Package Design vs. Customer Reviews:

A Comparative Study on Influences in Fragrance Buying Decisions

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Abstract

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The purpose of this study was to determine the effect of customer reviews, compared to package design, on the fragrance buying decisions of women aged eighteen to twenty-five. The researcher conducted two surveys: the first asked thirty-five random women to choose between two equally priced, but differently designed, perfumes (Perfume X and Perfume Z). This first group's preference was Perfume X, with 57.14% of participants choosing this product. The second survey asked a different group of thirty-five random women to choose between the same two perfumes, but with the addition of unequally favorable customer reviews. Group 2 participants preferred the product with better customer reviews (Perfume Z), with 68.57% of participants choosing this product. Because overall product preference changed with the presence of customer reviews, this study determined that customer reviews had a greater influence than package design on the fragrance buying decisions of eighteen to twenty-five year-old women.

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Chapter 1: Introduction

Marketing professionals commonly refer to packaging as the "silent salesman." This term emerged with the rise of self-service retail shopping, when the consumer gained the power to make buying decisions without the help of a retail salesperson. Marketers saw targeted package design as a new opportunity to influence buying decisions. They researched the target market's aesthetic preferences to determine what design elements would be most effective in attracting consumers. Creative packaging professionals then used this information to strategically design a package. Since then, consumer-targeted packaging has been an integral part of branding and marketing.

Social media has added another potential element to a consumer's decision-making process. Blogs, customer review sites, and other social networking applications allow consumers to publicly communicate their satisfaction or dissatisfaction with products and services. Businesses cannot control the content of social media sites, thereby giving up some power in branding and marketing to consumers. The purpose of this study is to determine if this power shift has also diminished packaging's influence in buying decisions, specifically in the area of fragrance.

The fragrance industry is notorious for its creative packaging; design magazines dedicate articles to this topic and consumers keep empty perfume bottles for decorative purposes. Package design is an integral part of fragrance marketing and intended to strongly influence buying decisions. However, social media has encouraged consumers to discuss the scents themselves, rather than just their packaging. Retail websites such as Sephora.com and Amazon.com allow customers to review their experiences with fragrance purchases.

If customer reviews are factors in buying decisions, fragrance marketers must understand how they affect consumers' product perceptions. This understanding will allow marketers to more strategically target their fragrances to a technology-oriented consumer. Greater insight into the effects of customer reviews also helps determine if the fragrance package design workflow needs to be updated. To gain this insight, this study compared how package design and customer reviews influenced the buying decisions of eighteen to twenty-five year old female consumers.

Chapter 2: Literature Review

Product form refers to the exterior packaging of a product. Marketers seek to understand the role of packaging in consumer buying decisions in order to effectively package their products. In 1995, Peter Bloch provided insight into buying behavior by establishing the following model of consumer responses to product form (p. 17):

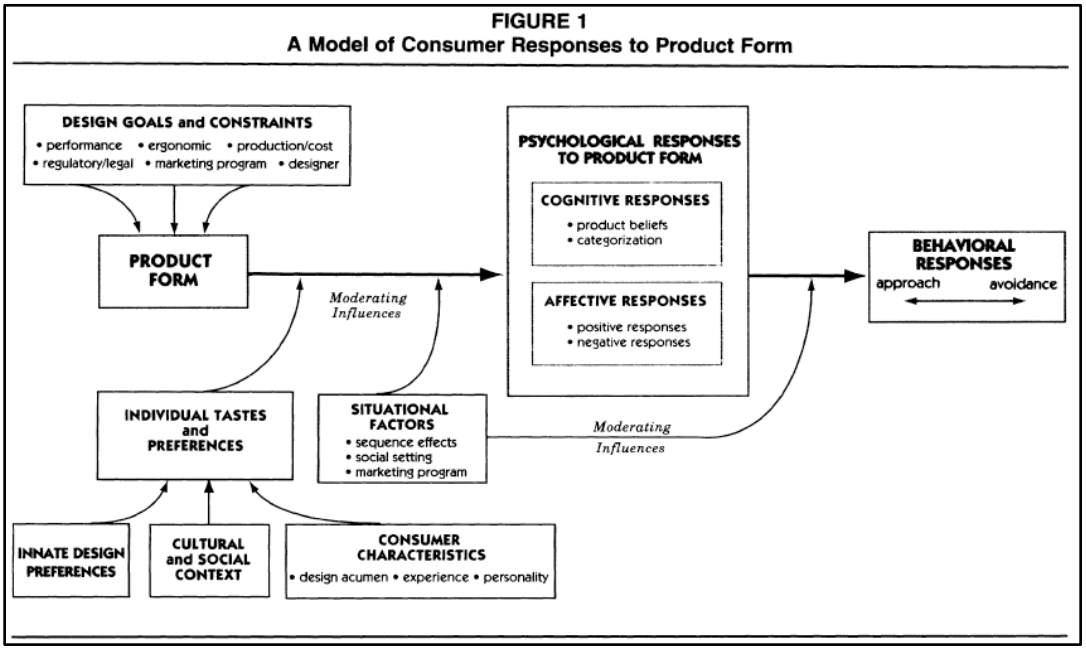

Figure 1. A Model of Consumer Responses to Product Form.

Accompanying this model are twelve postulates about psychological and behavioral responses to product design (see Appendix A). Bloch's findings support and expand on the previous research that has indicated, "when given the choice between two products, equal in price and function, target consumers buy the one they consider to be more attractive" (Bloch, 1995, p. 16). His theories also support the importance of strategically designed packaging, which refers to packaging whose components are specifically created to elicit positive aesthetic responses in a target market. Many components contribute to the success of design, but all can be divided into two main categories: "the graphic elements such as color and logo; and the structural elements

such as shape, size and material" (Pantin-Sohier, 2009, p. 54). For the purpose of this study, the researcher will focus on the graphic element of color and the structural element of shape; these are well-researched design elements that are also distinguishable in two-dimensional representations of product packaging. The researcher will also focus on female design preferences because this study will use female participants.

