Consumers' psychology in a cross-cultural context: the Oral B Case

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ABSTRACT

Title: “Consumers’ psychology in a cross-cultural context: the Oral B Case”

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The purpose of this study is to explore how different types of advertising claims affect consumers' perception and purchase intent by using the case of a leading multinational company operating in the FMCG industry within the oral care market. The investigated claims’ characteristics impacting consumers’ buying behavior are the following: the numerical benefits included in the claim, the format of the numbers, the presence of comparative advertising, and the role of repetition of claims over time. Moreover, it is investigated whether culture is a factor impacting consumers' choices and preferences by comparing American and German respondents. The methodology used for the research is a quantitative research strategy that tests the current theories coming from past literature. The survey research technique is employed to collect information in two countries, USA and Germany, to answer the research question and provide an example of advertising claims applied to the oral care market. The results of the analysis lead to the following conclusions. Claims that included numerical benefits are found to positively impact consumers’ perception of the claim itself, guaranteeing factualness and objectivity. In the USA claims including percentages rather than whole numbers are perceived as more effective in driving purchase intent than those including round numbers. Indirect comparative advertising claim is proved inefficient compared to non-comparative claims. Control claims do not show to be impacted by a wear-out effect that reduces their commercial efficacy after repeated exposure. Finally, the cultural context significantly impacts consumers’ preferences toward advertising. These results are interpreted with Hofstede’s cultural model focusing on the uncertainty avoidance dimension that differentiates the countries.

Keywords: Advertising claims, Advertising, Cultural differences, Claims design, Numerical Format, Wear-out, Comparative claims, Market Segments

SUMÁRIO

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O objetivo deste estudo é explorar como diferentes tipos de alegações publicitárias afetam a perceção e intenção de compra dos consumidores, utilizando o caso de uma empresa multinacional líder. As características das reclamações investigadas com impacto no comportamento de compra dos consumidores são as seguintes: os benefícios numéricos incluídos na reclamação, o formato dos números, a presença de publicidade comparativa, e o papel da repetição das reclamações ao longo do tempo. é investigado se a cultura constitui um fator com impacto nas escolhas e preferências dos consumidores, comparando os inquiridos de nacionalidade americana e alemã. A metodologia utilizada para a investigação consiste numa estratégia de investigação quantitativa que testa as teorias aplicáveis atualmente, provenientes da literatura passada. A técnica de pesquisa é utilizada para recolher informação em dois países com o objetivo de responder à questão da pesquisa e fornecer um exemplo de alegações publicitárias aplicadas ao mercado dos cuidados orais. Os resultados da análise conduzem às seguintes conclusões. Constata-se que as alegações que incluem benefícios numéricos têm um impacto positivo na perceção dos consumidores sobre a própria alegação, garantindo a factualidade e objetividade. Nos EUA as reivindicações que incluem percentagens em vez de números inteiros são consideradas mais eficazes do que as que incluem números redondos. A alegação de publicidade comparativa indireta revela-se então ineficaz. As alegações de controlo não demonstram ser afetadas por um efeito de desgaste que reduz a sua eficácia comercial após exposição repetida. Finalmente, o contexto cultural tem um impacto significativo nas preferências dos consumidores em relação à publicidade. Isto é interpretadoom o modelo cultural de Hofstede centrado na dimensão de evitar incertezas que diferencia os países.

Palavras-chave: Reclamações publicitárias, Publicidade, Diferenças culturais, Desenho de reclamações, Formato numérico, Reclamações comparativas, Segmentos

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CHAPTER 1 - INTRODUCTION

1.1 Background

Advertising claims have been historically privileged by marketers to communicate more effectively, with an emphasis placed on the content. The way a message is communicated can influence the consumer's intention to purchase a specific product. However, it does not have a direct effect on the purchasing action itself (Belch, 1981). With the advent of the online advertising, the advertising sector has seen rapid growth and change. New online channels available and technology-related changes in the advertising sector have significant social and economic repercussions for both consumers and advertisers. These factors contributed to create confusion among researchers on how to maximize and incentivize the effectiveness of advertising claims, as traditional theory on claims design had been subjected to changes linked to the evolution of the advertising's role and format. Moreover, in the last few years it can be observed that an increasing number of international corporations are filing of being charged with lawsuits related to false advertising, as well as more and more consumers unite for class actions. This is accompanied by a higher scrutiny from local and national authorities, such as the European Commission and the Federal Trade Commission (FTC). This scenery is amplified by an increased consumers' scepticism towards advertising that requires extra attention from corporations to the claims' credibility they commercialize. This research addresses the need to contribute to early studies on claims to provide current and updated evidence on what makes advertising claims effective among consumers.

The purpose of this study is to explore how different types of advertising claims may affect the communication perceived effectiveness on different types of consumers by using the case of a leading multinational company within the oral care market. The study also explores the impact of the cultural factors on consumers preferences, as people's desires and consumption behaviors are fundamentally determined by their culture (De Mooij, 2019).

Cultural factors have a significant impact on consumer behavior as they represent external influences impacting consumption. Among the cultural factors, subcultures within the same nation, and social classes play a significant role in consumer behavior; however, only national culture will be taken into consideration in this analysis. Due to their role as invisible barriers, cultural influences have been identified as having the greatest influence on international marketing communications and the success of marketing initiatives launched. From a

management standpoint, it's critical for businesses to be aware of and sensitive to the fact that today's markets are global and cross-cultural.

Globalization changed market dynamics both at the micro-level of the consumers consumption choices and at the macro-level of cultural differences. Globalization is a process in which the people and the countries of the world are brought closed together, economically and culturally, through trade, information technology, travel, cultural exchanges, the mass media and mass entertainment (De Beukelaer et al., 2015). On one side, if globalization is an inevitable process, then cross-culturalization will also be inevitable and cultural differences between nations, regions, and ethnic groups are becoming stronger. Marketing communication, as a two-way interactive communication, is strongly impacted by globalization. On the other hand, consumers worldwide are more homogeneous, especially within the same nation. Increased wealth, expenditures on education and media contributed and will lead even more to convergence of consumers' consumption and purchase patterns (Sharifonnasabi et al., 2020).

1.2 Problem Statement

The study contributes to break down the complexity of consumers' psychology when approaching advertising claims and try to create an understanding about the factors to be focused for marketers.

The main intention of this study is to analyze the impact of claims' characteristics on consumers' buying behavior. The characteristics investigate are the following: the numerical benefits, the format of the numbers, the presence of comparative advertising, the role of repetition of claims over time. Moreover, it is investigated if culture is a factor impacting consumers choices and preferences by comparing American and German respondents.

These objectives guided the development of the following research questions:

RQ1: Which factors make similar advertising claims more attractive than others?
RQ2: Does advertising claims' attractiveness differ across segments and countries?

The research questions will be tackled by answering the following:

- Do Advertising Claims with numerical benefits positively impact consumers' perception of the claim?

- Are Advertising Claims that include whole numbers more effective than advertising claims including percentages?
- Is there a wearout effect connected with the effectiveness of the control claims versus new advertising claims?
- Is a comparative claim more or less effective than a non-comparative claim?
- Do consumers' preferences towards advertising claims vary across market segments?
- Does the cultural context have an impact on consumers' preferences toward advertising?

1.3 Relevance

The main research conducted on advertising claims effectiveness and characteristics refer to the early 80s and 90s and this research aims at providing recent evidence to build on the literature review. The case of an international leading company in the FMCG Industry, Procter & Gamble, is employed. The adoption of the Oral B case ensures reliability and data novelty.

Researchers suggest that a claim needs to be objective to be credible, therefore it has to be provided with tangibility and accurate descriptions of facts and benefits that can be proven. Different elements were studied and identified as the ones to be considered to tackle consumers' skepticism and ensure the advertising effectiveness. Among those, the benefits communicated with the use of numbers were found to convey trustworthiness, with debate concerning the format of the number itself. Attribute tangibility and accurate description make a claim objective, while comparative claims tend to lack credibility, although results on their effectiveness are unconclusive. The role of repetition of claims in advertising over time is investigated, together with potential wear-out effects connected to the use of control claims. Different models of segmentations have been studied, and finally evidence on the impact of culture on consumers and cross-cultural frameworks are presented.

This analysis represents a summary of the main learnings on the topic by building a comprehensive empirical test applied to an international company of the main theories developed by the literature. It brings together the insights coming from different studies into one single place, providing an updated and recent data useful to build on historical models on advertising claims. The study has as well a high potential impact for managers and marketers, as it represents an opportunities for companies to leverage learnings and managerial implications coming from the case provided.

1.4 Research Method

The methodology used for the research is a quantitative research strategy that includes a deductive approach with a test-first mentality, where the focus is on the current theories and past literature (Bryman & Bell, 2007).

Secondary and primary data were collected in order to gain the information necessary to answer the study questions posed. The first step was a review of the existing literature, in particular relevant academic publications, pertaining to the most important components of this study (advertising claims, comparative claims, repetition and wear-out, segmentation, cross-cultural models). This comprehensive evaluation assisted in clarifying the problem's definition and establishing the value of the empirical case to be used.

Quantitative research was used to acquire primary data, utilizing a questionnaire that evaluated the claims attractiveness by groups. The questionnaire was realized during my experience as a marketing intern for Procter & Gamble within the Oral Care business unit. Twenty-four stimuli were shown in total, namely four groups of claims made up by six different claims each, by using the same visual of the product among all the stimuli. The questionnaire also gathered information on each respondent's demographics and experience with the brand of Oral B.

1.5 Dissertation Outline

The outline of the thesis appears below. In the introductory chapter, the problem statement and research questions were addressed first. The available literature on advertising claims, market segmentation and cultural models and frameworks is covered in the second chapter. The third section represent the core of the research that introduces and explains the Oral B case. The methodology and data set of the investigation is described, followed by the presentation of results and their analysis to tackle the research questions, together with managerial implications coming from it. The fourth and last chapter concludes the study with a summary of the key findings, an explanation of the limitations of the study and suggestions for further research.

CHAPTER 2 – LITERATURE REVIEW

This chapter summarizes prior research and literature on advertising claims, market segmentation, and cross-cultural models to better understand the thesis' purpose. Based on this literature, research questions were formulated.

2.1 Advertising Claims

An advertising claim is any assertion made about the business, the brand, or the product, across all media (Darley & Smith, 1993). Attribute tangibility and accurate description are different factors that make a claim objective (Darley & Smith, 1993). Claim objectivity significantly impacts perceived ad credibility, brand beliefs, attitudes, and purchase intentions. It depends on the kind of media used (radio or print) and the degree of claim objectivity (objective/factual claim, subjective/intangible claim, and mixed), as investigated by Darley and Smith (1993). Objective claims can be defined as "*any claim that a consumer would reasonably expect the company to be able to prove*," while a claim is subjective when "*it cannot be proved right or wrong by any generally accepted criteria; also known as puffery*". The findings of Darley and Smith's research indicate that objective statements are more successful than subjective claims, that tangibility and factualness contribute to claim objectivity effects; and that there are no content differences between print and radio media.

Specific aspects of the advertising claims have been investigated: researchers have focused on its numerical format (Sevilla et al., 2018; Kruger & Vargas, 2008); on the concept of deceptive and misleading advertising claims (Armstrong et al., 1979; Andrews et al., 2000; Beales et al., 1981); on truthful advertising (Anderson & Renault, 2006; Johnson & Myatt, 2006; Renault, 2015); and on consumers' perceived skepticism towards advertising claims across different fields and ages (Ford et al., 1990; Schaefer et al., 2005; Diehl et al., 2007). It was witnessed an increase in consumer mistrust towards advertising claims related to marketers' attempts to persuade customers through embellished, overstated, or even obviously misleading product claims (Campbell & Kirmani, 2008; Friestad & Wright, 1994).

Sevilla et al. (2018) investigated the impact on customer perceptions of adopting a numerical format claim instead of an identical percentage format claim. Even though the claims are the same in theory, consumers respond better to numerical rank claims when set sizes are small, and to percentage rank claims when set sizes are greater. Other studies, on the other hand (Kruger & Vargas, 2008; Parker & Leinhardt, 1995), found that consumers understand whole

numbers better than percentages. Because numerical estimation has the potential to influence consumers, there is a vast literature concerning how numerical data and estimates may change how consumers judge sources or engage in certain behaviors (Yaniv & Foster, 1995; Epley & Gilovich, 2001, 2005, 2006; PenaMarin & Wu, 2019). Early research suggested that numerical precision helps consumers by signaling confidence and trust toward the claim (Jerez-Fernandez et al., 2014), the factualness of the claim (Schindler & Yalch, 2006), and knowledge (Mason et al., 2013). PenaMarin and Wu (2019) ultimately show that the use of precise information can backfire when the estimates are incorrect.

