

RYERSON UNIVERSITY

Graphic Communications Management

GCM490: THESIS

Gendered Design: Breaking the Stereotype in Package Design

What role do stereotypes play in designing for female personal care products?

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Abstract

Designers play an integral role in shaping our surrounding environments. Through a variety of both conscious and unconscious decisions, designers perpetuate a division between the two traditional genders through a form of targeted design: gendered design. Gendered design plays a significant role in package design, and is often determined to be the foundation in which a designer builds on top of. This study aims to analyze the accuracy of previous determined stereotypes and to determine the detrimental effects when the companies design based on these biases. The results show a feeling of indifference that exists not only for the female population, but the male population as well, suggesting that the current commercial way of designing is falling out of favor with consumers. Minimalism and design thinking are possible methods in overcoming these issues, as further research into consumer preferences and dissatisfaction would prove beneficial to all stakeholders involved.

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Introduction

"The concept of a well-defined, gender-oriented product characteristic remains difficult to grasp, as there is no complete theory that embraces all the different aspects and the complexity related to such a concept."(Xue & Yen, 2007) This concept of gendered design has been a difficult subject to analyze, as explained in Lishan Xue and Ching Chiuan Yen's pilot study into understanding the female preference within design. Design unconsciously shapes our surroundings; whether it be through our meticulously designed package design of shampoo bottles or on larger scales such that of a government system, these designs play an integral role of defining the right and wrongs, and establishing the status quos. As designers, we continue to face the dilemma of perpetuating with these established beliefs we do not entirely agree with, beliefs such that males prefer straight lines and females prefer circular shapes (Moss, Gunn, & Heller, 2006). While previous research done in the gendered design studies look to understand and generalize the differences in preference between male and female, the aim of this study is to understand whether or not people in the current social climate do conform to these biases, and to understand their perception towards packaging design.

Literature Review

Gendered design is a subject that has been consistently studied within both the design and psychology fields in the creative industries. While the knowledge of what makes a design gendered, through the defined standards of "masculine" or "feminine", has been thoroughly researched and widely applied, there lacks an understanding of the repercussions of such differentiation (Moss, Gunn, & Heller, 2006)(McIntyre, 2018). As a result, these divisions have encouraged societal norms that eventually define the user, and

create a community that emphasizes less on individualism and more on gendered scripts (McIntyre, 2018)(Velden & Mörtberg, 2011).

Defining the Design Industry

Design unconsciously affects our perspective of what is correct (McIntyre, 2018). There is researched evidence that our own perspectives are heavily affected by our surroundings in order for societal conformity, but what does this mean for the consumer? What steps could be taken in order to take designs away from these stereotypes, and how can designers create content that is personalized and approachable?

This paper will analyze the current understanding of the design discrepancies between the two traditional genders, while acknowledging some of the inequities that exists within the design industry (Clegg & Mayfield, 1999). As consumers we unassumingly accept and conform to these stereotypes (Xue & Yen, 2007), but through research and experimentation this paper wishes to gain a further understanding of the current social climate and hope to provoke ideation through questioning of the accepted norms. How does the lack of female representation in higher design positions affect the female perspective of their package designs? How can designers and consumers break these current sociocultural barriers in design, and account for the varying backgrounds and the diversity of the end-user? How will the application of these techniques help improve the personal care product packaging market (Oudshoorn, Rommes & Stienstra, 2004)?

Stereotypes beyond physical differences

With these considerations in mind, this paper acknowledges there are different physical needs of each gender. It would be irresponsible to generalize the needs and wants of both traditional genders, but a thin line exists between what is an actual physical need and an

accepted gender stereotype. Would hair quality, a topic generally associated with females, be only a consideration when purchasing female shampoo, or could this consideration be applicable to both gender? Why are companies so persistent in using a specific gender script (for example design with emphasis to hair strength) when designing? While some might argue that females care more about their looks and their hair, but would this statement stand true to the entire population? How can one be so confident that a male counterpart cannot carry the same weight? This study wants to understand the underlying implications that these designs carry, and ultimately, determine the root of these presupposed notions.