Color has the power to illicit an emotional response from the viewer. The color red commands attention and invokes aggression or a sense of urgency. For example, a study on the influence of color in pharmaceutical packaging (Pantin-Sohier, 2009) asked patients to attribute specific qualities to a medical treatment's properties based on ten different colored packages. Ninety-four percent of patients believed that they should handle the red package's contents with precaution. In contrast to red, blue is considered passive, calm, and cool (Pantin-Sohier, 2009, p. 56). While color is important when considering general responses, it is also important when considering gender-specific responses: women have positive reactions to cool hues like pinks, blues, and purples (Neubauer, 1973, p. 65-80). For example, two color response researchers, Favre and November, (1979) conducted an experiment that asked participants to evaluate a single type of beauty cream, one pink and one white. Although both products were identical, every woman communicated that the pink cream was "gentler, lighter and more effective than the white cream" (Pantin-Sohier, 2009, p. 56). Since this study in 1979, pink and other cool hues have been stereotyped as feminine colors. Women-centric causes, such as breast cancer awareness and domestic violence awareness, have reinforced this hue association by using pink and purple as color identifiers (C. Twomey, personal communication, February 16, 2012).

Like color, shape is also an important design attribute. According to Pantin-Sohier, shape refers to "any visual element possessing a contour" (2009, p. 57). A package's shape contributes

to its brand's personality, meaning its human characteristics. One study analyzed the personality attributes that participants assigned to two categories of lines: curved lines and straight lines. The curved category included circles and undulations while the straight category included squares and angles. Participants categorized the curved lines as graceful and serene, and straight lines as serious (Hevner, 1935). Even though these simple abstract drawings were not associated with a branded product and corresponding marketing campaigns, respondents still assigned personality traits to them. Consumers project human characteristics onto inanimate objects based on visual components, like shape. Brands can legally protect this critical component of package design from imitation by registering a nontraditional shape trademark. This type of mark refers to items such as "a three-dimensional representation of the product itself, the container for the product, or the architectural design of a store or sign-post, such as McDonald's Golden Arches" (International Trademark Association, 2012). By using unique and consistent visual components, such as shape, brands can use packaging to create a "pseudo-person" that has the power to build relationships with consumers.

Package designers can further use shape to assign a gender to the pseudo-person. Studies show that females identify with curved lines while males are more attracted to straight lines (Singh & Saha, 2011). However, the connotations with fragrance packaging shapes are more complicated. According to Liquet (as cited in Pantin-Sohier, 2009), perfume consumers associate adaptability with ovals, harmony and aggression with triangles, and elegance and stability with rectangles. In this case, female respondents can be drawn to both types of lines depending on their individual personalities. Pantin-Sohier (2009) references the more corporal associations of form when he discusses the following beverage packages. Contrex, a brand of mineral water, uses a bottle whose silhouette echoes the hourglass shape of a woman's body. Vittel Sport, a

male-athlete-targeted beverage, features defined pectoral and abdominal muscles in its bottle to represent the male form. Both brands use recognizable contours to give its product a gender in addition to its personality.

The studies and literature on color and shape support Bloch's (1995) second postulate, which sates that "(t)he form of a product elicits beliefs about product attributes and performance" (p. 20). However the product's aesthetic features are not the only factors that influence consumer response. The social setting also influences consumer response, as Bloch asserts in his eleventh and twelfth postulates:

> P_{11}: The relationship between product form and psychological responses to that form is moderated by the social setting in which a product is encountered.
>
> P_{12}: The relationship between psychological and behavioral responses to product form is moderated by the social setting in which a product is encountered. (p. 24).

Although Bloch uses the phrase "social moderators" to refer to those present at the point of purchase, studies indicate that these influencers do not need to be present to have an effect on psychological or behavioral responses. Instead, consumers only need to associate the product with the influencer. For example, marketers will use a celebrity endorser, "a recognizable person who is contracted to advertise for a product or brand," to illicit positive consumer responses (as cited in Gorton, Tantiseneepong, & White, 2012). One study by Gorton, Tantiseneepong, & White, examined female consumer reactions to celebrity-endorsed perfumes by using picture association tests. The researchers first recorded participant reactions to advertisements for two leading perfumes without any endorsement. They found that participants assigned personality traits (e.g. elegant, independent, and classy) based on the product packaging. For example, when shown an advertisement of J'adore by Christian Dior, "respondents focused on the golden colour

of the perfume's packaging… [and] the glow of the bottle" (2012, p. 8). In this case, consumers saw a pseudo-person as a function of the perfume bottle's colors. However, when celebrity Emma Watson accompanied the perfume bottle, "most respondents took Emma Watson as a cue. In particular, the brand was seen as a much younger person that that described in response to the non-celebrity-endorsed version" (2012, p. 9). The presence of a celebrity caused participants to no longer see a need to create a pseudo-person. Instead, participants saw the endorsed perfume as an extension of the celebrity herself. Although endorsers are not present at the point of purchase, consumers associate them with their promoted products. This expands the "social setting in which a product is encountered" (Bloch, 1995, p. 24) to include celebrity endorsements. Since the rise of social media, marketers have attempted to expand this social setting to its influencers.