Concerning the first research question, "*Which factors make similar advertising claims more attractive than others?*", this first literature review leads to two sub-questions that need to be investigated:

- *Do Advertising Claims with numerical benefits positively impact consumers' perception of the claim?*
- *Are Advertising Claims that include whole numbers more effective than advertising claims including percentages?*

Advertising claims research has been applied in numerous fields, especially nutrition and food and health-related claims (Lähteenmäki et al., 2010; Van Trijp et al., 2007; Carrillo et al., 2014; Dean et al., 2007) and green and environment-friendly claims (Kärnä et al., 2001; Minton et al., 2012; Tucker et al. 2012; Do Paço & Reis, 2012; Xie & Kronrod; 2012). Researchers have investigated how nutritional and health claims affect consumers' perceptions of the package and the product, as well as how these claims affect what food they purchase. Carrillo et al. (2014) found that consumers' perceptions of nutritional and health claims depend on many factors, such as the type of claim (objective vs. subjective), the benefit it promises, the type of carrier, how familiar they are with the added ingredient, their cultural values, where the claim is positioned on the package, how big it is, and how long it is. Other studies looked the type of benefit claimed by the health claim (van Trijp et al., 2007) and the style the information is communicated (Dean et al., 2007). These scant comprehensive studies indicate that there are considerable cultural variations between nations. Looking at green advertising, there is a "mistrust" gap that should be addressed (Fowler & Close, 2012). Researchers have studied consumers skepticism's function in the processing of advertising messages. However, Do Paço and Reis (2012) showed that being skeptical about green promises has no detrimental effects

on behavior. Even though consumers are skeptical, they still engage in green activities and purchase environmentally friendly goods. Research on skepticism by Xie and Kronrod (2012) shows that accurate numerical statements in advertising can persuade even the most cynical consumers.

To increase the plausibility of product claims, repetition of claims over time has been largely shown to be valid and effective (Hawkins & Hoch, 1992; Hawkins et al., 2001; Johar & Roggeveen, 2007; Law et al., 1998; Skurnik et al., 2005). Moreover, when claims are written in concrete terms rather than abstract, their validity is judged to be higher because concrete content is perceived as more vivid and significant (Hansen & Wänke, 2010; Herr et al., 1991). Nevertheless, repetition in advertising has a controversial effect: the recurrence of the stimulus has a beneficial effect at the beginning, as it enhances learning opportunities and decreases ambivalence and conflict over the stimulus (Kinnucan et al., 1993), while over time, repetition may cause boredom, decreased incremental learning, and even saturation and reactance (Rethans et al., 1986), implying diminished attention and motivation. Therefore, an adverse effect eventually overpowers the initial beneficial benefit (Kinnucan et al., 1993). There is a little study concerning this area, and few people disagreed with Krugman's (1982) assertion (Calder & Sternthal, 1980), stating that after several exposures, advertisements would momentarily lose their impact but that, after a break, the advertisements could be shown again and most of their effectiveness would then be restored. This effect is named "*wearout*", defined as "*the eventual loss in commercial efficacy that comes with repeated exposure to an advertisement*" (Craig et al., 1976; Grass & Wallace, 1969). To conclude, on the one hand, repetition effectively proves truthfulness (Wright et al., 2012), while on the other hand, it likely leads to the wearout effect.

This aspect will be tackled in the analysis with the use of control claims that have been tested, i.e., claims that are currently used in the market, useful both to represent and to interpret the results, as well as to test the consumer perception of advertising that has been repeated in the market for numerous years:

- *Is there a wearout effect connected with the effectiveness of the control claims versus new advertising claims?*

There are several reviews and studies on comparative advertising, a subject that has gained importance for academics throughout time (Barrio-Garcia et al., 2020; Nye et al., 2008), and this research will contribute to the results on the topic. The term "*comparative advertising*" refers to any type of advertising in which the owner of a trademark compares his good, service, or brand to the one of a competitor (Romano, 2004). Early literature defines comparative advertising more strictly: Wilkie and Farris (1975) state that comparative advertising needs to compare two or more specifically named or recognizably presented brands of the same generic product or service class and make such a comparison in terms of one or more specific product or service attributes. Later, McDougall (1977) adopts a broader perspective by integrating any advertising form that implies a competitive superiority in any dimension. The nature of comparative assertions varies. Claims are differentiated according to the inference of a rival directly or indirectly. More emphasis can be placed on the items' similarities (*positive comparisons*) or contrasts (*negative comparisons*), as well as the mentioned item can also be promoted as "as good as" or "better than" the competition (*equivalence or parity claims*) (Romano, 2004). McDougall's (1977) classification of comparative advertising separates direct advertising, in which the competing brands are explicitly named, from indirect advertising, in which competing brands are not named, and from generic advertising, in which competing brands perform the same function but may have a different form in the product. Comparative marketing enables a business to tell consumers about the products of competitors. Both businesses should display comprehensive product information that helps customers find their matches if they provide items with comparable features. It is likely that the low-quality company will also start spreading match information about its rival. If quality differences are significant, such aggressive advertising could hurt social welfare by encouraging more consumers to buy low-quality goods while outweighing the advantages coming from improved consumer knowledge (Anderson & Renault, 2006).

An EU directive in 1997 made comparative advertising acceptable and legal with the caveat that it must not be deceptive, changing the role of comparative advertising until that time (Spink & Petty, 1998). The rationale is that comparative advertising is able to enhance consumers' knowledge of available goods and costs (Barigozzi & Peitz, 2005). As a result, the European strategy became more similar to the American approach of aggressive advertising. Indeed, back in 1969, the Federal Trade Commission (FTC) passed a Policy Statement on Comparative Advertising which promoted the use of comparisons that specifically mention the rival or the rival goods (Romano, 2004). Due to the controversial nature of the comparative advertising

research, whose persuasive impact has produced inconsistent results (Gotlieb & Sarel, 1991), there has been and still is debate about its efficacy. Early literature (Wilson, 1976; Wilson & Muderrisoglu, 1980) argues that it is less credible than non-comparative advertising. Nevertheless, some study supports the use of comparative communications and proves it effective (Shimp & Dyer, 1978), while other researchers have found no changes in purchase intention between the two (Belch, 1981). Prasad (1976) found that while a comparison advertising style might reinforce message recall to some extent, it can also reduce its efficacy due to consumers' perception of the lack of claim credibility. His experiment demonstrates that respondents with a previous preference for the comparison brand judge claims in comparative advertising as less credible than those with a prior preference for the promoted product. Nevertheless, there is a consensus that a low-share or unfamiliar brand can increase the relevance of an advertisement by mentioning a highly popular brand that consumers frequently buy (Barigozzi & Peitz, 2004). Finally, Ash and Wee (1983) state the pros and cons of comparative advertising: on one hand, it offers more information to the consumers, it incentivizes manufacturers to improve their products, and it is likely to be more profitable for advertisers; on the other hand, it implies potential misidentification of the brands mentioned, it may create a "boomerang" effect, and finally, it may deceive consumers.

With the Oral B case, the following question will be answered:

- Is *a comparative claim more or less effective than a non-comparative claim?*

2.2 Market Segmentation

Market segmentation has long been considered one of the most fundamental concepts of modern marketing (Wind, 1978).

Smith (1956) is often given credit for creating the theoretical framework for market segmentation as we know it today. Within the market, segments are groups of potential clients (Kotler, 1991; Tynan & Drayton, 1987). Wind (1978) states that market segmentation is a proactive activity in which companies intentionally classify their segments with the use of analytical methodologies. A market segment consists of a group of consumers who share a similar set of needs and wants.

The results of this analysis will be examined through the lenses of the various segments to investigate any potential differences in their preferences. In fact, segmentation's primary goal is to improve advertising messaging by better knowing one's target audience (Beane, 1987). Kotler (1980) shows that a segment is only useful if it can be measured, is easy to find, and has a real value. Demographic segmentation is the most common type of market segmentation. This is because consumers' data gathered using a precise, measurable scale is simple to understand, reasonably simple and low-cost to collect, and simple to transfer from one research to another. Age, sex, family size and composition, income or occupation, educational attainment, race, and country of origin are typical demographic factors (Beane, 1987; McDonald, 2012), also defined as personal factors. Different consumers, demographically segmented, react differently to advertising and these factors strongly impact consumers' behavior. Researchers have focused on the analysis of different ages' characteristics. Moschis & Friend (2008) proved that senior consumers are dramatically increasing in size, and their interests, motivations, and spending habits are changing quickly. Age is a significant business driver, particularly in the healthcare products and services (Moschis & Friend, 2008). The main characteristics of this segment are that they are financially secure and more willing to treat themselves (The Economist, 2002). The adult population is generally in better health, has more money, is more at ease financially, and is eager to spend and travel (The Economist, 2002). McDonald (2012) shows that segmentation methods have changed and evolved over the years, and consumers' needs may vary depending on their stage within the family life cycle. Life stages are identified as a constructive way to identify segments and create items specifically for different age groups. In this regard, there is an emerging concept of "contexts," such as "wellness," "awareness," and "traditionalism," each of which is related to life stages like "singles," "nesters," "developers," and "elders." This is due to the gradually decreasing relevance of socio-economic classifications as predictors of behavior.

The Oral B case will tackle market segmentation by showing the survey results according to gender, age, income, price points, and life stages:

- *Do consumers' preferences towards advertising claims vary across market segments?*

2.3 Cross-Cultural Frameworks

2.3.1 Definition of Culture

According to Mariampolski (2006), culture is the main heuristic principle to categorize and define human behavior. Culture can relate to interpersonal distinctions in leadership and organizations, such as organizational and professional culture, as well as it is referred to literature, arts, and music. Indeed, it is defined by Tylor, 1871, cited by White (1959) as "*a complex including knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society*."

There is no agreed-upon definition of culture among scholars due to the broad scope of the term (Smith & Bond, 1998; Triandis, 1996). There are many different definitions of culture when reviewing the literature on culture and cultural differences in management (Adler, 1997), social psychology (Smith & Bond, 1998), cognitive anthropology (Foley, 1997), anthropological linguistics (Duranti, 1997, 2009), and other related fields. One of the first broad definitions of culture was given by Linton (1945). Linton said that culture is a "*configuration of learned behavior and results of behavior, whose elements are shared and transmitted by the members of a particular society*." *Culture* was then defined as "*a historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life*" (Geertz, 1973); as well as "*the collective programming of the mind that distinguishes the members of one group or category of people from others*" (Hofstede & Hofstede, 2005); and finally "*culture is a relatively organized system of shared meanings*" (Smith & Bond, 1998).

The many definitions of culture underline that it is a progressively developing phenomenon that humans create and makes itself known via physical and social artifacts. Different degrees of aggregation, such as the national, organizational, or professional level, can be used to identify culture (Hofstede & Hofstede, 2005).

Only the national level is discussed in this study. Researchers who study culture find it challenging to come to an understanding of what constitutes culture as well as how to identify one culture from another. People from the same nation may typically be thought to have a similar language, historical era, and physical location, and as a result, a shared basis on which culture can arise and be upheld. It is well known that using nationality as a "definition" of culture is, at best, a practical fix (Hofstede, 1980; Schwartz, 1992; Smith & Bond, 1998; Smith et al., 2006), although it has received harsh criticism (Duranti, 1997; Hofstede & Hofstede, 2005). Presuming a homogeneity that implies assuming that a nation is devoid of variance, clash, or

dissent (Smith & Bond, 1998), is the main limitation when considering nationality as a proxy for culture.

Considering the numerous implications of this notion on business and marketing, it is recognized that business' behaviors in markets with multiple cultural reflections are influenced by their cultural awareness. Cultural differences serve as imperceptible roadblocks in cross-border marketing communications (Tian & Borges, 2011). Success in global business is significantly influenced by awareness of and sensitivity to cultural variations, driving marketing strategies toward cross-cultural adaptation (Emery & Tian, 2003, 2002). Advertising communications incorporate values, customs, and traits that vary among cultures (Emery & Tian, 2003; Mueller, 1993). Cultures do, however, typically shift gradually. In cross-cultural communication, Tian and Borges (2011) say that marketers must always change their behavior and marketing strategies to fit their target markets.

The Oral B case will tackle different cultural contexts, the German and the American ones, by posing the question:

- *Does the cultural context have an impact on consumers' preferences toward advertising?*

2.3.2. Cross-Cultural Models

The organizational sociologist Gert Hofstede wrote a book titled "Culture's Consequences" in 1980, in which he developed a worldwide framework that is still regarded as being incredibly comprehensive as the seminal work to understand the differences in culture across countries: **Hofstede's Cultural Dimensions Theory**. He gathered questionnaire responses from more than 100 000 people worldwide, and he was able to compare different countries and ultimately identify four distinct bipolar cultural dimensions: (1) Power Distance; (2) Uncertainty Avoidance; (3) Individualism/Collectivism; and (4) Masculinity/Femininity. These dimensions represent fundamental aspects of human values. A fifth component, (5) long-and short-term orientation, was included after a replication study conducted in East Asia by Michael Bond and colleagues (Hofstede & Hofstede, 2005) using the Chinese Value Survey. The last dimension, (6) Indulgence/Restraint, was added in 2010 to reflect more recent research on happiness-related topics. The extensive World Values Survey developed by Bulgarian sociologist Michael Minkov was the starting point that partly based the study on this dimension (Hofstede & Minkov, 2010).