Adapting the Knowledge to Current Times

By analyzing the past; what is the accepted norm and the relevant studies that have been done on these gendered biases and scripts, this paper wishes to create an analytical approach to the gendered purchasing habits by using a survey to determine the purchasing process and considerations of the general population. As society aims to become more progressive, the need for design processes and the designers themselves understand the bias becomes increasingly important, as designers must adapt to become more inclusive. As discussed in Sue Clegg and Wendy Mayfield's paper on Gendered Design (Clegg & Mayfield, 1999):

"The pages of the major trade journals reveal a picture of a profession which, despite the success of some women, portrays itself as highly individualistic and overwhelmingly male."

The Importance of This Study

Coming into the new millennium women were heavily underrepresented in the industrial and product design (Clegg & Mayfield, 1999). Only through advocating and organizations such as Society for Canadian Women in Science and Technology (SCWIST) that the social stigma towards girls in science and technology fields was removed (Society for Canadian Women, 2020). Similarly the social powers of design, as explored by Marie Søndergaard, exist within the design community (Søndergaard & Hansen, 2017). Social structures are defined by factors such as gender, race, class, and religion etc.; without the proper acknowledgment and a plan for change, the industry will continue to accept the status quo without any considerations (Søndergaard & Hansen, 2017).

Proposing Changes

The ultimate goal of this paper is to advocate for new ways of designing that are more inclusive and methods that incorporate more inputs throughout the design and idea generation processes. Contrary to the traditional solutionism idea of using technology as an end-all solution to our problems, designers must begin to understand the circumstance that they design from, and the biases that may exist within their designs. (Tucker, 2013). While designing or innovating against the defined norm seems difficult, designers are starting to utilize a larger range of design methods to alleviate the effects of their own biases and the constructed norms. Design thinking, for example, looks to incorporate input from the end-user throughout the design process to create designs and solutions that are more effective and approachable (Dam & Siang, 2020). Instead of asking for input during the feedback stage of the design process, design thinking looks incorporate more viewpoints when defining the issue during the research stage and when designing the solution. While design thinking may have considerable flaws when limited in resources,

shorter implementations will encourage more involvement from the end-user (Søndergaard & Hansen, 2017).

Methodology

The interest in studying design preference between the male and female genders has grown in exponential figures since the 1950s (Chron.com, 2020). Since then, both advertisers and designers alike became increasingly interested in creating solutions that appealed to the largest audience. This led to studies that had varying relevancy to gendered design, from understanding the differences between websites designed by female and male designers, to studies that tried to understand product preferences based on its physical and feature traits. Through these studies we can determine general trends within each given study: when designing for the web, females tend to use more colours and they tended to use less straight lines compared to their male counterparts (Moss, Gunn, & Heller, 2006). For physical appearances, it was determined that while both genders preferred simple designs, but for different reasons; men preferred simple things because of looks, while women preferred such due to the practicality of the products (Xue & Yen, 2007). While these studies do provide background to generalizations of preferences between the genders, this current study is more interested in determining the effects of these generalizations and how it affects the general perception of packaging design related to personal care products.

Methodology

This study used a survey in order to determine the validity of these gendered stereotypes within design. Consisting of 10 multiple choice questions and 25 participants, the survey looks to act as a pilot study into understanding both the designer and consumer perspective of general packaging design. Questions that were asked range from participant's age group, gender associations, exposure to design, preferred colour, and shampoo/deodorant/beer packaging preferences.

The colours that were selectable for the survey were chosen based on the traditional blue vs pink stereotype (Guirgus, 2015), male generalization of liking black (Moss, Gunn, & Heller, 2006), and on the findings from Joe Hallock's 2003 study of colour preference between the genders (Hallock, 2003). The options that were offered include: *red, blue, pink, black, or other colour*. The participants were then asked to evaluate their preferences in packaging design based on a weighted scale, from *strongly disagree* (awarded 1 point) to *strongly agree* (5 points). Participants were also offered the option of *doesn't matter*, which would exclude their submission for the specific category from the average calculations.

Near the end of the survey, 2 extended multiple choice questions were asked, their intent was to analyze whether or not inherent biases exist within the participants' thought and purchasing processes. This was achieved by having the participant determine if a provided image of a perfume bottle was designed specifically for a particular gender, in this case male, and allowing the participant determine if the overall design of the survey shared similar aspects of targeting. The survey is hosted on Google Forms, and is accessible through this link: <https://forms.gle/wppCvsvhG1vBAfQn7>.

