Does brand image or taste have more influence on consumer preference for energy drinks?

The Honors Program
Senior Capstone Project
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ABSTRACT

In the past, numerous studies have been completed comparing brand image to product performance. In these studies it has been shown that brand image does have an effect on preferences and observers evaluate product performance differently when brand image is part of the equation. However, Generation Y is often cited as being skeptical of advertising, because they have been bombarded with media their entire lives. Therefore, this study examined a product targeted towards Generation Y, energy drinks, and compared stated brand preferences to actual product performance. The sample was 68 college students from Bryant University varying in age from 18 to 23 years old. In the study, participants were asked to complete an online survey about energy drinks and within the survey they were asked to rank five energy drinks (Red Bull, Monster, Full Throttle, Amp, and Rockstar) in order from favorite to least favorite. Several days later, the participants then came to the Applied Psychology Research Center on campus and participated in a blind taste test where they again ranked the energy drinks favorite to least favorite.

Results showed that Generation Y is not immune to advertising. In the survey, Red Bull was clearly the most preferred brand with 47% of respondents selecting it as their favorite. In the blind taste tests, Monster was most preferred with 28% of respondents choosing it as their favorite. When comparing favorites using mean ranks, Red Bull was also most preferred in stated preferences (mean rank = 2.2) and Amp was most preferred in taste tests (mean rank = 2.7). Thus, Generation Y may be more skeptical about advertising, but they are still influenced by marketing efforts as shown by the discrepancy between stated preferences and the taste test preferences. These results provide important information for marketers because they show that advertising dollars aimed at Generation Y are effective.

INTRODUCTION

The research question that will be investigated in the following study is whether brand image or taste (product performance) has more influence over brand preference in energy drinks for Ganeration Y. This will build upon previous knowledge and experiments to see if energy drinks respond to the idea that brand image drives product preference as it has in previous studies regarding products such as orange juice and other carbonated beverages. Specifically, the following research investigates whether Millennials or Generation Y (The generation born between 1980-1994 is commonly referred as Generation Y or Millenials. This study will use the term Generation Y) are either immune or less affected by advertising efforts, or if they fall into the same patterns as previous generations have regarding the effects of advertising.

In previous generations it has been shown that advertising has a large effect on brand preference. Generation X and Baby Boomers have been targeted by advertising agencies to influence consumption patterns and/or brand preferences. This becomes evident in studies comparing blind versus non-blind taste tests. One great example is an experiment comparing store brand orange juice to a national brand, Minute Maid. Minute Maid scored highest during the non-blind taste test, but during the blind taste test, Minute Maid was the least preferred orange juice. This shows that Minute Maid's use of mass-media and a national marketing campaign creates this brand loyalty and perception of quality (De Wulf, Odekerken-Schroder, Goedertier, & Van Ossel, 2005).

Another example of previous research in this area is an experiment comparing the effect of disproportionate advertising budgets for products or services that are extremely similar in physical attributes. One comparison made within the experiment was between Howard Johnson and Holiday Inn. Consumer Reports had shown that the two hotels were nearly identical in all aspects of service and amenities, as well as having the same overall quality rating. In 1990, Holiday Inn had an advertising budget of $10.5 million while Howard Johnson's budget was only $600,000. Independent variables for this study included: brand name, price, room quality, cleanliness, staff quality, and food quality. The dependent variable was the intent to purchase. In the end, the overall perceived quality was 1.74 times greater for

Holiday Inn and the Holiday Inn had 4.75 times more positive associations (Cobb-Walgren, Ruble, & Donthu, 1995). This is just another example of the power of advertising in shaping perceptions of brand quality for previous generations.

The problem with most of these experiments and research studies is that they may not apply to Generation Y. Baby Boomers grew up as advertising started to hit maturity. Concepts such as Integrated Market Communication and Brand Identity have recently become accepted as powerful tools to shape preferences. Generation Y, the 63 million Americans born between 1980 and 1994, has become more aware of and cautious about falling victim to advertising. They have grown up their entire lives bombarded with advertising from every angle. It is no longer television commercials and the newspaper infiltrating their everyday life, but the constant barrage of spam, banner ads online, pop-ups, coupons, and extensive recommendation algorithms from companies such as Netflix. It has been said that Generation Y's "advertising shell" is the thickest of any generation and that they are extremely hard to reach due to the volume of advertising they see every day (Sutherland & Thompson, 2001). In a way, Millennials have become immune and are able to "zone out" advertising efforts that would affect our brand preferences.

