndustrialServicesCompany>ConstructionServices	Companies
Top>Organization>Company>TechnologyCompany>SoftwareCompany	Companies
Top>Organization>Company>TelcoServicesCompany	Companies
	Public Organizations (Government,
Top>Organization>EducationalOrganization	Military, Education or others)

	Public Organizations (Government,
Top>Organization>EducationalOrganization>School	Military, Education or others)
	Public Organizations (Government,
Top>Organization>Government	Military, Education or others)
	Public Organizations (Government,
Top>Organization>Institute	Military, Education or others)
	Public Organizations (Government,
Top>Organization>SportsOrganization>SportsTeam	Military, Education or others)
	Entities (language, doctrine,
Top>OtherEntity	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Award	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Class	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Color	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Disease	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Doctrine>Academic	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Language	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>MethodSystem	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Offence	religion, meanings or others)
	Entities (language, doctrine,
Top>OtherEntity>Rule	religion, meanings or others)

	Entities (language, doctrine,
Top>OtherEntity>Rule>Contract	religion, meanings or others)
Top>OtherEntity>Title	Vocation & Titles
Top>OtherEntity>Vocation	Vocation & Titles
Top>Person	Person
Top>Person>FirstName	Person
Top>Person>FullName	Person
Top>Person>LastName	Person
Top>Process	Person
Top>Process>IntentionalProcess>IntentionalPsychologicalProcess	Person
Top>Process>Motion>Translocation>Transportation	Person
Top>Product	Other Products (food & beverages, electronic appliances, vehicles or others)
Top>Product>Cosmetic	Fashion Product (cosmetic, accessory, clothes, footwear or others)
Top>Product>CulturalProduct	Cultural Product (music, picture, show or others)
Top>Product>CulturalProduct>Broadcast	Cultural Product (music, picture, show or others)
Top>Product>CulturalProduct>Movie	Cultural Product (music, picture, show or others)
Top>Product>CulturalProduct>MusicalProduct	Cultural Product (music, picture, show or others)
Top>Product>CulturalProduct>Picture	Cultural Product (music, picture, show or others)

	Cultural Product (music, picture,
Top>Product>CulturalProduct>Printing	show or others)
	Cultural Product (music, picture,
Top>Product>CulturalProduct>Printing>Book	show or others)
	Cultural Product (music, picture,
Top>Product>CulturalProduct>Printing>Document	show or others)
	Cultural Product (music, picture,
Top>Product>CulturalProduct>Printing>Magazine	show or others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Food	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Food>Beverage	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Food>CookedPlate	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Food>DairyProduct	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Food>FruitOrVegetable	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Food>OilOrGrease	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Machine>ElectricalAppliance	others)

	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Machine>ElectronicAppliance>ElectronicDevice	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Machine>Instrument	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Machine>Vehicle	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Machine>Vehicle>Ship	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Machine>Weapon	others)
Top>Product>ProfessionalService	Services
Top>Product>ProfessionalService>TelecommunicationsService	Services
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Substance	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Substance>ChemicalCompound	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Substance>ChemicalElement	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Substance>Fuel	others)

	Fashion Product (cosmetic,
	accessory, clothes, footwear or
Top>Product>Textile>Accessory	others)
	Fashion Product (cosmetic,
	accessory, clothes, footwear or
Top>Product>Textile>Clothes	others)
	Fashion Product (cosmetic,
	accessory, clothes, footwear or
Top>Product>Textile>Fabric	others)
	Other Products (food & beverages,
	electronic appliances, vehicles or
Top>Product>Utensil>Container	others)
Top>Timex	Time (period, date)
Top>Timex>Date	Time (period, date)
Top>Unit>Currency	Currency
Top>Unit>IntensityUnit	Other Units (time, weight or others)
Top>Unit>PhysicalExtentUnit	Other Units (time, weight or others)
Top>Unit>TimeUnit>Day	Other Units (time, weight or others)
Top>Unit>TimeUnit>Era	Other Units (time, weight or others)
Top>Unit>VolumeUnit	Other Units (time, weight or others)
Top>Unit>WeightUnit	Other Units (time, weight or others)