This analysis will focus on two different countries: Germany and the United States, according to the claims testing. The respective scores on Hofstede's Cultural Dimension Theory are the following:

Cultural Dimension	Germany	United States
Individualism	67	91
Masculinity	66	62
Long–Term Orientation	83	26
Uncertainty Avoidance	65	46
Power Distance	35	40
Indulgence	40	68

Figure 1 – Hofstede's Insights

The degree to which people feel threatened or uncomfortable by ambiguity or vagueness defines the dimension of **Uncertainty Avoidance**. Germany is one of the nations that actively avoid ambiguity, scoring 65 on the high end, suggesting a strong preference for deductive over inductive methods of thought, presentation, or planning (Hofstede's Insights). Rules and formality are necessary to organize life, and this translates into seeking the truth and having faith in professionals. Therefore, compared to low uncertainty avoidance countries like the USA, people are less receptive to change and innovation (De Mooij & Hofstede, 2011). On the other side, the USA has a low score of 46 in the uncertainty avoidance dimension, which is below average. As a result, the perceived environment that Americans are part of will have a significant influence on their behavior. This reflects in the tendency to be more accepting of ideas from everyone and enable freedom of speech. Therefore, Americans are more likely than Germans to accept new ideas, creative products, and a desire to try something new or unusual.

The aspect of the diffusion of innovation related to uncertainty avoidance has been largely studied (Tellis et al., 2003; Yeniurt & Townsend, 2003), asserting that the diffusion rate of innovative products is significantly inversely correlated with uncertainty avoidance,

particularly in nations with stronger economic conditions. Diehl, Mueller, and Berlutter (2007) conducted a study investigating the level of consumer skepticism towards advertising, focusing on pharmaceutical advertising tested among American and German consumers, and concluded that US respondents' skepticism is lower, which can be due to the USA lower degree of uncertainty avoidance. Another study conducted by Mooij and Marieke K. (2014) asserts that some product characteristics are by nature culturally specific. Detergents, cleaning supplies, and hand soaps with antibacterial claims tend to be popular in societies with high levels of uncertainty avoidance. For example, Germans are especially drawn to some goods that promise to eradicate germs, while they tend to be less successful in the Netherlands, testifying to the traditional German desire for testing and proof.

Individualism is found to have a positive effect on the diffusion of new products, being positively correlated with acceptance rates (Yeniurt & Townsend, 2003). This dimension, defined by the degree of interdependence a society maintains among its members (Hofstede's Insights), is valued very differently between the two countries, with the USA being much more individualistic than Germany.

Moreover, the **indulgence** dimension differentiates the societies, with Germany scoring significantly lower than the USA, indicating a tendency towards cynicism and pessimism (Hofstede's Insights). Restrained customers are more hesitant and thoughtful about making purchases, showing a relationship between the indulgence dimension and skepticism (Kazmi & Rahman, 2019).

The last dimension among which the countries differentiate the most is **long-term orientation**. The USA is normative, scoring low on this metric, meaning that they tend to uphold long-standing customs and standards while being wary of societal change. In contrast, Germany is positioned at the opposite end of the spectrum, with a high-end score reflecting an extremely

pragmatic orientation. Given that this dimension has not been investigated in terms of its marketing implications among different cultures, it will not be further analyzed.

Acknowledging the findings from the analysis of the literature, we can expect that skepticism towards advertising is greater among countries scoring higher on Uncertainty Avoidance (Germany) versus lower (USA), as well as the likelihood of innovative advertising to be effective is greater among countries scoring lower on Uncertainty Avoidance (USA) versus higher (Germany).

Many other models highlight the main differences between Germany and the USA (Tian & Borges, 2011; Gesteland, 1996). It is worth mentioning **Gesteland's (1996)** four-paired cultural model that differentiates culture among four dimensions: deal-focused/relationship-focused, formal/informal business cultures, rigid-time/fluid-time cultures, expressive/reserved cultures. The most significant dimension concerning the mentioned countries is the formal vs. informal corporate cultures. Europe, in particular Germany, represents the former. In this culture, people are hierarchical, concerned with their social standing, and adhere to stringent rules. Conversely, the USA embeds an informal culture that stresses individual capability over social connections and position and is egalitarian and open (Tian & Borges, 2011).

According to **Hall's Model of Cultural Communication** (Hall, 1987), context and meaning are strictly interconnected. This relationship is reflected in the framework he developed that ranks different cultures on a scale of high to low context based on how their people understand and perceive the details of a conversation or an event.

In low-context cultures, most messages are sent directly through words, while in high-context cultures, most information comes from a person's physical or social surroundings. Both the USA and Germany are low-context cultures. Both countries rely heavily on verbal communication, which implies a greater demand for explicit disclosure of background material through spoken or written conversations in everyday transactions. However, on Hall's scale, Germany is a

lower-context country than the United States, that is defined by Miller et al. (2009) as a medium-to-low-context culture. Germans utilize words that express a message's whole, complete, and intended meaning, whereas Americans may depend more on implicit messaging to achieve their intent.

Figure 2. Understanding Cultural Differences. Hall & Hall (1990).

Hall's framework marketing implications are various: Miller et al. (2009) investigate the impact of the cultural context on the effectiveness of different styles of advertising, focusing on internet visuals advertising; Hornikx and Le Pair (2017) investigated the influence of the country classification as a low or high context culture on perceived advertising complexity and liking, concluding that ad liking tends to be higher for higher context cultures than for the lower ones; Bai (2016) uses Hall's cultural pattern to analyze advertisements differences among high and low context cultures.

To avoid commercial and advertisements to be perceived as having little informative value, as is currently asserted by many Americans (Miller et al., 2009), advertising in a low-context society requires communications to be direct and provide a clear and extensive product description. High-context advertisements, however, should pay more attention to the setting or context in which the message is communicated (Miller et al., 2009; Cutler et al., 1992). On the other hand, other researchers found that some parts of advertising, like pictures and visuals, can be made the same across countries and still work well, so the communication strategy does not need to be changed (Miracle, 1996).

CHAPTER 3 – The Oral B Case

This chapter describes the methodology used to gather and evaluate data in order to develop conclusions and address the research questions and the respective sub-questions derived from the literature review:

RQ1: *Which factors make similar advertising claims more attractive than others?*

Sub-questions:

- *Do Advertising Claims with numerical benefits positively impact consumers' perception of the claim?*
- *Are Advertising Claims that include whole numbers more effective than advertising claims including percentages?*
- *Is there a wearout effect connected with the effectiveness of the control claims versus new advertising claims?*
- Is *a comparative claim more or less effective than a non-comparative claim?*

RQ2: *Does advertising claim' attractiveness differ across segments and countries?*

Sub-questions:

- *Do consumers' preferences towards advertising claims vary across market segments?*
- *Does the cultural context have an impact on consumers' preferences toward advertising?*

The chapter is organized as follows: initially, the research methodology is presented, followed by the description of the survey design and stimuli employed, then the main results of the claims are presented and analyzed, and managerial implications of the findings are commented.

3.1 Research Methodology

This study employs a survey research technique to collect information to answer the research question and provide an example of advertising claims applied to the Oral Care Market. The

survey was conducted during the summer internship I carried out at Procter & Gamble (P&G) in the Geneva Office (EU HQ) as a Consumer Market Knowledge (CMK) Intern from June '22 to August '22. The data is strictly confidential, and it is used with the purpose to represent an example to answer the research questions posed in the analysis. The marketing strategy of the company could be harmed by competitors if the data were available, therefore the original claims were paraphrased and underwent minor changes to avoid inappropriate uses. The global oral care market size was $30.91 billion in 2019, and it is expected to grow to $38.89 billion by 2027, with a CAGR of 3.1% during the forecasted period (Fortune Business Insights, 2020).

The use of a survey research method can have both positive and negative effects on the research as a whole. Faster response times, lower costs, and the capacity to reach a larger number of respondents are the main benefits of internet-mediated surveys (Saunders et al., 2009). Risks include intrinsic inflexibility, the possibility of ambiguous or omitted replies (Kothari, 2004), and a response rate that is likely low, approximately 11% on average (Saunders et al., 2009).

The AYTM Platform (https://aytm.com/) was used to conduct the research, and Excel was used to analyze the results. AYTM is a professional software used for market research and survey design. It offers advanced tools and allows access to global panels with over 100 million survey takers. The main benefit of using AYTM is that it is a business tool that can guarantee a high response rate and give a sample of the population that is representative of the whole.

3.2 Survey Design and Data Collection

The survey was first made in English and then translated into German so that answers could be collected both in the US and Germany. The two structurally identical surveys were intended for users currently using an electric rechargeable toothbrush or planning to use one. The incidence rate was set at 70%. This measure represents the rate of occurrence of the % of people eligible to participate in the survey. It is calculated as:

$$Indidence\ Rate\ (\%) = \frac{Total\ Number\ of\ Qualified\ Respondents}{Total\ Number\ of\ Respondents\ screened\ for\ the\ Study}$$

The survey was composed of four different sections:

1) Prequalification
2) Advanced Research Questions
3) Qualitative
4) Segmentation Questions

Prequalification Questions:

The first section aims at screening the respondents who have started answering the survey to select only the eligible ones whose answers are relevant. The scope was limited to those who were at least somewhat interested in electric rechargeable toothbrushes, i.e., people who were currently using one or people who were open to use one in the future.

Advanced Research Questions:

The second section concerns the analysis itself with the advertising claims testing. There are two subsections that use different tools for the analysis: the first one divides the claims into four separate groups, and the second one tests all the claims in the set together. The claims tested in the first methodology (by group/bucket/territory) are twenty-four and the ones tested in the second methodology are fourteen, representing a subgroup of the first ones. Among the set, four control claims are considered (identified in bold in the table below). *Control claims* are defined as claims currently being advertised in the market and are used to benchmark the relative performance of the new claims that are tested, as well as to test if they are still effective among consumers in driving purchase intent. The groups represent territories according to which each claim can be categorized, with the scope of exploring the relative effectiveness of each to launch a new marketing campaign.

In the first subgroup, the reorder ranking logic was applied to each of the four groups made up of six claims. Ranking questions allow respondents' qualitative judgments to be classified by quantifying them into numbers (Acharya, 2010). Respondents visualize a drag-and-drop

interface and are asked to rank all the options from top to bottom. The questions were randomized to shuffle the answers' orders to ensure data reliability. The four territories to be explored are:

- Basic Cleaning: encompasses those claims referring to primary cleaning concerns of consumers, primarily plaque and bacteria removal;
- Gum Health: includes claim addressing Gum issues and concerns regarding the perceived harshness of electric rechargeable toothbrushes;
- Technology: includes claims highlighting the technological functions of the toothbrush and leveraging those features to drive product attractiveness;
- Experience: includes claims focused on the experiential part of the brushing routine rather than the purely cleaning benefits.

Note that numbers are expressed with letters to take distance from the original scientifically proven numbers used by Oral B. The claims used are either already published claims and used by Oral B in the market, or they have been modified for future initiative.

Therefore, the following **legenda** needs to be used to read the below claims:

- ***x*** indicates a number between 50% and 800%
- ***x1*** indicates a number between 91% and 99% (imprecise number)
- ***y*** indicates a number between 2x to 10x
- ***z*** indicates the duration, between one day and two weeks

Basic Cleaning	**Gum Health**	**Technology**	**Experience**
Removes ***x*** more bacteria in your whole mouth since day 1	***x* healthier gums in *z* *(Control 2)***	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	Every Day Professional Clean Feeling

x* whiter teeth in *z* *(Control 1)	Removes ***x*** more* plaque along the gumline (vs. manual toothbrush) in only ***z***	Magnetic Technology. Best ever clean.	Take care of your routine with a pleasant and satisfying brushing
Removes ***x*** more* plaque bacteria (vs. manual toothbrush)	Removes ***y*** times more* plaque along the gumline (vs. manual toothbrush)	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**Sensational Clean. Feel it to believe it. (Control 4)**
Removes ***y*** times more* plaque bacteria (vs. manual toothbrush)	No more gum bleeding: extra gentleness and care	AI makes your routine exciting while efficient engineering gives you extra clean	Experience the next level Superior Clean
Surprisingly smooth sensations. Clinically proven best cleaning	***x1*** of gingivitis patients experience a change from unhealthy to healthy gums when using this toothbrush	Get ready to regulate your brushing with a pressure sensor.	The clean that wows.
Round cleans better. Power cleans easier.	The toothbrush that prevents gingivitis in ***x1*** of users	Rotation meets micro-vibrations for a long lasting clean.	Get the clean of your life with Oral B iO

Figure 3. Set of Claims used in the ranking questions

The second section of the survey employs a subgroup of claims. A chosen group of sixteen claims from the whole set shown above is adopted and tested with the use the AYTM Max Diff Analysis Tool. Among the 16 claims tested and presented below, 6 are numerical claims, and the remaining 10 are non-numerical claims:

Tested Claims
Removes **X** more bacteria in your whole mouth since day 1
X whiter teeth in Z (Control 1)
Extremely smooth and clinically proven best cleaning
X healthier gums in Z (Control 2)
Removes **X** more* plaque along the gumline (vs. manual toothbrush)
Removes **Y** more* plaque along the gumline (vs. manual toothbrush)
Round cleans better. Power cleans easier.
Pressure sensor allows you to control your brushing
Recognizes your brushing style and coaches you with our Oral B App (Control 3)

Clinically proven best cleaning. Rotation meets micro-vibrations.
Magnetic Technology. Best ever Clean.
Professional Clean Feeling Every Single Day
Sensational Clean. Feel it to believe it (Control 4)
The clean that wows.
X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush
With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market

Figure 4. Subset of Claims used in the second part of the claims testing in the Max Diff Question

AYTM's Max Diff technique is used to determine the relative preference and importance of multiple attributes. This approach enables a greater understanding of the distance between items and their overall preference order compared to a regular ranking question. Moreover, the use of the Max Diff allows the respondents to compare a wide range of options without being under undue pressure to read and assess everything at once. Sixteen advertising claims were tested using this method: they were grouped and shown to each respondent in balanced order, and respondents were asked to identify the claim that would make them most likely to purchase the product. Respondents would see 12 screens, each one including four visuals: the image of the product itself was constant (Figure 5 shown below), and the claim statement was the only element changing in order to control the impact of the background on the consumer's preferences and increase emphasis on the importance of the wording.