Love or hate Generation Y, the truth is that they are the future consumers of the world and have to be understood in order to reach the target audience. Automotive manufacturers have started to realize the power of Generation Y. They are relying more on event marketing, product placement and digital media and shying away from traditional marketing efforts. For example, Scion, a division of Toyota, is an entire line of automobiles targeted toward the younger generation (Ciminillo, 2005). Generation Y does not enjoy the traditional advertising of the past, but rather unique product placement or alternative marketing efforts.

A recent study published in the Journal of Consumer Research mentions the self-congruency theory, suggesting that consumers choose products that are aligned with symbolic meanings that align with their self-concept (Monnier, 2008). To explore this, an experiment was completed focusing on food and beverage and the values they represent. For food, social power symbolism was compared to a beef sausage roll versus a vegetarian alternative. Beef

sausage, and red meat in general, are supposed to represent social power. Within the study, people that identified high social power values favored sausage roll as having a higher taste evaluation. Subjects with low social power values had a taste preference for the vegetarian alternative. This shows that symbolism, which is formed from advertising, influences consumer preferences.

Another experiment was performed focusing on differences between Pepsi and Woolworth Cola. In a blind taste test there was no statistical taste difference between the two. With regards to marketing, Pepsi portrays values related to an exciting life. Similar to the sausage, people who stated they had a preference for high excitement evaluated Pepsi higher regarding taste in the non-blind taste test. On the contrary, subjects who value low excitement rated Woolworth cola higher on taste evaluation. In conclusion, value endorsements suggest that value priorities and cultural symbols influence taste evaluation and attitude toward products (Monnier, 2008).

Findings from previous research suggest that Generation Y will exhibit stated brand preferences for specific energy drinks. These preferences would arise from the effect advertising budgets have on brand image and the self-congruency theory relating to the fact that Generation Y is responding to edgy advertising. Brands that combine a larger advertising campaign with edgier advertising should be a preferred brand due to the self-congruency theory. Thus, hypothesis one is:

H1: Generation Y will exhibit stated brand preferences for specific energy drinks.

A brand can be defined as a name, symbol, design, or mark that enhances the value of a product beyond its functional value. Therefore, a brand adds value to the investor, manufacturer, retailer, and consumer. It is for this reason that Integrated Marketing Communications have become widely accepted. A successful IMC strategy is an integral part to a firm's brand equity strategy. An IMC strategy can be defined as "a set of processes that include the planning, development, execution, and evaluation of coordinated, measurable, persuasive brand communications programs over time with consumers, customers, prospects,

employees, associates, and other targeted external and internal audiences," (Madhavaram, Badrinarayanan, & McDonald, 2005). This differs from the brand equity strategy, which is involved in the acquiring, developing, nurturing, and leveraging a brand or portfolio of brands. Once can see the connection between the implementation of an IMC campaign and the strength of brand equity.

Looking beyond advertising and IMC strategy, there are other factors that can lead to strong brand preferences. In markets that have little product differentiation there is large first mover advantage. This was shown in a recent study that compared the large discrepancies in market share with an undifferentiated product such as salsa. Focusing on Tostitos and Pace, the study was able to conclude that Tostitos enjoyed a large advantage in market share in the east, while Pace was the market leader west of the Mississippi. The findings in the study showed that Tostitos was released first in the east and Pace in the west, and since there was such little product differentiation between the two, the variations in market share could only be explained due to the first mover advantage each enjoyed (Bronnenberg, 2008). Similarly, it could be argued that energy drinks have very little product differentiation when looking at features from an ingredients standpoint. The main ingredients for energy drinks all include a similar energy blend of guarana, taurine, Vitamin B12, and sugar. Red Bull has a first mover advantage because it was the first energy drink introduced in the United States (Noonan, 2001). Hypothesis two states that there will be a correlation between first mover advantage and market share in the energy drink market.