Method of Analysis

By comparing the gender, design experience, and colour preference the study looks to understand how one's gender could play a role in their colour preference, and how their design experience could affect this result. The study also wants to analyze the deviation between what was stereotypically believed to be factually true against the current beliefs of a student or adult in Toronto. The issue of experience with design was also a consideration within this survey, as this survey looks to determine if design experience has an influence to participants' inherent design biases, and if it has effects on their general perspective of design altogether. Would a student with design or print background have a more contrasting perspective (results 1 or 5 on the weight scale) towards package designs, and have a more confident opinion when determining the targeted gender of designs? Analysis will be performed on data and trends generated in Microsoft Excel using chart, tables, and Pivot Tables.

While the answers to these survey questions could bring insight into the possible correlation between gender stereotypes and design, it is critical to consider the results as a reflection of a small pool of participants, as it cannot lead to general assumptions of the entire public. This survey looks to place emphasis on the disconnect between the consumer and the designs on packaged products, and advocate for design methods and potential remedies that avoid these outdated biases, not to disavow previous research done on gendered designs.

Results

In the total of 25 responses that were recorded in the survey, there was a wide range of respondents from different demographics: 60% (15) of the participants were women and 40% (10) were men, and majority of the participants were currently in university (72%).

Age Group of Participants	University	Other	Grand Total
Female	11	4	15
Male	7	3	10
Total	18	7	25

Table 1 Gender and age group breakdown

The participants' experience with design also varied, while the majority of participants did have some sort of experience working with design, the largest majority of surveyed were presumable consumers with little to no design experience (32%).

Design Experience of Participants	Fun	School	See	Work	Grand Total
Female	3	4	6	2	15
Male	3	3	2	2	10
Grand Total	6	7	8	4	25

Table 2 Gender and design experience breakdown

The survey lead to some interesting discoveries that strengthened a few key concepts that was proposed at the beginning; while participants did conform to the stereotypical associations, there wasn't a clean designation or difference between the male and female participants. An interesting result was that while only 4 coloured options were offered, 76% of the participants were able to find their favorite colour in the list and only 24% picked other as an option. Although a great portion of participants were able to find their favourite colour from the designated list, none of the colours were predominantly chosen by one of the genders.

Preferred Colour	Black	Blue	Pink	Red	Other	Grand Total
Female	1 (6.7%)	3 (20%)	4 (26.7%)	3 (20%)	4 (26.7%)	15
Male	1 (10%)	2 (20%)	2 (20%)	3 (30%)	2 (20%)	10
Grand Total	2	5	6	6	6	25

Table 3 Gender and colour preference breakdown

The preference of each product design was more predictable. Averages of the preference ratings had a range from (2.9) to (3.47), which was very close to the *neutral* designation of (3). Shampoo packaging design had the most polarizing averages, as the max and min results were both found within this product category. An unexpected result was the female participants having a higher satisfaction rating within the beer packaging category as compared to their male counterparts, despite the beer packaging industry being a market that is predominantly advertised towards the latter population (Land, 2019).

Shampoo Preference Rating	1	2	3	4	5	Average
Female	0	1	6	8	0	3.47
Male	0	2	7	1	0	2.90
Grand Total	0	3	13	9	0	25

Table 4.1 Gender and shampoo packaging breakdown

Deodorant Preference Rating	1	2	3	4	5	Average
Female	0	1	9	5	0	3.27
Male	0	2	4	3	0	3.11
Grand Total	0	3	13	8	0	24

Table 4.2 Gender and deodorant packaging breakdown

Beer Preference Rating	1	2	3	4	5	Average
Female	0	2	7	5	0	3.21
Male	0	3	2	4	0	3.11
Grand Total	0	5	9	9	0	23

Table 4.3 Gender and beer packaging breakdown

A trend that this study wanted to analyze was how education or experience within print and design played a role into product design satisfaction. The retrieved data was arranged by experience with design and the count of all the categories was summed together. From the results, a trend from designing to fun, to school, then to work can be seen; as experience increased, an increase in rating was also observed. Those who considered themselves minimal experience with design had average product ratings falling in between those with school experience and those with work experience. These participants, were more likely to rate a product packaging *neutral* ("3") compared to any other experience segment (64%).