Figure 5. Example of how the claims were visualized in the survey

This method is able to collect high-resolution individual-level data to be analyzed by the Hierarchical Bayesian Multinomial Logit model. The data analysis is carried out by the AYTM

platform while collecting the answers: using a Hybrid Gibbs Sampler with a random Metropolis step MCMC, the Bayesian model is estimated. When the responder makes a decision, the model takes the characteristics of the other items in the task into account. The logit transformation of the linear combination of utility scores for the attributes yields the best/worst probability. Individual responses from respondents are examined, and their preference scores represent their personal preferences and pooled "average" preferences with a normal distribution. As a result, each respondent's raw Logit coefficients are available. AYTM employs an adaptive real-time randomization technique in place as the survey is being completed to ensure the highest possible efficiency of item allocation. Results will be visualized by using an average-based preference likelihood (PL) with a 50% baseline, representing the PL that an item would be preferred over one other randomly selected item in the set. A score above 50% indicates that an attribute is a better-than-average performer.

Qualitative:

Respondents are asked to comment on their favorite choice by answering an open-ended question to collect qualitative feedback: "*What do you particularly like about your preferred choice?"*. Interpretation of results is facilitated by investigating consumers' verbatims, the main expression of the voice of the consumer. Nowadays, more and more companies need to collect insights using unstructured data from consumers' verbatims (Gallagher et al., 2019), expressed in this analysis as an open-ended question within the survey that enables free writing. Using open-ended questions empowers marketers with the ability to learn from people's spontaneous replies while also preventing prejudice that may arise from advising them on how to respond. In contrast to close-ended questions, open-ended questions in web questionnaires can have drawbacks, such as the requirement for extensive coding and a higher item non-response rate (Reja et al., 2003). Unfiltered customer feedback is increasingly important as it represents an opportunity to understand customer attitudes about items and their overall experience with a brand. Additionally, it provides the company a chance to comprehend how to "close the loop" on any negative consumer feedback they may get and, conversely, how to benefit from positive

customer input (Gallagher et al., 2019; Garver, 2003). Ultimately, the voice of consumers provides insights to reinterpret analytical data with a new perspective (Aguwa et al., 2017). Moreover, this section includes a question investigating the familiarity of respondents with the control claims included in order to test the role of repetition and wear-out effects.

Finally, being aware of the limitation of the claimed behavior by consumers versus the actual one during the purchasing process, an extra-question was asked. Respondents were asked, after the claims test was concluded, if they think they will engage in new behaviors toward advertising claims during their daily life. In particular, if they were more interested in the product and they would engage in online/in-store search to collect information, if they will pay more attention to toothbrush advertising, if they are currently considering an immediate purchase of the product, or if their attitude towards the claims and their interest did not change at all or even diminished. This question aims at testing the short-term impact of the claims' engagement experience through the survey.

Segmentation Questions:

AYTM's Panel Data automatically includes ten demographics of the respondents in the results: gender, age range, household income, education, ethnicity, employment statistics, career, relationship status, parental status, and location. Two questions were added to be able to segment the respondents by their willingness to pay and by life stage. Concerning the first one, the respondent was asked to choose among four rising price points ("how much are you willing to pay for an electric rechargeable toothbrush?"). Concerning the second one, respondents were asked to choose the relevant life stage within the life cycle they were in, to classify among "*Pre-Family*", "*Family*", "*Post-Family*", and "*Retired*".

3.2 Data Analysis

The survey was open from the 1st of July until the 10th of July 2022 and 1200 people participated, 600 in Germany and 600 in the USA.

3.2.1 Demographic Information

Out of 1200 participants, the most common age range was 25–44 years old, making up more than 40% of the participants. Thereafter comes the age span of 45–64, followed by >65 and <25. There was an equal split between genders in Germany, while the majority of respondents were female in the USA. Income was concentrated between $25k and $100k, with the highest concentration in the high-end in the USA than in Germany, with 40% of respondents earning between $50k and $100k. Concerning price points, almost 60% of German respondents are willing to pay between $20 and $100 versus less than 30% in the USA. This distribution reflects the high awareness widespread in Germany of the benefits of using power versus manual toothbrushes, making Germany one of the countries with the highest penetration rates (P&G internal source). Life stages are normally distributed, with more than 30% of respondents in both countries having children living at home.

Demographic data	DE (n=600)	USA (n=600)
Gender		
Female	53%	65%
Male	47%	35%
Age		
*18-24**	9%	3%
25-44	45%	41%
45-64	38%	42%
>65	8%	14%
Income		
$0-$25k	13%	23%
$25k-$50k	40%	23%
$50k-$100k	32%	40%
>$100k	15%	14%
Price Point		
$0-$20	20%	57%
$20-$50	39%	14%
$50-$99	29%	13%
>$100	12%	16%
Life Stage		
Pre-Family	26%	19%
Family	36%	35%
Post-Family	24%	28%
Retired	14%	18%

Figure 6. Demographic Data of the Respondents

3.2.2 Data Manipulation

I downloaded from the AYTM platform the Excel annexed with a coded map to interpret the data. Then I extrapolated the results by group by using pivot tables with filters corresponding to the demographic segmentation above, to visualize each group separately. After cleaning the data from the blank cells and the meaningless comments and manually translating from German to English, the verbatims were manipulated by extracting the keywords to understand the trend among consumers' verbatims, identifying the most recurrent topics, and highlighting only the most significant comments.

3.3 Results

From the grouped claims questions that tested basic cleaning, gum health, technology, and experience claims with the use of the ranking format, the results are visualized using the scoring average, according to which each answer option's average rank is displayed, and rank values are reverse scored for the mean average of the answers. An index anchored to the control claim was calculated for each score to allow a direct comparison with the control and it is calculated as:

$$IDX\ vs\ control = \frac{New\ Claim\ Score}{Control\ Claim\ Score}\ x\ 100$$

The color coding indicates that: claims performing better than the control claim are green, claims performing worse than the control claim are red, and equals to the control are yellow. For example, looking at Figure 7 hereunder, "Removes X more bacteria in your whole mouth since day 1" performs 2% better than the claim in the market.

The results in Germany are:

Claims Basic Cleaning - DE	Score	IDX vs control
Removes ***X*** more bacteria in your whole mouth since day 1	4,35	102
X whiter teeth in *Z* (Control 1)	4,28	100
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	4,2	98

Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	4,12	96
Extremely smooth and clinically proven best cleaning	3,73	87
Round cleans better. Power cleans easier.	3,54	83

Figure 7. Results of Claims on Basic Cleaning Ranking in Germany

Claims Healthy Gums - DE	Score	IDX vs control
***X* healthier gums in *Z* (Control 2)**	4,44	100
Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	4,30	97
Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	4,15	93
X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	3,90	88
A toothbrush that prevents gingivitis in ***X1*** of users	3,82	86
No more gum bleeding: extra gentleness and care	3,80	86

Figure 8. Results of Claims on Healthy Gums Ranking in Germany

Claims Technology - DE	Score	IDX vs control
Clinically proven best cleaning. Rotation meets micro-vibrations.	3,85	101
Recognizes your brushing style and coaches you with our Oral B App (Control 3)	3,82	100
Get ready to regulate your brushing with a pressure sensor	3,6	94
With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	3,54	93
AI makes your routine exciting while efficient engineering gives you extra clean	3,33	87
Magnetic Technology. Best ever Clean.	3,08	81

Figure 9. Results of Claims on Basic Cleaning Ranking in Germany

Claims Experience - DE	Score	IDX vs control
Sensational Clean. Feel it to believe it (Control 4)	3,83	100
Experience the Next Level Superior Clean	3,72	97
Every Day Professional Clean Feeling	3,51	92
Take care of your routine with a pleasant and satisfying brushing	3,42	89
The clean that wows.	3,20	84
Get the clean of your life with Oral B iO	3,08	80

Figure 10. Results of Claims on Experience Ranking in Germany

The results in the USA are:

Claims Basic Cleaning - USA	Score	IDX vs control
Removes ***X*** more bacteria in your whole mouth since day 1	4,71	104

Removes ***X*** more* plaque bacteria (vs. manual toothbrush)	4,66	103
X whiter teeth in Z (Control 1)	4,52	100
Removes **Y** more* plaque bacteria (vs. manual toothbrush)	4,38	97
Round cleans better. Power cleans easier.	4,3	95
Extremely smooth and clinically proven best cleaning	3,99	88

Figure 11. Results of Claims on Basic Cleaning Ranking in the USA

Claims Healthy Gums - USA	Score	IDX vs control
Removes ***X*** more* plaque along the gumline (vs. manual toothbrush)	4,65	109
X healthier gums in one week (Control 2)	4,25	100
X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	4,13	97
Removes **Y** more* plaque along the gumline (vs. manual toothbrush)	3,96	93
A toothbrush that prevents gingivitis in **X1** of users	3,77	89
No more gum bleeding: extra gentleness and care	3,55	84

Figure 12. Results of Claims on Healthy Gums Ranking in the USA

Claims Technology - USA	Score	IDX vs control
Get ready to regulate your brushing with a pressure sensor	4,21	106
Magnetic Technology. Best ever Clean.	4,10	103
Recognizes your brushing style and coaches you with our Oral B App (Control 3)	3,98	100
AI makes your routine exciting while efficient engineering gives you extra clean	3,72	93
With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	3,51	88
Clinically proven best cleaning. Rotation meets micro-vibrations.	3,20	80

Figure 13. Results of Claims on Technology Ranking in the USA

Claims Experience - USA	Score	IDX vs control
Sensational Clean. Feel it to believe it (Control 4)	4,95	100
Experience the Next Level Superior Clean	4,65	94
Take care of your routine with a pleasant and satisfying brushing	4,53	92
The clean that wows.	4,19	85
Every Day Professional Clean Feeling	3,95	80
Get the clean of your life with Oral B iO	3,70	75

Figure 14. Results of Claims on Experience Ranking in the USA

From the Max Diff testing the results in Germany are:

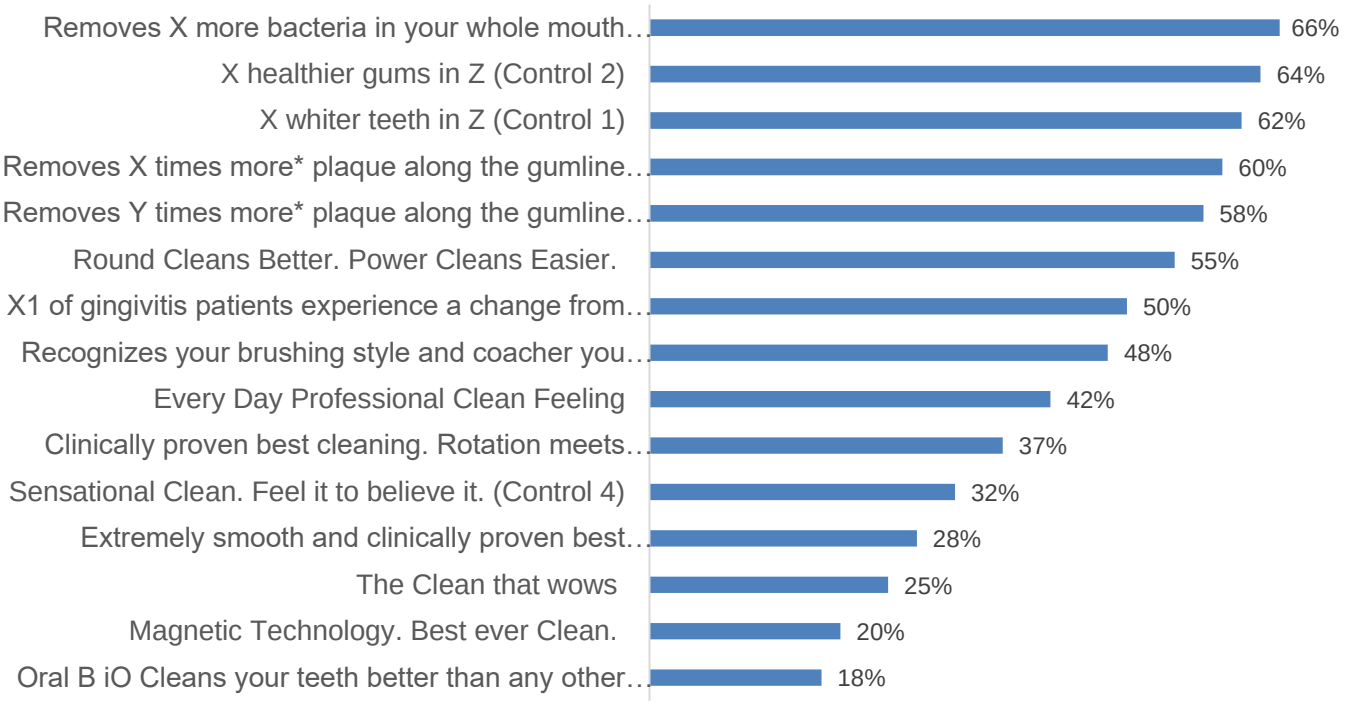

Figure 15. Claims ranking from the Max Diff Testing in Germany

Each score represents the probability that the claim considered is preferred oven one other randomly selected in the set of claims. Looking at the German distribution, the mean is lower than the median. The mean corresponds to 44% and the median to 48%. This means that the distribution is left skewed, therefore there is a higher concentration of scores on the right side of the distribution, while the left tail of the corresponding graph is longer. The range of the distribution is widespread (48%), as the highest score is 66% and the lowest is 18%. This range is lowered to only 8% when considering the Top 5 scores. This means that it is hard to find such a discriminating element among the first five claims that allows to identify the best score and advise to commercialize only the claim with the highest performance. This consideration suggests that all the Top 5, among which two control claims are included, can be employed with similar performance in the short-term.