H2: Red Bull exhibits a first mover advantage and is the market leader.

As previously stated with the study involving orange juice, product performance and brand preference do not always match. People are influenced by brands and their symbolic meanings. This was shown by a study performed at the University of South Carolina in 1972. Within the experiment, 127 college students from the University of South Carolina were used as subjects. The subjects were given one of three shopping lists for a small, informal party. They were to project themselves into the situation and try to describe the student who purchased the items on the list. Each list had the same items except for beer. One list had

Pabst, one had Brand X, and the third did not mention beer. The subjects were then to describe the party planner, who created the shopping list, in one or two paragraphs. Each sentence was then assigned a positive, negative, or neutral rating by judges. These ratings were then tallied and separated by shopping list. In the end, subjects with the Pabst Blue Ribbon shopping list had more positive things to say about the party planner. Brand X and no beer had more negative things said about the party planner. More specifically, over one-third of the Brand X and no beer subjects used adjectives such as unintelligent and unimaginative while only nine percent of subjects with Pabst on their list used these terms to describe the party planner. Therefore, these findings support the idea that beer brand distinctions arise through the breweries' marketing efforts (Woodside, 1972).

Besides orange juice, there are numerous studies that show a discrepancy between stated brand preference and actual product performance. There was a beverage experiment that focused on Pepsi and Woolworth Cola. In a blind taste test, there was no statistical taste difference between the two. However, when it came to stated brand preference, Pepsi was found to be a clear favorite regarding taste (Monnier, 2008). The conclusion at the end of this study showed that value priorities and cultural symbols influence taste evaluation toward products. We suggest that Generation Y may be subject to the same influences. Thus, hypothesis three of the current study states that Generation Y's brand preferences in a blind taste test will not match their stated brand preferences.

H3: Participants' stated brand preferences will not match their taste preferences in the blind taste test.

Another variable in the development of brand preference is frequency of use. It has been argued that an increase in usage will create greater familiarity with the product and stronger brand preferences. The question to be analyzed here is whether energy drinks exhibit this same correlation, or if Generation Y, known as less brand loyal, has a high rate of switching and, as a result, a decrease in the strength of their brand preference. Hypothesis four states that an increase in consumption frequency will lead to a smaller difference in stated and taste preferences.

H4: There will be less difference between stated and taste preferences with increased familiarity with energy drinks.

METHODOLOGY

This study recruited participants from Bryant University. The subject pool was created to include students across majors and classes. More specifically, participants were recruited from a Business 101 class of freshman, a Marketing 201 class with sophomores and juniors, a Business 400 class of seniors, and the Student Alumni Association whose members are from all majors and represent all grades (Appendix A – Demographic Statistics). Teachers were asked to provide some type of grade incentive and the students were informed there would be free samples of energy drinks.

While recruiting members, a brief presentation was made in the classroom asking students to participate in a study of energy drinks that would include a survey and a taste test. Then, the students were provided with a URL to complete an electronic survey. The survey was to be completed before they participated in the blind taste test. Also, a signup sheet was provided in the classroom, so the participants could choose a time slot to participate in the taste test. Participants were required to leave their email address and cell phone number (optional). This information was used to remind the participants when they had signed up for the taste test. 84 students completed the online survey.

All blind taste tests were completed in The Applied Psychology Lab at Bryant University. Participants were asked to sign up for a 15 minute time slot and there was a maximum of 4 students at a time. Upon arrival, participants were asked to wait in a holding room and provided with the paperwork for the study (Appendix B). This paperwork included instructions for the taste test, a consent form, a ranking system for the samples, and an area for notes.