Experience Product Rating	1	2	3	4	5	Average
Fun	0	4	10	4	0	3
School	0	4	7	9	0	3.25
Work	0	2	4	6	0	3.33
See	0	1	14	7	0	3.27
Grand Total	0	11	35	26	0	72*

Table 5.1 Participant experience to design and average product ratings

*note: 3 inputs were labelled N/A

Experience Product Rating	3	< 3 >	% of 3
Fun	10	8	56%
School	7	13	35%
Work	4	8	40%
See	14	8	64%
Grand Total	35	37	72*

Table 5.2 Participant experience and neutral ratings percentage

*note: 3 inputs were labelled N/A

The final component of this survey was to determine whether or not inherent biases are more prevalent in those with more design experience. This was achieved by examining the existence of a possible trend between design experience and the participant's ability to determine the "sexuality" of the provided design. By using the prompt: "This is packaging for male perfume", the survey looked to see whether or not they make a gendered generalization of the image. The results of the question aligned with the hypotheses that as

the experience in design increased, so did the likelihood of making a generalization based of the image. However the small sample size prevents any substantial statements to be made as further experiments must be made.

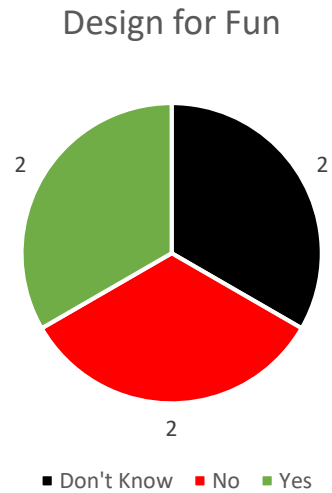


Table 6.1 Designers with recreational experience to whether or not the perfume bottle was masculine

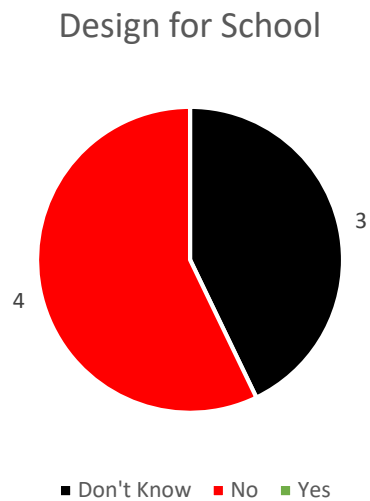


Table 6.2 Designers with educational design experience to whether or not the perfume bottle was masculine

Design for Work

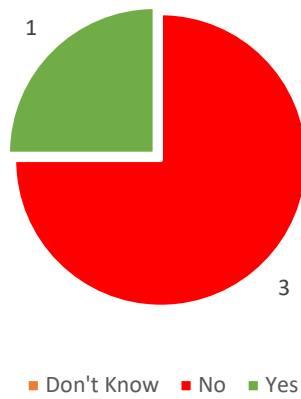


Table 6.3 Designers with professional design experience to whether or not the perfume bottle was masculine

See Designs as a Consumer

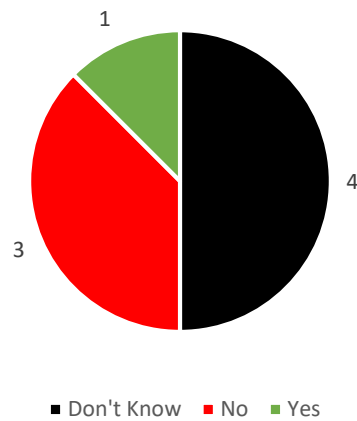


Table 6.4 Consumers with minimal design experience to whether or not the perfume bottle was masculine

Survey Target Audience	Female	Male	Unknown	Grand Total
Fun	3	1	2	6
School	2	1	4	7
Work	1	2	1	4
See	4	0	4	8
Grand Total	10	4	11	25

Table 7.1 Participant experience to whether or not the survey was gendered

Survey Target Audience	Made An Assertion	Unknown	% Made An Assertion
Fun	4	2	66.7%
School	3	4	42.9%
Work	3	1	75%
See	4	4	50%
Grand Total	10	11	25

Table 7.2 Participant experience to whether or not the participant made an assertion of survey

Discussion

The results indicate that, aligned with the hypotheses, although the concept of gendered design exists through the eyes of both the designer and the consumer, the distinction between female and male is blurred and close to non-existent. This was evident through the survey, as a clear designation between the female and male population was not found, especially within the colour preference segment. The survey did however discover that female participants did show a slightly higher satisfaction rating as compared to the male participants throughout the three different subdivisions, which was an interesting discovery showing a possible trend not originally discussed.