The Max Diff results in the USA are:

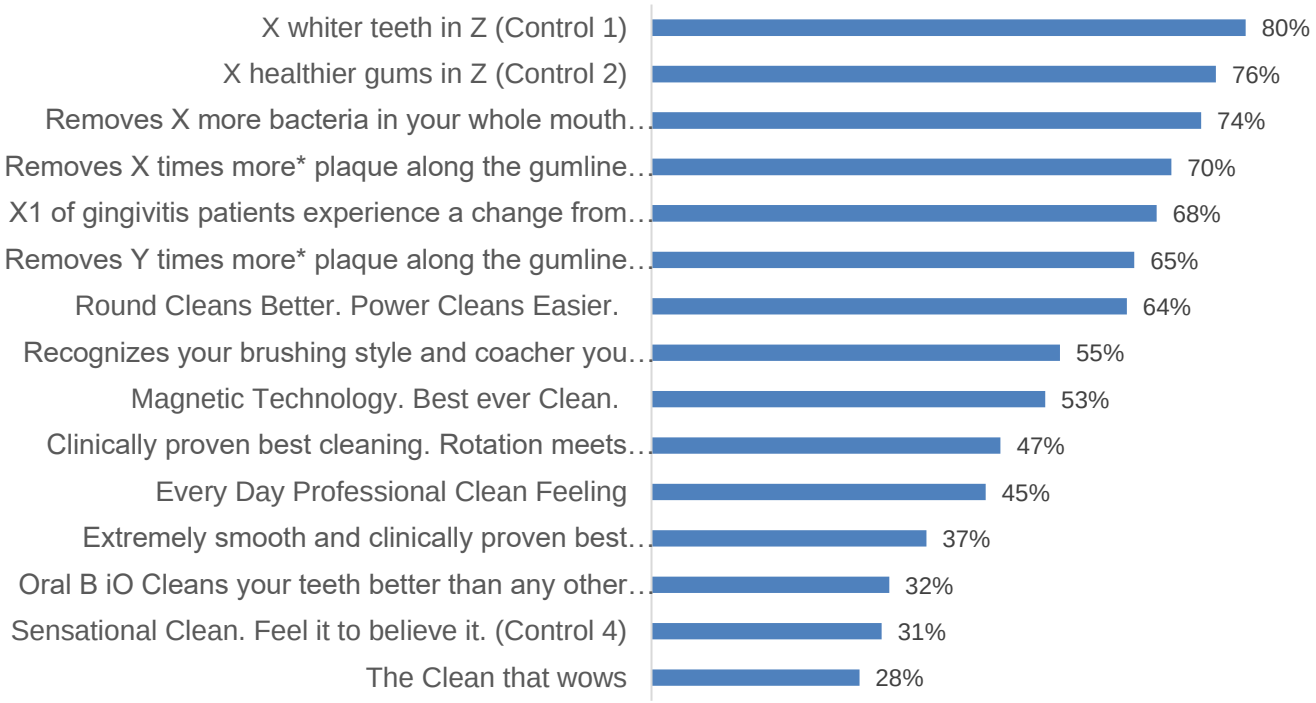

Figure 16. Claims ranking from the Max Diff Testing in the USA

Looking at the USA distribution, the mean and the median are equal and correspond to 55%. This means that the distribution is equally separated into two parts that have equal weights and spaces. Respondents' scores are equally balanced. The range of the distribution is even more widespread than the German one (52%), as the highest score is 80% and the lowest is 28%. However, the range between the Top 5 scores is higher than the German one, equals to 12%. This consideration indicates higher polarization of preferences among American respondents. Nevertheless, the great heterogeneity within the whole set and the little heterogeneity withing the Top 5 is confirmed, which makes equivalent the choice between the first performers, especially the Top 2 claims.

To the question 11 concerning claimed future behaviors of the respondents after interacting with the claims, the results by age concerning the "positive" reactions are the following (figure 17 below). The average score of the two surveys (USA and Germany) is visualized, since the percentages showed no discernible difference, and it is more significant to analyze the overall

impact of claims on behaviors. The first column (light blue) refers to "interest", i.e., those answering they are more interested into the product and will look for information online or in-store; the second column (medium light blue) refers to "awareness", i.e., those who consider themselves more self-conscious concerning advertising claims and will pay more attention to toothbrush advertisings; the third column (dark blue) refers to "consideration", i.e., those who are actually considering buying the product. The question allowed respondents to choose multiple answers, and therefore the sum of the percentages could reach more than 100%.

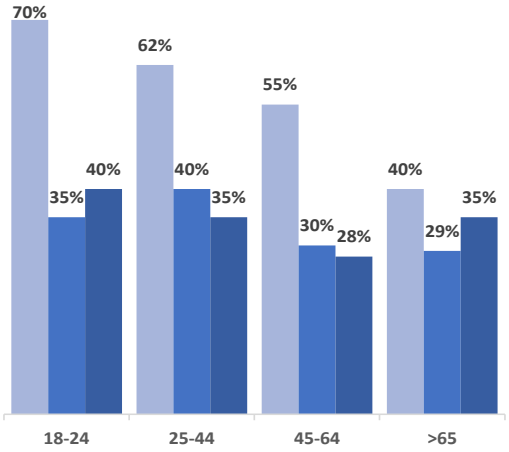

Figure 17. Average Results (USA & DE) from Q11 by age for Positive Reactions corresponding to the first 3 answers (First column: Interest; second column: Awareness; third column: Consideration)

The "negative" reactions include those respondents who did not think their attitude changed after engaging with the claims or are not interested in advertising at all. The results of the negative reactions, corresponding to the last three possible answers to Q11 are showed below.

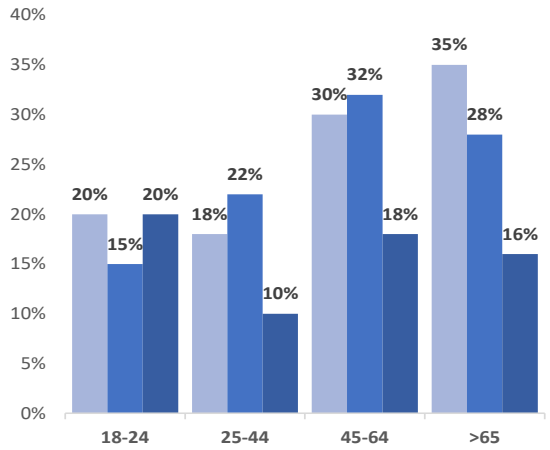

Figure 18. Average Results (USA & DE) from Q11 by age for Negative Reactions corresponding to the last 3 answers

(First column: No Change; second column: No Interest; third column: None of the Above)

Analysis of the Results:

Do Advertising Claims with numerical benefits positively impact consumers' perception of the claim?

The Oral B case demonstrated that claims with numbers scored better than those without. Indeed, both in the USA and in the DE ranking, the six numerical claims' including X/Y/Z scored significantly higher than non-numerical claims. In the USA, the first six winning claims are the six numerical claims included in the set, while in Germany, the first five winning positions are occupied by numerical claims. The numerical indication is proven able to increase consumers' trust towards the benefits promised. In both countries, claims including "X" – for example, 100%– are the most effective. Furthermore, in both countries, "*X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush*," outperforms "*a toothbrush that prevents gingivitis in X1 of users*," even if the meaning is the same. "X1" represents a number between 91% and 99%. This supports the evidence found by Xie and Kronrod (2012), who claim that numerical precision or imprecision influences the consumer's valuation of claim credibility, especially if the number is the most visible part of the claim.

Deep diving into the qualitative verbatims to investigate consumers' perceptions during the choice, the numerical benefit is perceived as giving credibility to the claim, and the specific time frame is seen as an attainable goal:

- *"I like it is tangible, it is credible"*
- *X1 (like 92%) sounds more plausible than 100%, I believe it"*
- *"It gives me a percentage on how effective the toothbrush is, it seems a scientifically proven statement"*
- *"I am convinced by the X (like 100%) MORE"*

- *"The focus on Z (short time, like 2 weeks) shows a goal that can be reached quickly, I like the time frame specification for the improvement"*
- *"Removal of X of bacteria is a clear and believable benefit"*

Are Advertising Claims that include whole numbers more effective than advertising claims including percentages?

This question is addressed by the Oral B Case by examining the results of two claims out of the total set that were tested that have the same exact meaning but a different numerical format:

- Removes X (high %, like 400%) more* plaque along the gumline (vs. manual toothbrush)
- Removes Y times (round number, like 4 times) more* plaque along the gumline (vs. manual toothbrush)

The only difference between the two is found in the way the numerical benefit is communicated: X (high percentage) vs. Y (round number). In the USA a clear preference for the Percentage Claim can be observed: from the Max Diff analysis, the Percentage Claim reaches a score 5% higher score than the Round Number Claim, and from the group ranking results it consistently outperforms the Control Claim both in the Basic Cleaning and in the Gum Health bucket. In Germany, no significant difference can be observed between the two scores. Indeed, there is only a 2% difference between the Max Diff Preference Likelihood, and the Round Number Claim even performs better than the Percentage Claim in the Gum Health bucket, while they perform very similarly in the Basic Cleaning group. The Oral B case shows that claims that include percentages are more effective than claims including whole numbers in the USA, while there is no difference in Germany. Indeed, investigating consumers' verbatims, a recurrent comment among American respondents is focusing on the percentage itself, i.e., *"X (like 400%) is a lot. The percentage immediately caught my eye"*, while no such verbatim emphasizing the

attractiveness of the high percentage can be found among German respondents. Therefore, it cannot provide one truthful answer to the question above.

Is there a wearout effect connected with the effectiveness of the control claims versus new advertising claims?

The Oral B case provides an example useful to comment on the wear-out effect through the use of the Control Claims, i.e., claims currently used in Oral B advertising that are tested among the set of claims that have not been adopted before. When ranking the claims and choosing their favorite through the Max Diff tool, respondents are not aware of which claims were the control ones. Subsequently, respondents are asked if they were familiar with and/or saw the following claims—the Control Claims—in any previous Oral B advertising:

- X whiter teeth in Z
- X healthier gums in Z
- Recognizes your brushing style and coaches you with our Oral B App
- Sensational Clean. Feel it to believe it

These are the average results from the USA and Germany:

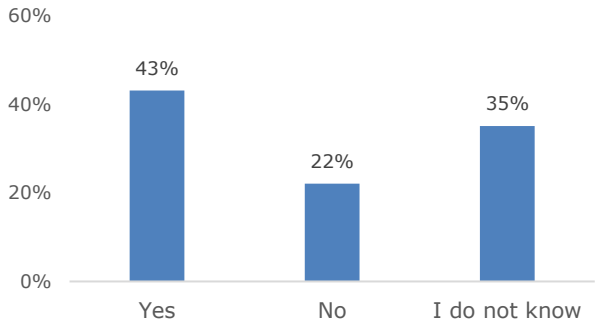

Figure 19. Average Results (USA & DE) from Q10

Most of the respondents, 43% of them, were familiar with the 4 control claims part of the set. The first two, respectively belonging to the Basic Cleaning and the Gum Health bucket, were proven to be the most effective among both the tests, scoring in the Top 3 both for the USA and

Germany. The last two claims, despite only reaching the 8th and 13th positions for Germany and the 8th and last positions for the USA in the Max Diff analysis, represent the best performers in their respective Technology and Experience bucket (looking at the Technology claims ranking results, only the Tech Control Claim is slightly outperformed). Therefore, the performance of the Control Claims was not negatively impacted by the acknowledgment that more than 40% of respondents in both countries partially already knew the mentioned claims. This result can be explained by the fact that Oral B is a very well-known brand worldwide, therefore, Campbell and Keller's (2003) conclusions are sustained. According to this study, repetition of advertising attributed to an unfamiliar brand exhibit decreased effectiveness, while the wear-out effect coming from repetition can be delayed when the same advertising is applied to a well-liked brand (Campbell & Keller, 2003). Finally, the results by buckets that show a clear preference for the control claims may indicate a higher risk aversion of those answering the survey. Indeed, a tendency to preserve the status quo, represented by the current proposition, rather than the new proposition of advertising claims is noted, and can vary according to numerous factors, such as age and education.