The Merriam-Webster Dictionary defines social media as, "forms of electronic communication (as Web sites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos)" (2012). Since the introduction of social media, American consumers have consistently increased their usage of the Internet and social networking sites (Booth & Matic, 2011). This increase has caused marketing and public relations professionals to research and analyze the effect of social media on brand strategy. One study conducted in 2009 by Donald Wright and Michelle Hinson for the Institute of Public Relations shows that out of 574 public relations professionals, 84 percent agree that social media offers organizations, "low-cost ways to develop relationships with members of various strategic publics, [up from] 80% agreement in 2008" (p. 9). In the current state of the economy, companies place increasing importance on using low-cost methods in all areas of business possible. Ease of access and low cost have aided social media's rise in influence and popularity among business professionals and consumers. It has also given

consumers a role in shaping brand perception, thus expanding Bloch's "social setting" to include Internet sites such as blogs, meaning a website that contains a personal journal with the writer's opinions (Merriam-Webster, 2012).

Blog writers, known as bloggers, are one type of consumer influencer who has gained "a large share of voice in the market thanks to the power of the Internet, and to technologies that bring together people who share common interests" (Booth & Matic, 2011, p. 184). Bloggers can be viewed as ordinary celebrity endorsers who have varying levels of influence. Instead of celebrities publicly announcing their approval of a product, consumers write public anecdotes about their experiences with branded products. To better identify and understand an individual consumer's level of influence, Norman Booth and Julie Ann Matic conducted the study, "Mapping and leveraging influencers in social media to shape corporate brand perceptions" (2011). Booth and Matic employ a customizable valuation algorithm to assign quantifiable values indicating the influence (or "index score") of social media users. The algorithm considers the following variables: viewers per month (vpm), linkages, post frequency, media citation score, industry score, social aggregator rate, engagement index, subject/topic-related posts, qualitative subject/topic-related posts, and index score. This rating system then gives individual users a score from 1 to 5, 1 being poor and 5 being excellent. It further divides users into three levels: Tier A (index score of 3.6 to 5), Tier B (index score of 2.1-3.5), and Tier C (index score of 0-2). While Tier A blogs have the largest readership of the three, Tier B bloggers are the most susceptible to contracted endorsement as they are "often searching for ways to monetize their popularity" (p. 188). Brands can transform these Tier A and B bloggers into product endorsers by incorporating them into social media strategies. The endorsements will cause blog readers to associate bloggers with their promoted products, similar to the association between celebrity

endorsers and their supported brands. Products will be an extension of their bloggers, and consumers will not see a need to create a pseudo-person. Booth and Matic's algorithm help expand Bloch's "social setting" to Internet blogs.

The social setting described in Bloch's eleventh and twelfth postulates extend to celebrity endorsers and Internet blogs because their promoted products become extensions of these entities. Consumers attribute the personality characteristics of endorsers and bloggers onto the associated products. In both cases, consumers infer these characteristics based on the behaviors and stories they have witnessed. Some websites, such as Amazon.com, provide a different method of imparting experiences with a product: customer reviews. These review sites allow customers to rate a product on a five-star scale, one star denoting a negative experience and five stars denoting a positive experience. Customers are also prompted to write a brief explanation of their rating assignments. Examples of customer reviews reveal that participants use the opportunity to publicly describe the pseudo-person they individually created for the product, like in a five-star review for Versace Woman by Gianni Versace: "Elegant, but bold. Pretty close to perfect" (ThnksFrThMmrs, 2011). The Versace Woman bottle uses strategic package design to echo the contours of a woman's body with pink, purple, and gold as its primary colors. The combination of this shape and color scheme imparts a feeling of regal femininity and an image of a female royal; elegance and boldness are consistent with these qualities. Some reviewers create a pseudo-person that directly opposes the packaging but is consistent with the scent, like in a five-star review for Euphoria by Calvin Klein: "(S)ubtle and elegant… My only regret is the shape and look of the bottle. I'd rather have a beautifully decorated glass bottle instead of a silver taco in my hand" (Artisana, 2011). The Euphoria bottle sends a mixed gender message with its combination of round and angled shapes. Euphoria also falls 25 percent in popularity when

compared to Versace Woman (based on the category of reviewed women's perfumes priced 25 to 35 dollars), despite their equal average customer review ratings of 4.5 stars (Amazon.com, Inc, 2012). Here, product popularity correlates with package popularity given a constant average customer review rating.

Packaging affects the perception of both a product's brand and the product itself. Consumers associate packaging design elements, such as color and shape, with human characteristics and then assign them to the product. In other words, consumers attempt to create a pseudo-person that they can then either accept or reject. Without the presence of social moderators or other outside influence, the pseudo-person is created only from its design characteristics. However, the presence of a known human being, either by physical location or mental association, causes consumers to attribute this person's characteristics rather than in interpret their own. For example, consumers transfer personality traits from celebrity endorsers onto their respective products because of their mental association. In addition, bloggers have gained a more powerful role as buying behavior influencers by using social media to describe products. Marketers and brand strategists have not yet determined the role of customer reviews in consumers' creation of pseudo-people. One might infer that if consumers transfer personality traits from celebrities and bloggers to their endorsed products, then they will also do so with customer reviewers. However, this does not take into account the relationship consumers feel they have with the former, or the degree to which customer reviewers may have an influence over buying decisions.

Chapter 3: Methodology

The purpose of this study was to determine if females aged eighteen to twenty-five are more influenced by packaging design than customer reviews when purchasing fragrance. The researcher used the scientific method and descriptive research to test the following hypotheses:

H_0: Package design will not affect the fragrance buying decisions of eighteen to twenty-five year old females more than customer reviews will.

H_a: Package design will affect the fragrance buying decisions of eighteen to twenty-five year old females more than customer reviews will.

Participant Population

The participants were eighteen to twenty-five year old female high school and college students randomly selected for voluntary participation. These students were pursuing various degrees, but none were pursuing a major or minor in Graphic Communication to avoid curriculum-induced bias. There were two equally-sized groups of participants: Group 1 and Group 2.