While participants were in the holding area the taste tests were set up in two rooms, so two participants would be in each room with specific instructions not to speak to each other. For each subject, a small amount of each of the five energy drinks was provided in opaque plastic

cups. In order to prevent subjects from recognizing the color of specific energy drinks, the samples were all dyed to approximately the same orange color using (tasteless) red food dye. The samples were labeled A through E. In order to eliminate bias in the form of the order in which the samples were presented, designation of A – E changed each day. Each participant already had their voting sheet and a writing utensil. They were instructed to drink each sample and write down any necessary notes. In between samples, the participants were instructed to have a taste of water to eliminate any cross-contamination of samples within the mouth. Once the participants were done with all of the samples they were asked to consult their notes and rank the samples first favorite, second favorite, third favorite, fourth favorite, and least favorite. At the very end, they were asked to again leave their email address, in order to match their taste test with their previous electronic survey, and were thanked for participating. 68 students who had taken the survey completed the taste test. A snowstorm that resulted in closing of the University was responsible for much of the difference between that sample size and the number of students who completed the survey, as 39 students were scheduled for taste tests that day and many could not be rescheduled.

We analyzed the data for non-response bias. There were 68 participants who completed both the survey and taste test and 84 people who completed the survey. Thus, 16 people dropped out of the study and did not complete the taste test. Therefore, we compared the number of energy drinks consumed per week between the 68 who completed the taste test and the 16 who did not. The concern was that people who were unfamiliar with energy drinks were more likely to drop out of the study and possibly bias the taste test data. However, there was no statistical significance between the two groups in terms of consumption frequency, and therefore no evidence of non-response bias.

RESULTS

H1: Generation Y will exhibit stated brand preferences for specific energy drinks.

Hypothesis one stated that Generation Y will exhibit stated brand preferences for specific energy drinks. In order to test this, we examined brand rankings in the survey. The ranking

question asked participants to rank five different energy drinks (Amp, Monster, Rockstar, Red Bull, and Full Throttle) one through five, with one being their favorite. Red Bull was the clear favorite in this question with 47.1% of participants ranking it number one (Figure 1). Also important, is the fact that strong preferences were shown in rankings one through five, because 41.2% of people ranked Full Throttle as their least favorite. We also computed mean ranks with lower numbers indicating the more favored choice and higher numbers the less favored (Figure 2). When looking at mean ranks, Red Bull is again a clear favorite with a mean rank of 2.2. Monster came in second, with a mean rank of 2.5, and Full Throttle was again last with a mean rank of 4.1. Therefore, this data supports H1 and that Generation Y has stated brand preferences for specific energy drinks.