The most relevant consumers' verbatims concerning the control claims are:

- "X (*like 100%*) is promising, it gives me high confidence in the product"
- "I didn't know a brush could be so technological"
- "Sensational Clean promises exceptional results, it sounds convincing"

Is *a comparative claim more or less effective than a non-comparative claim?*

The Comparative Advertising Claim in the tested set is: "*With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market*". According to McDougall (1977) classification, this claim would be defined as indirect comparative advertising, as the competing brands are not named but only implied. Both in the USA and in Germany this claim performs very low and it is outperformed by the non-comparative claims: it reaches 13th place with 32% of Preference Likelihood (PL) in the USA, and the 15th and last place with 18% of

PL in Germany. Among the buckets, the comparative claim is part of the Technology group and it is scoring below average, down-performing the Control claim in both countries. In Germany the absolute score of the comparative claim is significantly lower than the one in the USA, indicating a higher level of skepticism towards comparative advertising. Concluding, the Oral B case is an example proving that a comparative claim is less effective than a non-comparative claim.

Do consumers' preferences towards advertising claims vary across market segments?

The Max Diff results were studied by segment: income, age, gender, price points, and life stages are considered. The results by segment are shown for the Top 5 performing claims, as the claims' scores are highly concentrated in these positions and represent the most important focus of our analysis. Looking at the market segmentation, it can be noticed that the winning claims are slightly more attractive for the youngest segment and for males for both countries. However, the segment of those below 25 years old represents only the 9% in Germany and the 3% in the USA and therefore it is a statistically significant sample. Looking at the income segmentation, the respondents with the lowest annual income (<$25,000) found the Top 1 claim more attractive than the other segments (respectively "Removes X more bacteria in your whole mouth since Day 1" for Germany and "X whiter teeth in Z" for the USA), and the same is valid for the segment with the lowest willingness to pay for the product showed (between $0 and $20). These categories are mostly composed by the respondents below 25 years old, confirming that the youngest are the more enthusiast concerning the advertising claims shown. Among the other segments there are not significant differences among the percentages for the winning claims, both in the USA and in Germany. Therefore, the preferences of the respondents can be considered uniform, as the scores are all distributed very close to the mean, i.e., the overall score in the Max Diff Results Chart presented above.

Claim	Female	Male

Claim	Female	Male

Overall Rank	n = 600 (100%)	53%	47%
#1	Removes X more bacteria in your whole mouth since Day 1	62%	60%
#2	X healthier gums in Z (Control 2)	66%	62%
#3	X whiter teeth in Z (Control 1)	64%	62%
#4	Removes X times more* plaque along the gumline (vs. manual toothbrush)	61%	59%
#5	Round Cleans Better. Power Cleans Easier.	58%	58%

Overall Rank	n = 600 (100%)	65%	35%
#1	X whiter teeth in Z (Control 1)	81%	79%
#2	X healthier gums in Z (Control 2)	77%	75%
#3	Removes X times more* plaque along the gumline (vs. manual toothbrush)	74%	73%
#4	X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	69%	71%
#5	Removes Y times more* plaque along the gumline (vs. manual toothbrush)	69%	67%

Figure 20. Max Diff Results by Gender, in Germany (left) and in the USA (right)

Overall Rank	Claim n = 600 (100%)	18-24 9%	25-44 45%	45-64 38%	>65 8%
#1	Removes X more bacteria in your whole mouth since Day 1	78%	65%	64%	70%
#2	X healthier gums in Z (Control 2)	70%	65%	62%	69%
#3	X whiter teeth in Z (Control 1)	68%	60%	62%	72%
#4	Removes X times more* plaque along the gumline (vs. manual toothbrush)	63%	62%	58%	59%
#5	Round Cleans Better. Power Cleans Easier.	61%	58%	62%	50%

Figure 21. Max Diff Results by Age, in Germany

Overall Rank	Claim n = 600 (100%)	18-24 3%	25-44 41%	45-64 42%	>65 14%
#1	X whiter teeth in Z (Control 1)	86%	82%	80%	76%
#2	X healthier gums in Z (Control 2)	79%	74%	76%	74%
#3	Removes X times more* plaque along the gumline (vs. manual toothbrush)	76%	74%	75%	74%
#4	X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	73%	71%	69%	70%
#5	Removes Y times more* plaque along the gumline (vs. manual toothbrush)	69%	71%	67%	69%

Figure 22. Max Diff Results by Age, in the USA

Overall Rank	Claim n = 600 (100%)	$0-$25K 13%	$25K-$50K 40%	$50K-$100K 32%	>$100K 15%
#1	Removes X more bacteria in your whole mouth since Day 1	76%	64%	64%	66%
#2	X healthier gums in Z (Control 2)	68%	65%	62%	65%
#3	X whiter teeth in Z (Control 1)	63%	62%	61%	62%
#4	Removes X times more* plaque along the gumline (vs. manual toothbrush)	63%	62%	58%	59%

#5	Round Cleans Better. Power Cleans Easier.	60%	59%	60%	54%

Figure 23. Max Diff Results by Income, in Germany

Overall Rank	Claim n = 600 (100%)	$0-$25K 23%	$25K-$50K 23%	$50K-$100K 40%	>$100K 14%
#1	X whiter teeth in Z (Control 1)	85%	78%	80%	79%
#2	X healthier gums in Z (Control 2)	76%	76%	77%	72%
#3	Removes X times more* plaque along the gumline (vs. manual toothbrush)	73%	74%	76%	73%
#4	X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	73%	71%	69%	69%
#5	Removes Y times more* plaque along the gumline (vs. manual toothbrush)	67%	69%	70%	65%

Figure 24. Max Diff Results by Income, in the USA

Overall Rank	Claim n = 600 (100%)	€0-€20 20%	€20-€50 39%	€50-€99 29%	>€100 12%
#1	Removes X more bacteria in your whole mouth since Day 1	76%	64%	62%	68%
#2	X healthier gums in Z (Control 2)	69%	65%	62%	66%
#3	X whiter teeth in Z (Control 1)	64%	60%	62%	69%
#4	Removes X times more* plaque along the gumline (vs. manual toothbrush)	63%	60%	58%	59%
#5	Round Cleans Better. Power Cleans Easier.	61%	57%	61%	50%

Figure 25. Max Diff Results by Price Point, in Germany

Overall Rank	Claim n = 600 (100%)	$0-$20 57%	$20-$50 14%	$50-$99 13%	>$100 16%
#1	X whiter teeth in Z (Control 1)	80%	81%	80%	79%
#2	X healthier gums in Z (Control 2)	76%	77%	76%	76%
#3	Removes X times more* plaque along the gumline (vs. manual toothbrush)	73%	75%	75%	75%
#4	X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	71%	68%	70%	69%
#5	Removes Y times more* plaque along the gumline (vs. manual toothbrush)	69%	67%	68%	66%

Figure 26. Max Diff Results by Price Point, in the USA

Overall Rank	Claim n = 600 (100%)	Pre-Family 26%	Family 36%	Post-Family 24%	Retired 14%
#1	Removes X more bacteria in your whole mouth since Day 1	75%	65%	63%	67%

#2	X healthier gums in Z (Control 2)	68%	65%	62%	60%
#3	X whiter teeth in Z (Control 1)	62%	60%	62%	65%
#4	Removes X times more* plaque along the gumline (vs. manual toothbrush)	61%	62%	58%	59%
#5	Round Cleans Better. Power Cleans Easier.	60%	57%	59%	57%

Figure 27. Max Diff Results by Life Stage, in Germany

Overall Rank	Claim n = 600 (100%)	Pre-Family 19%	Family 35%	Post-Family 28%	Retired 18%
#1	X whiter teeth in Z (Control 1)	84%	80%	81%	79%
#2	X healthier gums in Z (Control 2)	76%	77%	75%	74%
#3	Removes X times more* plaque along the gumline (vs. manual toothbrush)	76%	75%	73%	74%
#4	X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	71%	68%	69%	73%
#5	Removes Y times more* plaque along the gumline (vs. manual toothbrush)	72%	67%	67%	69%

Figure 28. Max Diff Results by Life Stage, in the USA

The main implication of the lack of significant differences among the segments' answers in the Max Diff analysis is that Oral B communication can be standardized. The best performer claims could be implemented in the market using mass targeting. Nevertheless, the very specific context of the oral care market needs to be considered, as consumers' needs tend to be more similar to each other (mainly plaque removal and gum issues), and more uniform across segments than other sectors.

Finally, investigating the answers by segment in the four ranking questions divided by groups (Basic Cleaning, Gum Health, Technology, Experience), it is noticed that the youngest respondents and males are the categories among which the technological and experiential claims have the highest appeal. On the other hand, the other groups show no difference, confirming that the basic and fundamental needs for this product category, i.e., plaque and bacteria removal and gum health, are constant among segments. The results are visualized as an average between the responses of the two surveys and focus on the comparison with the control claim, to be interpreted with the use of the index, only for the segment gender and age that shows differences.

Basic Cleaning	IDX vs control	Gum Health	IDX vs control	Tech	IDX vs control	Experience	IDX vs control
X whiter teeth in *Z* (Control 1)	**100**	***X* healthier gums in *Z* (Control 2)**	**100**	Clinically proven best cleaning. Rotation meets micro-vibrations.	100	Experience the Next Level Superior Clean	102
Removes ***X*** more bacteria in your whole body since day 1	97	A toothbrush that prevents gingivitis in ***X1*** of users	97	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**100**	**Sensational Clean. Feel it to believe it (Control 4)**	**100**
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	89	Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	87	AI makes your routine exciting while efficient engineering gives you extra clean	97	Every Day Professional Clean Feeling	95
Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	88	Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	83	Magnetic Technology. Best ever Clean.	91	Take care of your routine with a pleasant and satisfying brushing	93
Round cleans better. Power cleans easier.	86	***X1*** of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	82	Get ready to regulate your brushing with a pressure sensor	87	The clean that wows.	92
Extremely smooth and clinically proven best cleaning	84	No more gum bleeding: extra gentleness and care	77	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	84	Get the clean of your life with Oral B iO	85

Figure 29. Average Claims ranking by Bucket Results by Gender (Female)

Basic Cleaning	IDX vs control	Gum Health	IDX vs control	Tech	IDX vs control	Experience	IDX vs control
Removes *X* more bacteria in your whole body since day 1	104	***X* healthier gums in *Z* (Control 2)**	**100**	AI makes your routine exciting while efficient engineering gives you extra clean	103	Experience the Next Level Superior Clean	104
X whiter teeth in *Z* (Control 1)	**100**	Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	96	Clinically proven best cleaning. Rotation meets micro-vibrations.	102	Every Day Professional Clean Feelin	102
Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	96	Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	91	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**100**	**Sensational Clean. Feel it to believe it (Control 4)**	**100**
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	92	***X1*** of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	89	Get ready to regulate your brushing with a pressure sensor	91	Take care of your routine with a pleasant and satisfying brushing	92
Extremely smooth and clinically proven best cleaning	86	A toothbrush that prevents gingivitis in ***X1*** of users	84	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	87	The clean that wows.	88
Round cleans better. Power cleans easier.	83	No more gum bleeding: extra gentleness and care	82	Magnetic Technology. Best ever Clean.	84	Get the clean of your life with Oral B iO	78

Figure 30. Average Claims ranking by Bucket Results by Gender (Males)

The results per bucket filtered by gender show that males are more prone to technological and experiential claims than females. Among males, both Control Claim 3 and Control Claim 4 are outperformed by two new claims, while the first buckets that include more traditional claims that tackles the basic needs do not different results between females and males' respondents. These results suggest that advertisement including technological benefits and detailed feature of the technological product are more effective among a male audience, while a female audience is more familiar with "status quo" advertisements, confirming historical evidence of the differences between genders on how they perceive and respond to complex advertisement (Knupfer, 1998; Putrevu, 2001).

Looking at the results by age, among the youngest respondents, the four control claims are consistently outperformed in all the buckets. The young, both in the USA and in Germany, represent the segment more interested in innovative and creative claims, finding the magnetic and rotating technology, the pressure sensor and the AI technology attractive features. In the

middle-aged segments the claim in the market is preferred, while the old surprisingly finds the technological claims more interesting than the sample average. The first two buckets differentiate only among the old segment, among which the new basic cleaning claims outperform the control, showing highest interest of this category to plaque and bacteria removal benefits, consistent with the fact that they are more likely to experience health issues and therefore are more concerned.