Procedure

This experiment involved two stages: the first to establish a constant and the second to test the dependent variable with an added independent variable. In the first stage, each member of Group 1 participated individually in a survey distributed through the Internet. The individual was first prompted to complete Section 1 of the survey:

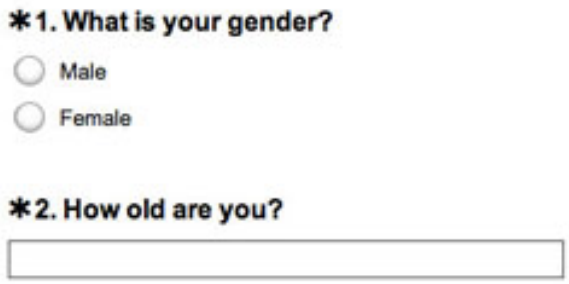

Figure 2. Survey: Group 1, Section 1.

After submitting responses, the participant was then shown the following image and prompted to complete the accompanying questions:

Figure 3. Survey: Group 1, Section 2.

After all responses were recorded, the perfume that received the most responses in Question 3 was considered Group 1's preferred product. This preferred perfume was then labeled "Perfume G" in Group 2, while the unpopular perfume was labeled "Perfume J."

In the second stage, each member of Group 2 also participated individually in a survey distributed through the Internet. The individual was first prompted to complete Section 1 of the survey:

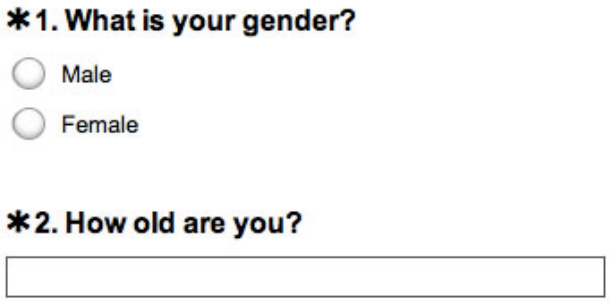

Figure 4. Survey: Group 2, Section 1.

After submitting responses, the participant was then shown the following image of Perfume G and Perfume J, their customer reviews, and prompted to complete the accompanying questions:

Figure 5. Survey: Group 2, Section 2.

The customer reviews each had a star ranking (1 to 5 stars, 1 being bad) and textual commentary. The researcher wrote the textual commentary, ensuring that each review contained one key word from the aesthetic, pseudo-person, and liking-strength category. These key words were taken from real customer reviews to avoid researcher bias. The following tables show the composition of customer review rankings for each perfume and the categorized key words of each review:

Customer Reviews Star Count	Quantity for Perfume G	Quantity for Perfume J
1	1	0
2	2	0
3	1	1
4	0	2
5	0	1

	Perfume G	Perfume J
Average Rating	2	4

Table 1. Customer Reviews: Composition of Star Ratings.

				Perfume G	
Stars	Tagline	Why (full text)	Aesthetic	Pseudo-Person	Other
3	It's okay	I thought it was a cute bottle, and had a youthful feel to it. It's okay.	cute	youthful	okay
			bottle		
2	Wasn't impressed	The bottle didn't look that great on my vanity, and the perfume just didn't seem elegant enough for me. Overall, I wasn't impressed.	bottle	elegant	on my vanity
			look		wasn't impressed
2	Not my thing	The color of the glass isn't really for me, and was a little too subtle for my tastes. It's just not my thing, but there's nothing wrong with it.	color	subtle	not my thing
			glass		
1	Didn't like it	I didn't like the color or think it was sophisticated. I would not buy this again.	color	sophisticated	would not buy
				Perfume J	
			Aesthetic	Pseudo-Person	Other
5	Must-have!!	I love the look of the bottle!! It's sophisticated, yet youthful. This is a must-have!	look	sophisticated	must-have
			bottle	youthful	
4	I'll buy it again	I use this beautiful bottle as a decoration on my vanity. I'll buy it again!	decoration	beautiful	use on my vanity
			bottle		
4	Fit for a princess	It's such a pretty design and is fit for a princess! I definitely recommend it.	pretty design	princess	recommend
3	It's alright	The design was okay, and the perfume seems elegant. Overall it's okay.	design	elegant	okay

Table 2. Customer Reviews: Sorted Key Words & Phrases.

Methods of Analysis

The researcher input the Group 1 and Group 2's preference data into two stacked column graphs, one for each product, to visually display the quantity of "Yes" answers for each product. These graphs showed if Group 1 and Group 2's preferences did or did not align, as well as to what degree. The researcher also counted the total number of key words in Group 1 and Group 2's responses. The researcher then calculated what percentage of key words fell in each of the three categories—aesthetic, pseudo-person, and other—and used the data to create stacked column graphs for Group 1 and Group 2. On these column graphs, the Y-axis represented the percentage of total key words and each stack within one column represented one category of key words. The researcher then looked for trends and correlations within and among the data sets. The researcher then compared these same sets of groups, this time looking for overlaps in specific words used between each group. If Group 1 and Group 2's preferences do not align, the null hypothesis will be true, and if Group 1 and Group 2's preferences do align, the alternative hypothesis will be true. The additional key word comparisons will support and expand on these findings.

Chapter 4: Results and Discussion

To compare the influences of customer reviews and package design, two online surveys were electronically distributed to two different groups. The first survey's purpose was to determine a product preference and the reasons for it in the absence of customer reviews. The second survey's purpose was also to determine a product preference and the reasons for it, but in the presence of customer reviews. Comparing and contrasting the results of both surveys revealed whether the null hypothesis or alternative hypothesis was true.