Education and experience within design was determined as a factor in encouraging these biased views within the participants. This was especially evident where experienced designers were more likely to make a gendered assertion as compared to the unexperienced participants for both the perfume bottle and survey "gender" questions within the survey.

Implications

While the study was originally more interested in understanding the female perception of personal care products (shampoo, perfume, deodorant, and etcetera) the survey provided

insight into a potential issue that flaws the entire package design industry. Apart from the original suspicion that the packages designed for females were overtly feminine, this study suggests that the male population could be experiencing a similar apathetic or potential dissatisfactory feeling towards the selection of product packaging. As the personal care industries continue to invest into a highly differentiated market that fail to appeal to either genders, companies are neglecting an important factor that can decrease the price sensitivity of the consumer; visual aesthetics (Mumcu & Kimzan, 2015).

Limitations

The shortcomings of this survey is heavily associated with the small sample size of this survey; although trends were able to be determined, these can be seen as irregularities in the data rather than concrete evidence. Questions based on topics such as gendered design bias were the most revealing of this shortcoming, as one or two participants could have swayed the results of the subdivision (e.g. only four participants considered themselves designers with work experience out of the 25 participants).

The survey was limited by the inability to survey in person due to the current pandemic, and could be further expanded with questions that had options that were more extensively researched, and implement age group as a possible factor into the biased assumptions. Although this study was not able to come to concrete conclusions, it lead to new observations that were not entirely known to researchers.

Recommendations

The dissatisfaction with packaging design, the "over-gendering" of products; these issues are known to each one of us as consumers, but there has not been previous research that gathered and defined this issue. This disengagement with the consumer has led to brands

such as MUJI that have started the movement to popularize the idea of less is more. This idea of minimalistic design is more dependent on brand recognition and more interested in conveying information rather than provoking feelings in the consumer (Keating, 2016).

While this trend of minimalism has led to consumers feeling more relaxed and has removed their aesthetic consideration in their purchasing decision, this will eventually lead to a market that lacks identity and differentiation in design.

An alternative to minimalism that also considers the disassociation with the end user is design thinking. Design thinking is the idea generation and design process that incorporates stakeholders throughout the process, helping the designer develop empathy towards the stakeholders and question the assumptions that are made (Dam & Siang, 2020). More information on design thinking can be found on <https://www.ideo.com/>.

Conclusion

The results from this study can serve as a starting point into understanding the underlying process of gendered design, and the negative effects it has on both the consumer and designer. As discussed, the method of designing just for the sake of designing lacked care and understanding towards the consumer. Without proper design considerations and systematic changes to the ideation and creation processes, a trend of disconnect between the designer and consumer will continue to exist. This, coupled with the lack of female representation in higher design positions, has created an industry that favors the status quo over the individualism of its users. However, change has been steadily occurring through the increased interest in incorporating minimalism and design thinking into a designer's creation process.

While this study does advocate for a more open discussion between the designer and its target consumer, it also recognizes the importance of the continual study of consumer behaviour. In order to understand the engrained bias, and to design measures to counteract this, studies similar to Stephanie Vezich's *Women's responses to stereotypical media portrayals* and Lishan Xue and Ching Chiuan Yen's *Towards Female Preferences in Design* are integral in understanding the unconscious bias in choosing designs.

As society progresses, consumers to continue to lean towards products that they relate towards, even choices as miniscule as shampoo packaging design. In order to encourage more consumer appeal, designers must acknowledge the bias that pre-exist consciousness and find ways to design without these pre-established gendered scripts. As asked by Maja van der Velden and Christina Mortberg in their study, *Between Need and Desire: Exploring Strategies for Gendering Design*, how does one design for gender if gender and design are emergent? (Velden & Mörtberg, 2011) Only through extended study beyond this study and other similar studies will the answer become clearer.