Basic Cleaning	IDX vs control	Gum Health	IDX vs control	Tech	IDX vs control	Experience	IDX vs control
Removes *X* more bacteria in your whole body since day 1	107	Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	111	Magnetic Technology. Best ever Clean.	110	Experience the Next Level Superior Clean	104
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	101	Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	109	Get ready to regulate your brushing with a pressure sensor	109	**Sensational Clean. Feel it to believe it (Control 4)**	**100**
X whiter teeth in *Z* (Control 1)	**100**	***X* healthier gums in *Z* (Control 2)**	**100**	Clinically proven best cleaning. Rotation meets micro-vibrations.	105	Take care of your routine with a pleasant and satisfying brushing	94
Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	92	**X1** of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	98	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**100**	Every Day Professional Clean Feeling	90
Round cleans better. Power cleans easier.	89	A toothbrush that prevents gingivitis in **X1** of users	93	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	97	The clean that wows.	86
Extremely smooth and clinically proven best cleaning	87	No more gum bleeding: extra gentleness and care	89	AI makes your routine exciting while efficient engineering gives you extra clean	92	Get the clean of your life with Oral B iO	82

Figure 31. Average Claims ranking by Bucket Results by Age (18-24 years old)

Basic Cleaning	IDX vs control	Gum Health	IDX vs control	Tech	IDX vs control	Experience	IDX vs control
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	107	***X* healthier gums in *Z* (Control 2)**	**100**	Clinically proven best cleaning. Rotation meets micro-vibrations.	108	**Sensational Clean. Feel it to believe it (Control 4)**	**100**
X whiter teeth in *Z* (Control 1)	**100**	Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	99	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**100**	Experience the Next Level Superior Clean	99
Removes *X* more bacteria in your whole body since day 1	100	Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	98	Get ready to regulate your brushing with a pressure sensor	98	Every Day Professional Clean Feeling	90
Round cleans better. Power cleans easier.	97	No more gum bleeding: extra gentleness and care	92	Magnetic Technology. Best ever Clean.	94	Take care of your routine with a pleasant and satisfying brushing	90
Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	86	**X1** of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	88	AI makes your routine exciting while efficient engineering gives you extra clean	90	The clean that wows.	82
Extremely smooth and clinically proven best cleaning	82	A toothbrush that prevents gingivitis in **X1** of users	82	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	83	Get the clean of your life with Oral B iO	78

Figure 32. Average Claims ranking by Bucket Results by Age (25-44 years old)

Basic Cleaning	IDX vs control	Gum Health	IDX vs control	Tech	IDX vs control	Experience	IDX vs control
Removes *X* more bacteria in your whole body since day 1	103	***X* healthier gums in *Z* (Control 2)**	**100**	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**100**	**Sensational Clean. Feel it to believe it (Control 4)**	**100**
Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	102	Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	100	Get ready to regulate your brushing with a pressure sensor	98	Experience the Next Level Superior Clean	94
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	101	**X1** of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	94	Clinically proven best cleaning. Rotation meets micro-vibrations.	94	Every Day Professional Clean Feeling	92
X whiter teeth in *Z* (Control 1)	**100**	Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	93	AI makes your routine exciting while efficient engineering gives you extra clean	91	The clean that wows.	84
Round cleans better. Power cleans easier.	95	A toothbrush that prevents gingivitis in **X1** of users	86	Magnetic Technology. Best ever Clean.	85	Take care of your routine with a pleasant and satisfying brushing	76
Extremely smooth and clinically proven best cleaning	87	No more gum bleeding: extra gentleness and care	85	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	80	Get the clean of your life with Oral B iO	70

Figure 33. Average Claims ranking by Bucket Results by Age (45-64 years old)

Basic Cleaning	IDX vs control	Gum Health	IDX vs control	Tech	IDX vs control	Experience	IDX vs control
Removes *X* more bacteria in your whole body since day 1	104	Removes ***X*** more* plaque along the gumline (vs. manual tootbrush)	107	Clinically proven best cleaning. Rotation meets micro-vibrations.	103	**Sensational Clean. Feel it to believe it (Control 4)**	**100**
Removes ***X*** more* plaque bacteria (vs. manual tootbrush)	102	***X* healthier gums in *Z* (Control 2)**	**100**	Get ready to regulate your brushing with a pressure sensor	101	Experience the Next Level Superior Clean	96
X whiter teeth in *Z* (Control 1)	**100**	Removes ***Y*** more* plaque along the gumline (vs. manual toothbrush)	97	**Recognizes your brushing style and coaches you with our Oral B App (Control 3)**	**100**	Take care of your routine with a pleasant and satisfying brushing	94
Removes ***Y*** more* plaque bacteria (vs. manual toothbrush)	96	**X1** of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush	94	AI makes your routine exciting while efficient engineering gives you extra clean	94	The clean that wows.	86
Extremely smooth and clinically proven best cleaning	91	No more gum bleeding: extra gentleness and care	90	With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market	92	Every Day Professional Clean Feeling	80
Round cleans better. Power cleans easier.	86	A toothbrush that prevents gingivitis in **X1** of users	86	Magnetic Technology. Best ever Clean.	81	Get the clean of your life with Oral B iO	79

Figure 34. Average Claims ranking by Bucket Results by Age (45-64 years old)

Does the cultural context have an impact on consumers' preferences toward advertising?

The analysis was applied to two different cultural contexts, the German and the American one. Those two countries, assuming nationality as a proxy for culture as explained in Chapter 2, differ primarily in their levels of Individualism, Uncertainty Avoidance, Long/Short term orientation, and Indulgence. According to Hofstede's model, Uncertainty Avoidance is one of the most important dimensions that has the greatest potential impact on business behaviors. Looking at the results, it can be claimed that skepticism towards advertising is greater in Germany than in the USA, which can be translated to countries scoring higher on Uncertainty Avoidance versus countries scoring low on this dimension. Indeed, there is an average difference of 10 percentage points between the German and American absolute scores from the Max Diff analysis. These results can be interpreted as American respondents being more enthusiastic towards the mentioned advertising claims versus German respondents. Moreover, the ranking questions with the buckets analysis show as well lower absolute scores in Germany, especially among the Technology claims group, even if the order of the winning claims is similar.

Interpreting the results of the claims related to Technology and Experience, it can be concluded that the attractiveness of innovative advertising is greater in the USA than in Germany, which can be inferred to countries scoring lower on Uncertainty Avoidance versus higher. These interpretations are in agreement with the literature on cross-cultural marketing and prove the statement above: the cultural context has an impact on consumers' preferences toward advertising. Americans tend to score consistently higher than Germans among Technology and Experience claims buckets, demonstrating that Americans are more likely to accept new ideas

and are more creative. Americans are more interested in the use of pressure sensors, AI features, and the interconnected mobile App. They rank "*clinically proven best cleaning. Rotation meets micro-vibrations*" as the lowest in the Technology bucket, which is instead the one ranking at the first place in the Technology bucket in Germany. For the Experience bucket, the Control Claim outperforms the new claims both for Germans and Americans, as it is likely influenced by the familiarity effect with the control claim. However, the ranking scores of the Experience Control claim in the USA are significantly higher (4,85 vs. 3.83).

Finally, to assess the claims general effectiveness the extra-question on future behavior is fundamental. This question (Q11: *After seeing all these claims, do you consider yourself engaging in one of the following behaviors?*) allows us to investigate the overall impact of the claims on the respondents' behavior, other than their preference in terms of the specific claims. Results show that there are more positive reactions than negative, with a peak of 70% of respondents below 25 years old claiming to be willing to collect more information on the product and 40% of state they are considering buying it. An average of 3.5 people out of 10 state they are willing to purchase the product after the claims testing, as well as they claim to be more interested and conscious of advertising claims. On the other side, the consumers showing a "negative" reaction to the rest represent a smaller part of the sample. On average, 30% of respondents will not change their attitude towards the product category in any ways after the testing, while around 20% of them are not interested in advertising and were not engaged by the test.

3.4 Comment of the Findings and Managerial Implications

In this section, we will comment on the results obtained from the study from an economic-managerial point of view.

This analysis allows the reader to extract valuable insights for marketing professionals working in the oral care industry and in the advertising industry as a whole. The research fills gaps in the advertising claims literature. In particular, the available literature on the topic is dated between the early 70s and 90s, when the first important empirical tests on consumers' behavior toward advertising paved the way for future studies (Pollay, 1987). Moreover, despite the

growth in international marketing, cross-cultural research in marketing has been limited (McCort & Malhotra, 1993). Recognizing this deficiency, the research questions proposed in this research were addressed only separately by the early literature on advertising claims and consumers' psychology.

The first part of the study focuses on a comparison between claims divided by group: the respondent was asked to rank the claims within each block referring to Basic Cleaning, Gum Health, Technology, and Experience. The goal is to test the relative effectiveness of each of those territories to be able to choose the most effective advertising strategy by choosing the best combination to be launched in the market. The first things that this analysis showed were mostly about how different the tested countries were in how likely they were to make innovative claims, how different the scale scores were, with German scores being more conservative and concentrated, how well the control claims performed in the market, and how there were not any big differences in the rankings between segments. The study then investigates the potential additional insights from these results by using a more omni-comprehensive tool that tests the claims together in the same set by using a real-time randomization technique. This second claims testing process provides more reliable data than the ranking technique and addresses the other sub-questions of the analysis by showing that segments' preferences do not vary consistently when evaluating the claims set, with uniform scores among different incomes, price points, and life-stages in the oral care market, while slightly differentiating among ages and genders.

This analysis provides insights from the ranking questions concerning the effectiveness of numbers within the claim design and of control claims, and the lack of effectiveness of comparative indirect advertising. In particular, by comparing the results obtained with previous studies, the importance of numbers in enriching the claims was proved, guaranteeing factualness and objectivity. Consistently to what we would have expected from the main research conducted in the early 80s (Belch, 1981; Prasad, 1976), the indirect comparative advertising claim included in the set was proved as inefficient compared to the others.

Moreover, it was noted that consumers are generally not open towards unfamiliar claims concerning technology when applied to the personal care sector, and that the less innovation-prone individuals are the ones characterized by lower levels of uncertainty avoidance, as expected from Hofstede's model. On the contrary, instead of what was expected according to

Kruger & Vargas (2008) research on whole numbers, the research showed that, in the USA, claims including percentages are perceived as more effective than those including round numbers. This finding is valid only in the USA and it supports Sevilla et al. (2018) theory stating that percentage claims are preferred when set sizes of the test are greater. However, the conclusion in Germany remains vague and therefore the results concerning the sub-question "*Are advertising claims that include whole numbers more effective than advertising claims including percentages?*" cannot be considered reliable due to this discrepancy. This phenomenon could be justified by the fact that the sample considered consists of 600 respondents in each region, assessing only two claims among the set (the one with the percentage versus the one with the round number), which may not be sufficient to provide consistent evidence.

Previous studies called to the attention of advertisers that the potential occurrence of the wear-out effect would cause a dramatic reduction in the effectiveness of the advertising itself. However, despite the control claims having been introduced in the market years before, especially the traditional Basic Cleaning and Gum Health Control claims, they achieved the best performance in the claims set. On the other hand, more recent studies have proved that notorious and highly valued brands are less likely to incur in wear-out (Campbell & Keller, 2003).

Concerning consumers' differentiation, few differences are found between different incomes, ages, life stages, genders and price points. Target or differentiated marketing was elected as the "best framework for strategic success in the marketplace" (Kotler 1991, p262). Consumers around the world all have different needs and wants (Kotler & Armstrong, 2001) and it is extremely difficult for businesses to create a marketing mix that can satisfy all consumers' demand. To interpret this evidence, it needs to be considered that the conventional class patterns have changed over the years, and today the average consumer has more money to spend. Companies must make a strategic decision and choose which market segments best suits their products to identify the high yield segment with the greatest likelihood of profitability or potential growth. However, with product universally consumed, a mass marketing based on a "one-size-fits-all" approach is more likely to work (Goyat, 2011). This study shows that consumers' preferences were uniform in the Oral B case: this can be explained by the global standardization strategy adopted by P&G during the last 20 years and by the acknowledgement that the study refers to only one inclusive segment, the one of those already somewhat interested

into the product category of power toothbrushes. Standardized marketing approaches can be used internationally as they conform across different cultures and countries in promoting the same product. P&G adopts relatively standard brands, formulations, packaging, positioning, and distribution in its global markets. This unified marketing framework allows multinational companies to save time and reduce costs in its marketing efforts, since individual marketing strategies for each country are unnecessary, boosting economies of scale as a result.

To summarize the learnings, it is important for a brand to develop its advertising claims in a way that can be proven, ensuring objectivity, including numbers, enhancing the effectiveness in driving purchase intent, being specific to the brands' benefit, not implying comparison with competitors, and keeping in mind of the main needs of consumers to be addressed, without largely investing in technology and new territories for a homogeneous population. Indeed, it is crucial that marketers design their claims having a clear segment objective in mind: only young people and males showed higher inclinations toward tech and experience territories. Finally, marketers should design their strategies based on the impact of culture and the social factors including groups, family, roles, and status that affect consumers' decisions. To induce the desired behavior in the consumer, more in-depth studies should be carried out highlighting the actual behavior of their purchases compared to the one claimed during the test.