Group 1

The first survey described in Chapter 3 received thirty-five responses from random females, aged eighteen to twenty-five. The following pie chart (Figure 6) shows the group's perfume preference between Perfume X and Perfume Z:

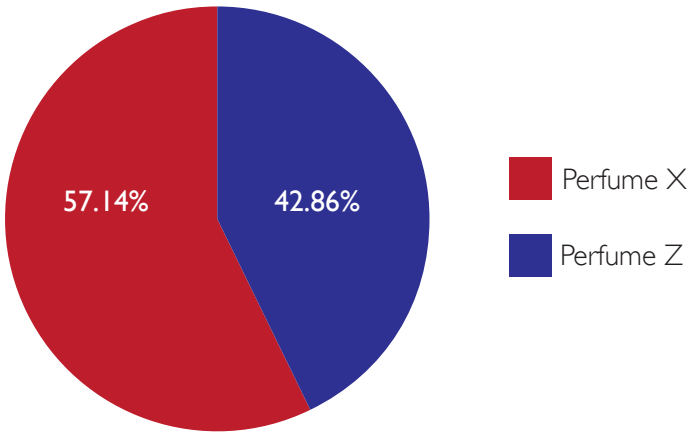

Figure 6. Overall Perfume Preference: Group 1.

As shown in Figure 6, Group 1 preferred Perfume X with 57.14% of positive buying decisions to Perfume Z with 42.86% of positive buying decisions. These results illustrated that without the presence of customer reviews, eighteen to twenty-five year-old females preferred Perfume X.

To ensure that group preference was not a result of a homogeneous age profile, the researcher used the following histogram (Figure 7) to illustrate Group 1's age distribution:

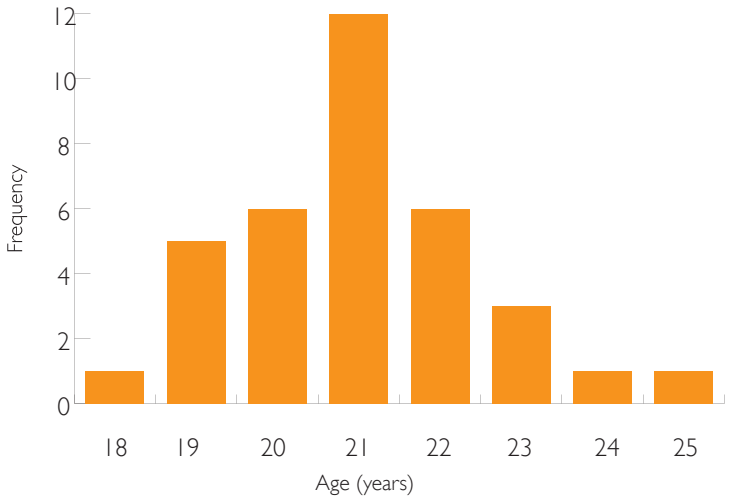

Figure 7. Age Distribution: Group 1.

Twenty-one year-old females were most heavily represented, but each age group was represented by at least one respondent. In order to determine possible correlations between ascending (or descending) age and perfume preference, the following stacked column graph (Figure 8) was used to illustrate perfume preference within each age group:

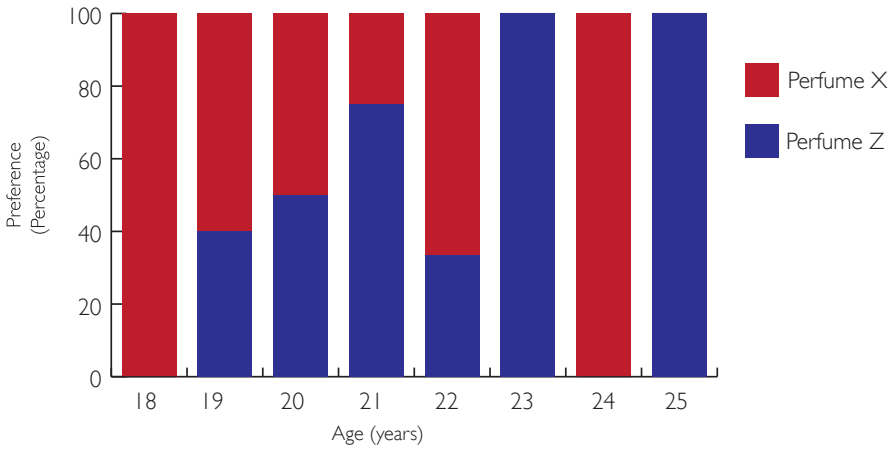

Figure 8. Perfume Preference by Age Group: Group 1.

The data did not show perfume preference to have a direct, or indirect, correlation with ascending age. Although some age groups had a unanimous preference (i.e. 18, 23, 24, and 25) for one perfume, no age groups with more than three members (i.e. 19, 20, 21, and 22) showed a unanimous preference for either perfume. In addition, half of the age groups with unanimous preferences favored Perfume X (i.e. 18 and 24) while the other half (i.e. 23 and 25) favored Perfume Z. Therefore, Group 1's overall perfume preference was not a function of age.

To determine what Group 1's overall perfume preference was a function of, the researcher sorted all fifty-six collected key words and phrases by perfume reference (i.e. Perfume X or Perfume Z), and then into the following three categories: "Aesthetic," "Pseudo-Person," and "Other." The following stacked column graph (Figure 9) was used to show what percentage of key words and phrases fell into each of the three categories for Perfume X and Perfume Z. For the remaining "Group 1" section, Perfume X and Perfume Z will be referred to as Perfume G and Perfume J, respectively.