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Appendices

Timestamp	Age Group	Gender	Exposure to Design	Preferred Colour	Shampoo Packaging Pref	Deodorant Packaging Pref	Beer Packaging Pref	Male Packaging T/F	Survey Target Audience	Feelings
08/11/2020 22:54:42	U	Male	School	Other	3		2	No	Unknown	Confused
08/11/2020 23:00:34	U	Female	See	Blue	3	3	4	Don't know	Female	Confused
08/11/2020 23:26:27	U	Female	Fun	Other	3	2	3	No	Female	Confused
08/11/2020 23:27:58	U	Male	School	Blue	3	4	4	No	Unknown	Happy?
08/11/2020 23:28:07	U	Male	Work	Other	4	2	3	No	Male	Confused
08/11/2020 23:33:14	U	Female	Fun	Pink	4	4	3	Yes	Female	Happy?
08/11/2020 23:35:13	U	Female	See	Pink	4	4	3	No	Female	Happy?
08/11/2020 23:40:44	U	Female	Work	Other	4	3	3	Yes	Male	Confused
09/11/2020 00:02:47	Other	Female	Work	Pink	4	4	4	No	Female	Confused
09/11/2020 00:07:25	Other	Female	See	Other	3	3	3	Yes	Unknown	Confused
09/11/2020 01:48:08	U	Female	See	Other	3	3	3	Don't know	Unknown	Confused
09/11/2020 20:36:37	U	Male	See	Black	3	3	4	No	Unknown	Confused
09/11/2020 21:40:13	Other	Female	See	Red	4	3	2	No	Unknown	Confused
10/11/2020 13:08:31	U	Female	School	Blue	3	3	3	No	Male	Confused
10/11/2020 23:09:37	Other	Female	School	Red	4	4	4	Don't know	Unknown	Confused
10/11/2020 23:53:07	U	Male	See	Blue	3	4	3	Don't know	Female	Confused
12/11/2020 13:55:04	U	Male	Work	Pink	2	4	3	No	Unknown	Confused
12/11/2020 19:32:57	Other	Male	Fun	Red	2	3	4	Don't know	Male	Confused
13/11/2020 23:40:13	Other	Male	Fun	Red	3	4	4	Yes	Female	Happy?
13/11/2020 23:40:13	Other	Female	Fun	Red	3	3	2	No	Unknown	Happy?
15/11/2020 16:12:38	U	Male	Fun	Pink	3	3	2	Don't know	Unknown	Confused
15/11/2020 17:13:25	U	Female	School	Red	4	2	3	Don't know	Female	Happy?
15/11/2020 17:37:27	U	Female	School	Black	2	4	3	No	Female	Confused
15/11/2020 18:08:01	U	Female	See	Blue	4	4	4	Don't know	Female	Happy?

Figure 1 Raw Responses of Participants

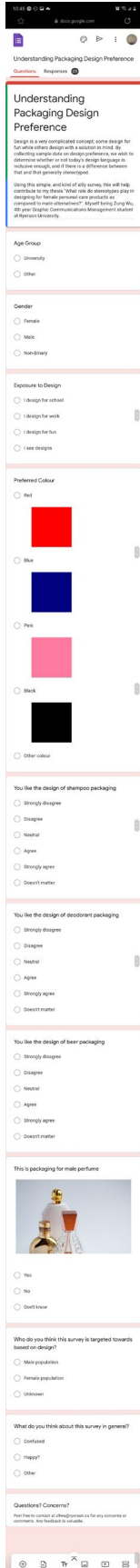


Figure 2 Screenshot of distributed survey

Count of Shampoo Packaging Pref		Column Labels			
Row Labels		2	3	4	Grand Total
Female		1	6	8	15
Male		2	7	1	10
Grand Total		3	13	9	25

Figure 3 Measuring shampoo votes to gender

Count of Beer Packaging Pref		Column Labels			
Row Labels		2	3	4 (blank)	Grand Total
Female		2	7	5	14
Male		3	2	4	9
Grand Total		5	9	9	23

Figure 4 Measuring beer votes to gender

Count of Deodorant Packaging Pref		Column Labels			
Row Labels		2	3	4 (blank)	Grand Total
Fun		1	4	1	6
School		1	1	4	6
See			7	1	8
Work		1	1	2	4
Grand Total		3	13	8	24

Figure 5 Measuring deodorant votes to gender

Count of Male Packaging T/F		Column Labels			
Row Labels		Don't know	No	Yes	Grand Total
Fun		2	2	2	6
School		3	4		7
Work			3	1	4
See		4	3	1	8
Grand Total		9	12	4	25

Figure 6 Using Pivot Tables to measure perfume generalization

Count of Survey Target Audience		Column Labels			
Row Labels		Female	Male	Unknown	Grand Total
Fun		3	1	2	6
School		2	1	4	7
Work		1	2	1	4
See		4		4	8
Grand Total		10	4	11	25

Figure 7 Using Pivot Tables to measure survey generalization