CHAPTER 4 – Conclusions and Limitations

4.1 Conclusions

Two research questions and six sub-questions, four related to the first research question and two related to the second one, were formulated during the study and the survey was able to provide the answers to the sub-questions in order to correctly address the research questions. Through the qualitative analysis of the quantitative results, we were able to address six sub-questions, while two remained open, with no univocal conclusion concerning the round number vs. percentage and with context peculiarity effect on the segmentation. In particular:

- Claims with numerical benefits positively impact consumers' perception of the claim itself. This is proved by a consistent higher score, and therefore higher effectiveness, of all the claims including a numerical benefit than those who did not include a numerical benefit.

- Claims that include whole numbers are not more effective than claims including percentages (when communicating the same exact meaning). However, univocal evidence was not found within the two surveys concerning a clear preference between "X" (high percentage, like 400%) or "Y times" (round number, like 4 times).
- Control claims do not show to be impacted by a wear-out effect that reduces their commercial efficacy after repeated exposure.
- A comparative claim is less effective than a non-comparative claim

These sub-questions, together with the literature analysis, address the first research question: "*which are the factors making similar advertising claims more attractive than others?*". We can conclude that a crucial element that makes a claim more effective than another one with similar content is the explicit indication of a numerical benefit. The number is seen as signaling confidence and a positive perception by the consumer toward the claim. There is no clear direction on whether the numbers should be in the form of percentages, round numbers, or voluntarily imprecise numbers. Marketers should prefer non-comparative claims over comparative claims to enhance commercial effectiveness, as well as leverage successful claims previously tested here and used as control claims.

- Consumers' preferences towards advertising claims can vary across segments. However, only slight variations were testified in the research, while preferences of the considered segments within the oral care market can be considered uniform.
- The diverse cultural context does have an impact on consumers' preferences toward advertising, mainly demonstrated by the different absolute scores between the German and American respondents and by the performance of the technological and experiential claims in the buckets in the USA.

These sub-questions, together with the literature analysis, address the first research question: "*Does advertising claims' attractiveness differ across segments and countries?*". The main insight is that uncertainty avoidance, one of Hofstede's cultural dimensions, does have an impact on countries' preferences mostly concerning the technological inclination. Market segments show slightly different preferences in the ranking of the claims. Despite the fact that market segmentation is a crucial milestone in the process of market testing, targeting by demographic segment is found to have less impact than the one expected from the literature. The only differences concern the youngest respondents and the males. Among the first ones the overall claims are more attractive, reaching higher scores than the older respondents, while

males are more prone to the technological and experiential claims than female, among which the control claims are rarely outperformed. However, the lack of significant differences can be justified by the specific context of the oral care market used for the analysis that is more prone to standardization and mass marketing compared to other sectors.

4.2 Limitations and Future Research

Due to its academic purpose, this study is subject to a number of restrictions and limits.

This analysis focused on advertising claims adopted when launching new marketing campaigns in a particular industry (i.e., oral care). Consequently, the findings cannot be generalized and applied to other industries. In addition, the research was limited to a particular product – the electric rechargeable toothbrush by Oral B – which raises issues about the generalizability of the conclusions for the oral care business in general. Therefore, additional study is required to test these results on a different line of products. The strict confidentiality of the data provided somewhat represent a limit itself too, since it went through modifications to avoid imitations from competitors and breach of secretness.

Moreover, another limitation concerns the sample chosen. Although the poll considered is heterogeneous in terms of age and genders, and therefore can be considered a realistic sample of the country's population, its problem is that is made up of consumers already somewhat interested in the product. Indeed, the survey was targeted to those who were currently using or open to use an electric rechargeable toothbrush and not to the average consumers with low awareness of this product. Therefore, results could change with a sample of consumers using only manual toothbrush and not interested to upgrade and this make the sample eligible for biases.

It would also be interesting to repeat the study on a population composed by different nationalities than only USA and Germany, to see if the results are the same regardless of the European geographic area. Moreover, every culture contains numerous subculture that cannot be identified into the definition of national culture itself. Culture is not an omni-comprehensive model and nationality is not an exact proxy of it. Culture is more pertinent to comprehend particular situations and environment, not generalizable consumers' behavior. Therefore, the impact of subculture and social classes on consumers' psychology should be considered too. Finally, it is recommended to adopt and implement in future studies the Tian and Borges (2011)

anthropological theory: culture has an impact on marketing communications and vice versa. Culture defines purchasing habits and influences marketing communication, and marketing communication contributes to cultural borrowing and altering. However, culture cannot be completely used as a predictor of consumers responses to advertising and claimed behavior, since the results had not been conclusive and there are mixed findings on the impact of culture on purchase intent.

Then, it should be acknowledged that the reliability of these results is subjected to the discrepancy between the claimed and the actual consumers behaviour. Indeed, surveys tend to be subjected to the limitations of the respondents' inconsistency when engaging in the purchasing. For example, some studies showed that consumers' green intent often does not translate at all into actual green purchase behaviours for more than 20% of cases (Boztepe, 2012).

Finally, advertising claims framework is strictly interwoven with regulations and deeply influenced by the changing laws. Given that literature appears to lack evidence of this influence on company's marketing strategies, this problem that impacts the claims' structure and design was not investigated in the present review. Although, trend of companies filing lawsuits against false advertising and consumers class actions are dramatically increasing in the last years, and the Federal Trade Commission and the European Commission strengthened the regulations on labelling, standards of identity, and advertising (FTC, 2021; Citizens Information, 2022). Therefore, the choice of wording is not taken only in perspective of consumers appealing, but first and foremost, the compliance with the regulatory framework.

APPENDICES

Block 1: Prequalification Questions

PQ1: Which of the following occupations are you, or any member of your household currently employed in? Select all that apply.

(1) Accountancy, banking, finance, consulting
(2) Architecture, arts, culture and entertainment
(3) Business, management and administration – in health/oral care **(EJECTED)**
(4) Business, management and administration – outside of health/oral care
(5) Community and social services, charity/voluntary
(6) Creative: marketing, advertising **(EJECTED)**
(7) Education
(8) Engineering, manufacturing, R&D, sales – in health/oral care **(EJECTED)**
(9) Engineering, manufacturing, R&D, sales – outside of health/oral care
(10) Environment and agriculture
(11) Government, law, public policy, communication
(12) Health care: doctor, dentist, hygienist, specialist **(EJECTED)**
(13) None of the above

PQ2: Please indicate which of the following best describes your involvement in buying oral care products for your household.

(1) I do most of the shopping for oral care products for my household
(2) I do at least half of the shopping for oral care products for my household
(3) Someone else does the shopping for oral care products for my household **(EJECTED)**

PQ3: What is the main type of toothbrush you use MOST OFTEN?

(1) An electric toothbrush powered by a rechargeable battery, with a cord that needs to be plugged into an outlet to be recharged
(2) A battery powered toothbrush with a disposable replaceable battery and no cord, so there's no need to plug it into an outlet

(3) A manual toothbrush (has a plastic handle with no electric capabilities)

(4) Other toothbrush **(EJECTED)**

PQ4: [Hide if PQ3A1] Which of the following statements best describer your attitude toward an electric toothbrush powered by a rechargeable battery, wit a cord that needs to be plugged into an outlet to be recharged?

(1) I am extremely interested in buying a rechargeable power toothbrush

(2) I am somewhat interested in buying a rechargeable power toothbrush

(3) I would never use a rechargeable power toothbrush **(EJECTED)**

Block 2: Advanced Research Question

Q1: [show if PQ3A1] In the past 6 months, which of the following brands of toothbrushes have you used? Select all that apply

(1) Oral B

(2) Philips Sonicare

(3) Fairywell

(4) Colgate

(5) Quip

(6) Store Brand

(7) Other, please specify

Q2: What is the amount spent on your current toothbrush purchase? If you don't remember, please give your best estimate.

(1) $0-$9

(2) $10-$19

(3) $20-$49

(4) $50-$99

(5) $100-$149

(6) $150-$199

(7) >$200

Q3: Let us present to you Oral B iO.

Q4 (Basic Cleaning): Please rank the statements from 1 to 7, with 1 being the one that would make you the MOST likely to purchase an electric rechargeable toothbrush (top) and 7 the one that would make you the LEAST likely to purchase one (bottom). (You can zoom on the image).

Image example:

NB: the visual used is the same for all the answers and the claim written changes.

A1: Removes X more bacteria in your whole mouth since Day 1

A2: X whiter teeth in Z

A3: Removes X times more* plaque bacteria (vs. manual toothbrush)

A4: Removes Y times more* plaque bacteria (vs. manual toothbrush)

A5: Extremely smooth and clinically best proven cleaning

A6: Round cleans better. Power cleans easier.

Q5 (Gum Health): Please rank the statements from 1 to 7, with 1 being the one that would make you the MOST likely to purchase an electric rechargeable toothbrush (top) and 7 the one that would make you the LEAST likely to purchase one (bottom). (You

can zoom on the image).
A1: X healthier gums in Z
A2: Removes X more* plaque along the gumline (vs. manual toothbrush)
A3: Removes Y more* plaque along the gumline (vs. manual toothbrush)
A4: No more gum bleeding: extra gentleness and care
A5: X1 of gingitivis patients experience a change from unhealthy to healthy teeth when using this toothbrush
A6: The toothbrush that prevents gingitivis in X1 of users

Q6 (Technology): Please rank the statements from 1 to 7, with 1 being the one that would make you the MOST likely to purchase an electric rechargeable toothbrush (top) and 7 the one that would make you the LEAST likely to purchase one (bottom). (You can zoom on the image).
A1: With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market
A2: Magnetic Technology. Best ever Clean.
A3: Recognizes your brushing style and coaches you with our Oral B App
A4: AI makes your routine exciting while efficient engineering gives you extra clean
A5: Get ready to regulate your brushing with a pressure sensor
A6: Clinically proven best cleaning. Rotation meets micro-vibrations.

Q7 (Experience): Please rank the statements from 1 to 7, with 1 being the one that would make you the MOST likely to purchase an electric rechargeable toothbrush (top) and 7 the one that would make you the LEAST likely to purchase one (bottom). (You can zoom on the image).
A1: Every Day Professional Clean Feeling
A2: Take care of your routine with a pleasant and satisfying brushing
A3: Sensational Clean. Feel it to believe it.
A4: Experience the next level Superior Clean
A5: The clean that wows.
A6: Get the clean of your life with Oral B iO

Q8 (Max Diff): Please evaluate each group of statements and select the one that would make you MOST likely to purchase an electric rechargeable toothbrush and the one

that would make you the LEAST likely to purchase one. (Please treat each group uniquely. You will see 12 screens).

A1: Removes X more bacteria in your whole mouth since Day 1

A2: X whiter teeth in Z (Control 2)

A3: Extremely smooth and clinically best proven cleaning

A4: X healthier gums in Z

A5: Removes X more* plaque along the gumline (vs. manual toothbrush)

A6: Removes Y more* plaque along the gumline (vs. manual toothbrush)

A7: Round cleans better. Power cleans Easier.

A8: Pressure sensor allows you to control your brushing

A9: Recognizes your brushing style and coacher you with our Oral B App (Control 3)

A10: Clinically proven best cleaning. Rotation meets micro-vibrations.

A11: Magnetic Technology. Best ever Clean.

A12: Processional Clean Feeling Every Single Day

A13: Sensational Clean. Feel it to believe it (Control 4)

A14: The clean that wows.

A15: X1 of gingivitis patients experience a change from unhealthy to healthy teeth when using this toothbrush

A16: With its revolutionary technology, Oral B iO cleans your teeth better than any other brush in the market.

Block 3: Qualitative

Q9: What do you particularly like about your preferred choice? (Open-ended question)

Q10: Before this survey, were you already familiar with and/or did you already saw in advertising any of the following claims?

- 100% cleaner teeth in one week
- 100% healthier gums in one week
- Recognizes your brushing style and coaches you with our Oral B App
- Sensational Clean. Feel it to believe it
    (1) Yes, I know these claims
    (2) No, I've never heard of these claims and/or I am not familiar with them
    (3) I don't know

Q11: After seeing all these claims, do you consider yourself engaging in one of the following behaviors? (Please select all that apply).

(1) I am more interested in the product and I will look for more information online/in-store

(2) I will pay more attention when looking at toothbrushes advertising

(3) I am considering purchasing an electric rechargeable toothbrush

(4) My attitude towards electric rechargeable toothbrush did not change at all.

(5) I am not interested in these advertising and I do not plan to take any action.

(6) None of the above

Q12: Did you already know of the existence of the Oral B iO toothbrush?

(1) Yes, I know the product

(2) No, I did not know the product

Block 4: Segmentation Question

Q13: Which of the following best describes the life stage you are currently in? Please choose the best fit.

(1) Pre-Family (includes students, single employed)

(2) Family (having kids between 0 and 10 years and older kids living at home)

(3) Post-Family (when kids left the parents' home)

(4) Retired

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