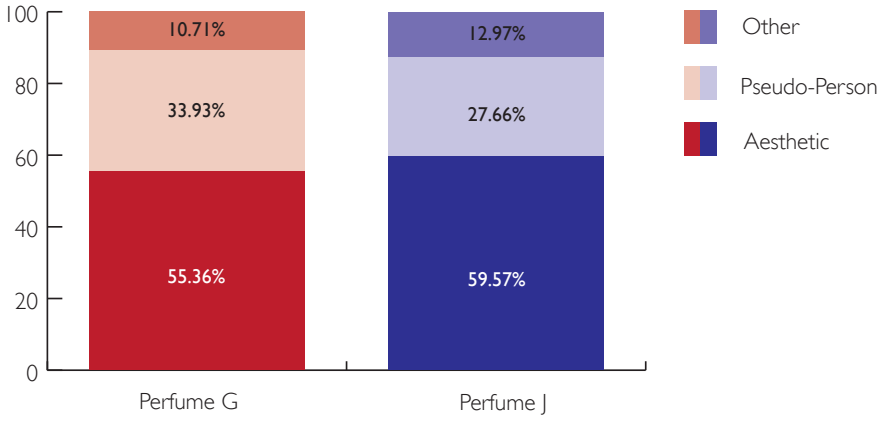

Figure 9. Categorized Key Words for Group 1.

Figure 9 displays that most of respondents' key words and phrases related to aesthetic elements of each perfume. However, the perfume with more key words and phrases in the "Aesthetic"

category was not the overall group preference—Perfume G had a lesser percentage of words in the "Aesthetic" category (55.36%) than Perfume J had (59.57%). Figure 9 also displays that Perfume G had a greater percentage of words and phrases in the "Pseudo-Person" category (33.93%) than Perfume J had (27.66%); having the greater percentage of words and phrases in the "Pseudo-Person" category directly correlated with overall product preference. This category, which was made up of the human characteristics that participants derived from aesthetic elements, allowed customers to determine potential personality compatibility of each product. The correlation between the "Pseudo-Person" category and product preference implies that respondents primarily sought *personality compatibility* in a product.

Overall, Group 1 preferred Perfume X(G), showing 57.14% of positive buying decisions for this product. Key word analysis further showed this preference to be correlated with perceived personality compatibility. The Group 1 results caused the hypotheses, stated in Chapter 3, to be applied to the study in the following manner:

H_0: Group 2 will not prefer Perfume X(G) to Perfume Z(J).

H_a: Group 2 will prefer Perfume X(G) to Perfume Z(J).

Group 2

The second survey described in Chapter 3 received thirty-five responses from random females, aged eighteen to twenty-five. The perfumes referred to as "X" and "Z" in Group 1 will be referred to as "G" and "J" in Group 2. The following pie chart (Figure 10) shows Group 2's perfume preference between Perfume G and Perfume J:

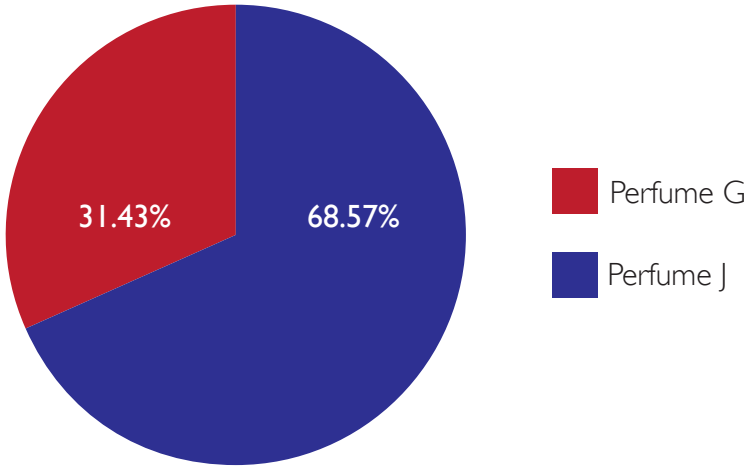

Figure 10. Overall Perfume Preference: Group 2.

As shown in Figure 10, Group 2 preferred Perfume J with 68.57% of positive buying decisions to Perfume G with 31.43% of positive buying decisions. This result illustrated that with the presence of customer reviews, eighteen to twenty-five year-old females preferred Perfume J.

To ensure that group preference was not a result of a homogeneous age profile, the researcher used the following histogram (Figure 11) to illustrate Group 2's age distribution:

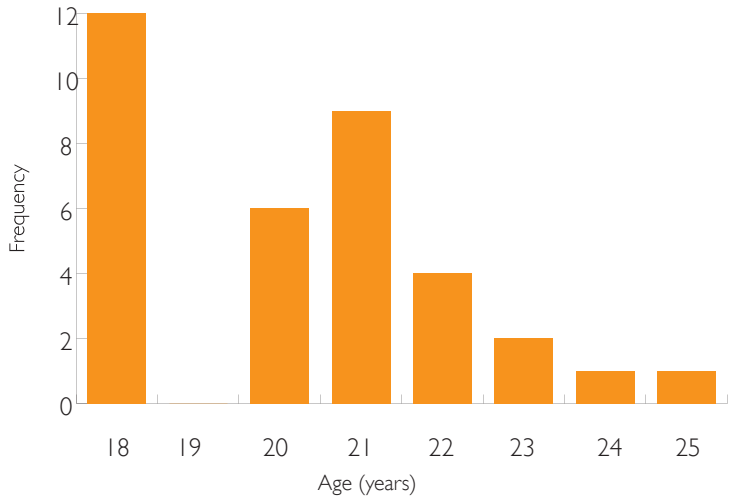

Figure 11. Age Distribution: Group 2.