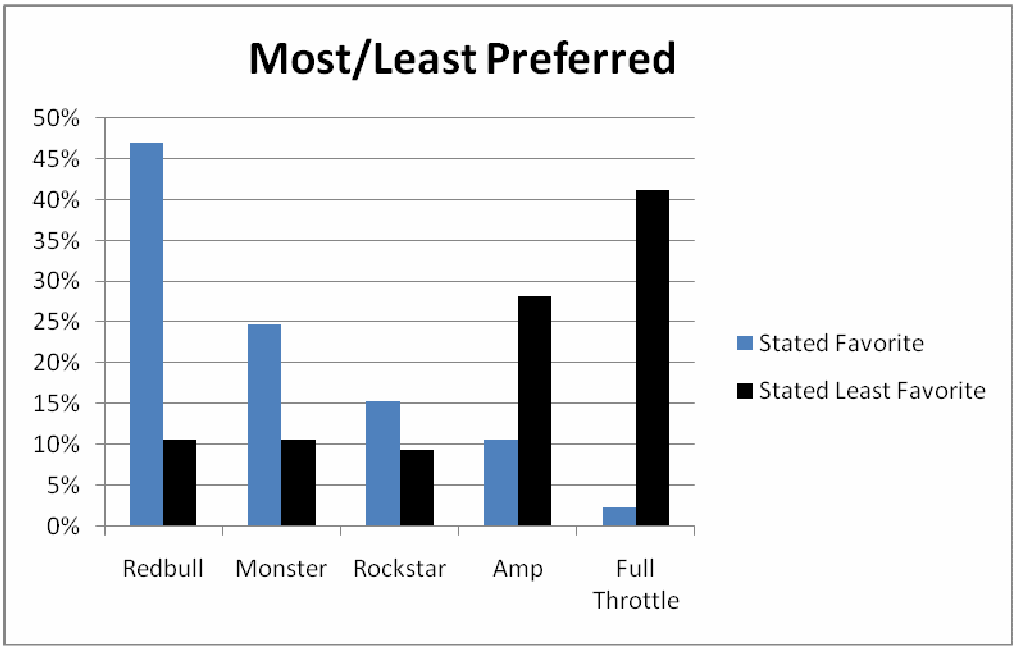

Figure 1: Preference Levels

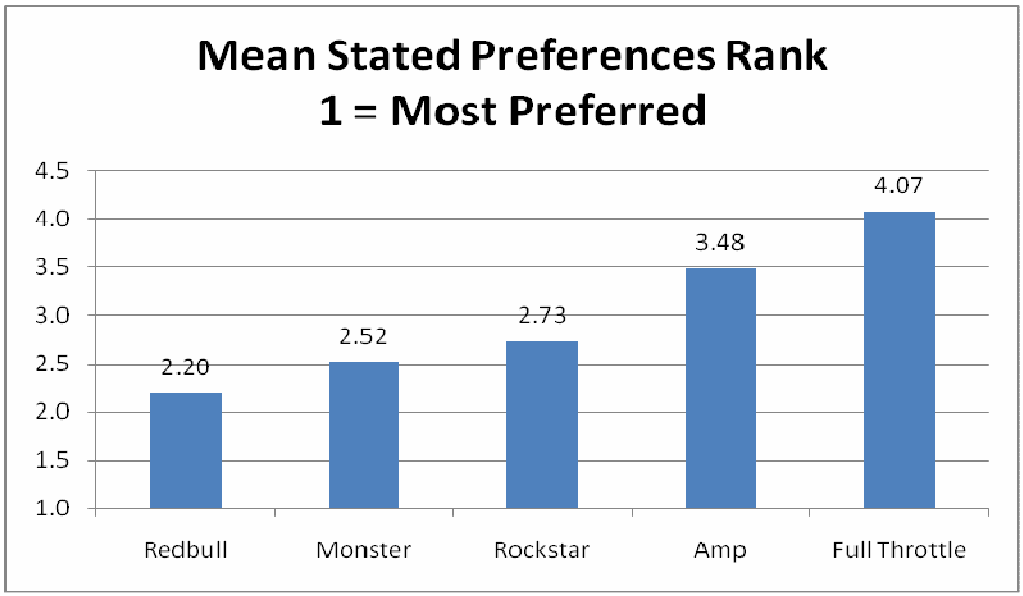

Figure 2: Mean Ranking for Stated Preferences

There was a secondary approach used within the survey to identify market leaders. This approach focused on unaided recall of energy drink brands. In this portion of the survey, participants were asked if they were aware of any energy drinks, and, if so, to list up to five that they were aware of. An extremely high 96.3% of respondents stated that they were aware of at least one energy drink. In this portion of the survey, Red Bull was recalled the most at 56 times and Full Throttle the least at 6 times (Figure 3). One energy drink not included in the blind taste test that was recalled frequently was 5 Hour Energy. This was not included in the blind taste test due to its extreme differences regarding ingredients and volume (5 Hour Energy cans contain only two fluid ounces). The unaided recall approach confirms what the ranking question had shown: Generation Y does have a stated brand preference and it is Red Bull.