Eighteen year-old females were most heavily represented, but each age group (except nineteen) was represented by at least one respondent. In order to determine possible correlations between

ascending (or descending) age and perfume preference, the researcher used the following stacked column graph (Figure 12) to illustrate perfume preference within each age group:

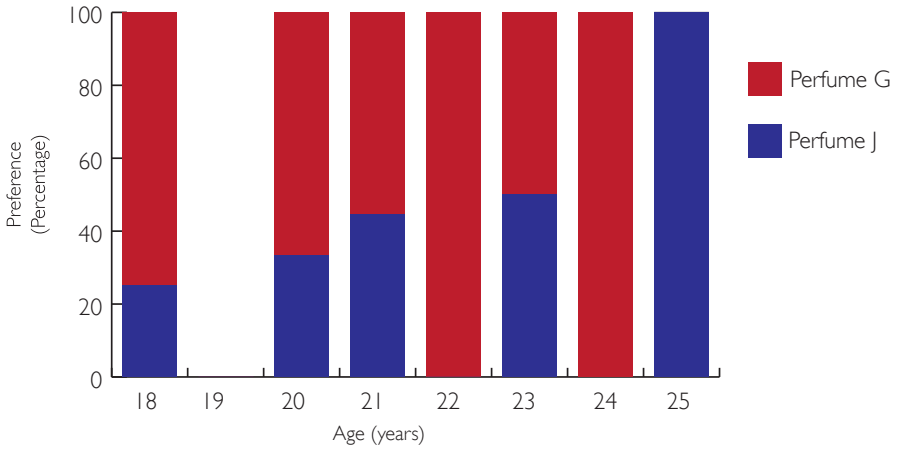

Figure 12. Perfume Preference by Age Group: Group 2.

The data did not show perfume preference to have a direct, or indirect, correlation with ascending age. Although some age groups had a unanimous preference (i.e. 22, 24, and 25) for one perfume, only one age group with more than two members (i.e. 22) showed a unanimous preference for either perfume. In addition, the age group, 24's, preference was different than age group, 25's, preference. Therefore, Group 2's preference for Perfume G or Perfume J was also not a function of age.

To determine what Group 2's overall perfume preference was a function of, the researcher sorted all ninety-eight collected key words in the same manner as Group 1's key words. The following stacked column graph (Figure 13) was used to show what percentage of key words and phrases fell into each of the three categories for Perfume G and Perfume J:

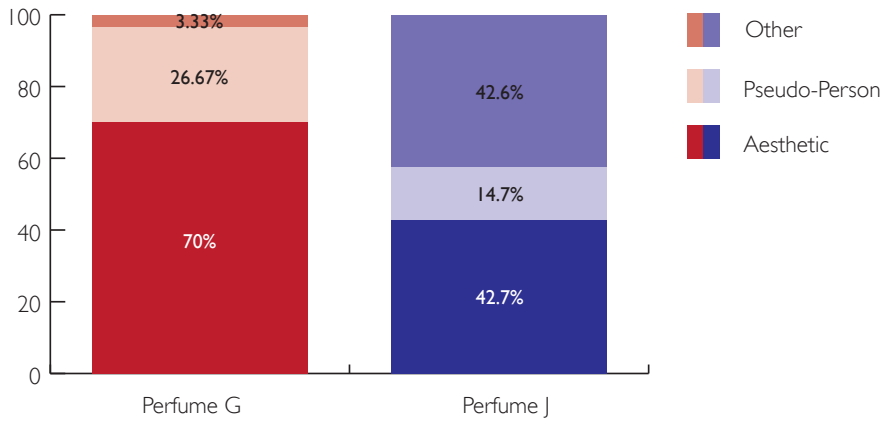

Figure 13. Categorized Key Words for Group 2.

Figure 13 shows that Group 2 respondents used mostly "Aesthetic" words to describe Perfume G, while they used an equal amount of "Aesthetic" and Other" words to describe Perfume J. The large representation of the "Other" category in Perfume J (42.65%) indicated the presence of additional definable categories to "Pseudo-Person" and "Aesthetic." Further examination of the "Other" category's key words and phrases revealed the two sub-groups: "Function" (which included items such as "the only time I wear perfume" and "on a cluttered vanity") and "Social" (which included items such as "more people preferred it" and "reviews"). The following pie chart (Figure 14) shows what percentage of "Other" words fell into each sub-group for Perfume G and Perfume J (i.e. percentages of 3.33% and 42.65%, respectively):

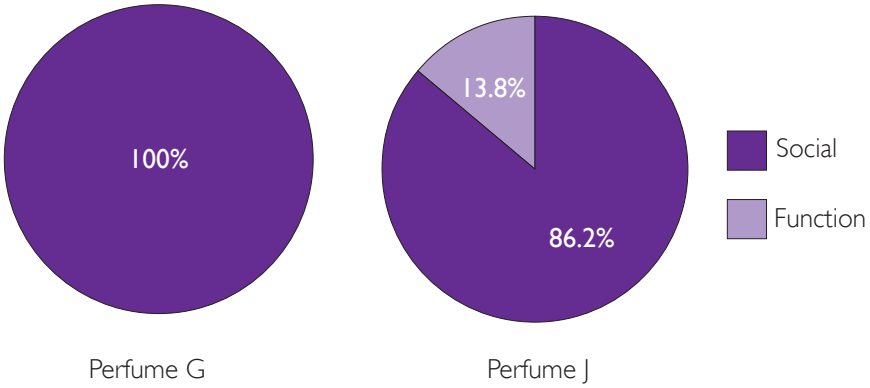

Figure 14. "Other" Sub-Groups: Group 2.

Figure 14 shows that 100% of words and phrases in Perfume G's "Other" category were used to describe social elements of buying decisions. It also shows that 86.2% of words and phrases in Perfume J's "Other" category were used to describe social elements, while 13.8% were used to describe functional aspects. The strong representation of the "Social" category in Perfume J (i.e. 36.76% of Perfume J's total key words and phrases) suggests Group 2's acceptance of customer reviewers as social moderators.

In order to directly compare the importance of personality compatibility to Group 2 with the importance to Group 1, all words and phrases used to describe human characteristics (i.e. "Pseudo-Person" and "Social") were combined into the new category of "Personality Compatibility." With this adjustment, the three categories of key words included "Aesthetic," "Personality Compatibility," and "Function." The category "Function" was used instead of "Other" because the transfer of the "Social" sub-group to "Personality Compatibility" leaves only the "Function" sub-group in the main category of "Other." The following stacked column graph shows what percentage of key words and phrases fall into each of these three categories for Perfume G and Perfume J:

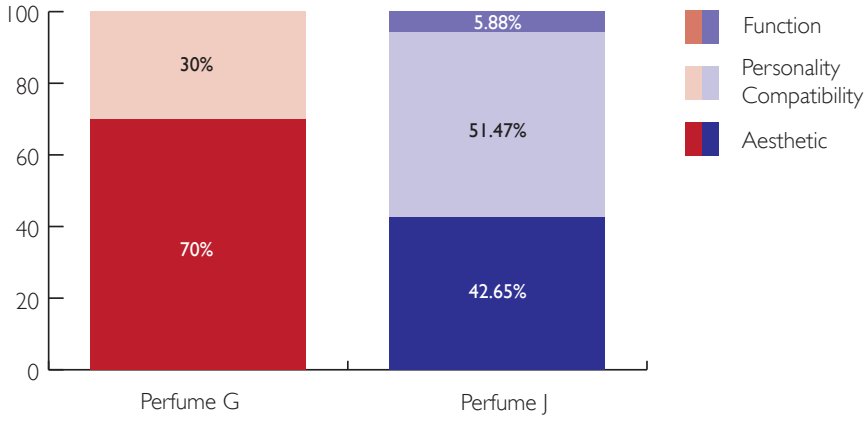

Figure 15. Categorized Key Words for Group 2: Adjusted.

This adjusted graph shows that Perfume J had a greater percentage of "Personality Compatibility" key words and phrases (51.47%) than Perfume G had (30%). Like in Group 1, the product with a larger percentage of key words and phrases related to personality compatibility was also the group's overall preference.

The change in overall group preference from Perfume X(G) to Perfume Z(J) indicated the null hypothesis to be true: package design does not affect the fragrance buying decisions of eighteen to twenty-five year-old females more than customer reviews do.

Chapter 5: Conclusions

The purpose of this study was to determine if package design affects the fragrance buying decisions of eighteen to twenty-five year-old females more than customer reviews affect their buying decisions. According to Peter Bloch's (1995) "Model of Consumer Responses to Product Form," consumers choose the more attractively designed product when deciding between two products of equal price and function. When this study's Group 1 participants were provided two perfumes of equal price and function, they chose the product they considered to be more attractive. However, their choice was not exclusively influenced by design elements; the participants used design elements to derive human characteristics about each product. These derived characteristics allowed the respondents to develop and assign a pseudo-person to each product. The compatibility, or incompatibility, of the pseudo-person with each of Group 1's respondents led to a positive, or negative, buying decision.

Bloch's model also states that the behavioral response to packaging is moderated by the social setting and social moderators. Instead of using aesthetic elements to derive a pseudo-person, consumers use the personality characteristics of the social moderators. While social moderators originally only included those present at the point-of-sale, it has expanded to also include celebrity endorsers not present at the point-of-sale. With society's recent technological advancements, the social setting also grew to include Internet sites such as blogs, with consumers accepting bloggers as social moderators. This study's Group 2 participants also accepted customer reviewers as social moderators; when provided two perfumes of equal price and function, but of unequal customer reviews, the majority of participants preferred the product with more favorable reviews. Like Group 1 participants, Group 2 participants preferred the product they felt had the more compatible personality. In contrast to Group 1 participants, Group 2

participants used the customer reviewers' pseudo-people, instead of their own aesthetically-derived pseudo-people, to determine personality compatibility.

Personality compatibility was the key element in these participants' buying decisions. Without the presence of a social moderator, they used a derived pseudo-person to determine compatibility. With the presence of social moderators (i.e. customer reviewers), they used the moderators' characteristics and opinions to determine compatibility. Although the null hypothesis (i.e. package design does not affect buying decisions more than customer reviews do) was proved true in this study, it was not proved that package design does not have the *potential* to have the larger influence over buying decisions. By using comprehensive market research to strategically target package design to a specific consumer, marketers can still overcome unfavorable social settings and moderators. However, the term "social moderators" now not only refers to those present at the point-of-sale, celebrity endorsers, and bloggers—it also refers to customer reviewers.

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Appendix A

Postulates: A Model of Consumer Responses to Product Form

P_1: The form of a product is determined by the set of goals and constraints applicable to the design project. The greater (fewer) the number and complexity of applicable goal and constraints, the more (less) challenging the design task.

P_2: The form of a product elicits beliefs about product attributes and performance.

P_3: The form of a product influences how the product is categorized within and among product classes.

P_4: Product forms with a moderate degree of incongruity with respect to existing forms elicit more positive cognitive responses than forms with low or high levels of incongruity.

P_5: The intensity and valence of affective reactions to a product are a function of its perceived form.

P_6: The stronger the positive (negative) psychological responses to a product's form, the greater the propensity to approach (avoid) the product.

P_7: The relationship between product form and psychological responses to that form is moderated by the perceived aesthetic fit between the product's form and individual design tastes.

P_8: Individual design tastes are a function of innate design preferences, cultural and social context, level of design acumen, experience with design, and personality variables.

P_9: The relationship between product form and psychological responses to that form is moderated by the perceived aesthetic fit between the product's form and that of other objects in relevant ensembles.

P_{10}: The relationship between psychological and behavior responses to product form is moderated by the perceived aesthetic fit between the product's form and that of other objects in relevant ensembles.

P_{11}: The relationship between product form and psychological responses that form is moderated by the social setting in which a product is encountered.

P_{12}: The relationship between psychological and behavioral responses to product form is moderated by the social setting in which a product is encountered.