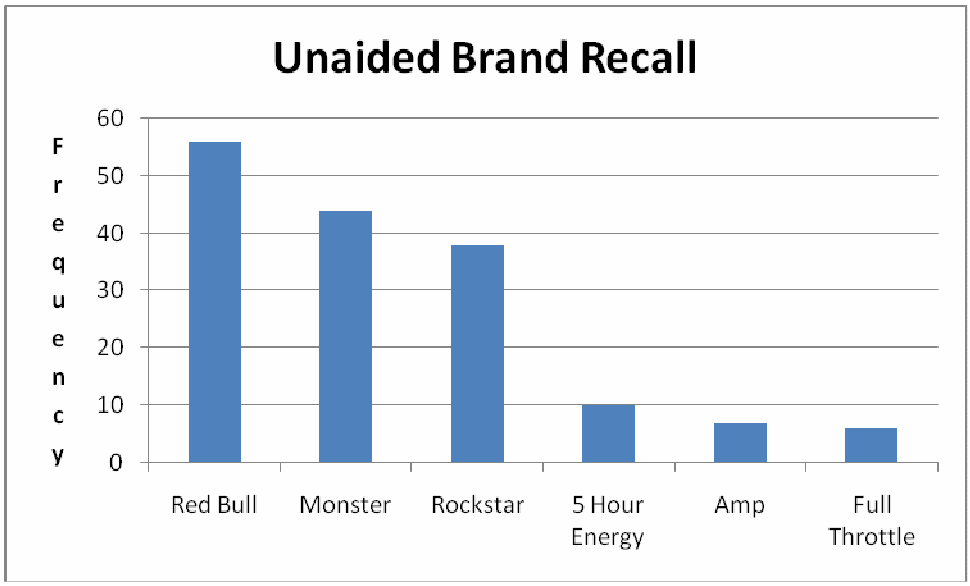

Figure 3: Unaided Brand Recall Frequencies

H2: Red Bull exhibits a first mover advantage and is the market leader.

Hypothesis two stated that for Generation Y, like other generations, the first mover is the market leader. Red Bull was introduced in Austria in 1987 after three years of development. Ten years later it launched Red Bull in the United States in San Francisco. From that point forward, Red Bull has spread throughout the country and entrenched their slogan "Red Bull gives you wiiiiings" into the majority of Generation Y's minds (Noonan, 2001). According to a Bevnet energy drink industry analysis, Red Bull has 42.6% market share based on sales for the year ending December 31, 2006 (Bevnet, 2007). This matches the data from the survey where 47.1% listed Red Bull as their favorite (Figure 4). Thus, hypothesis two has been confirmed.

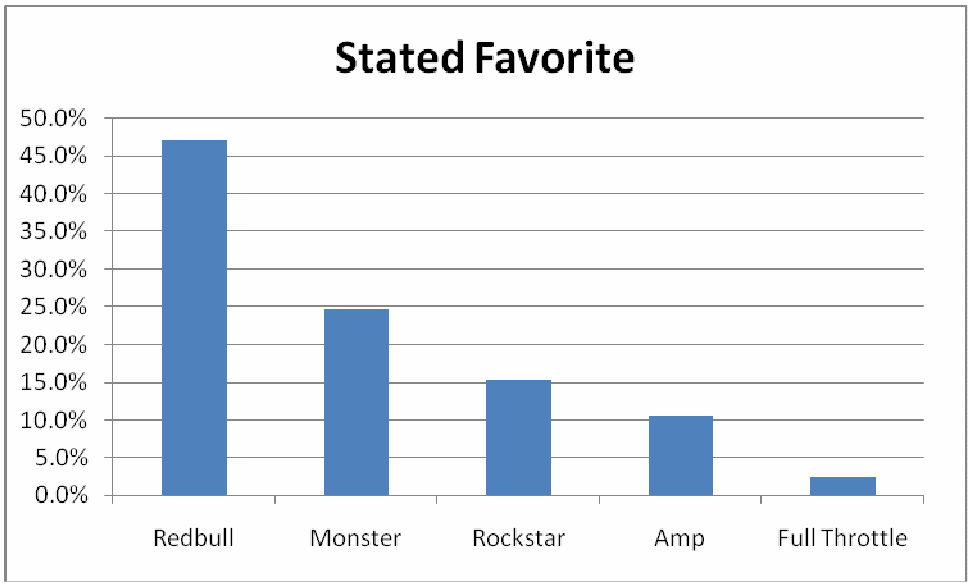

Figure 4:Stated Favorite by Percent

H3: Participants stated brand preferences will not match their taste preferences in the blind taste test.

Hypothesis three states that Generation Y brand preferences in a blind taste test will not match their stated brand preferences. This was tested using a Wilcoxon Signed Rank Test which compares each participant's stated preference rank with his/her taste preference rank for each of the five brands. Rankings were significantly different at p=.001 for all brands except Monster (Figure 5 and Appendix C). Results for Monster approached significance (p=.108).

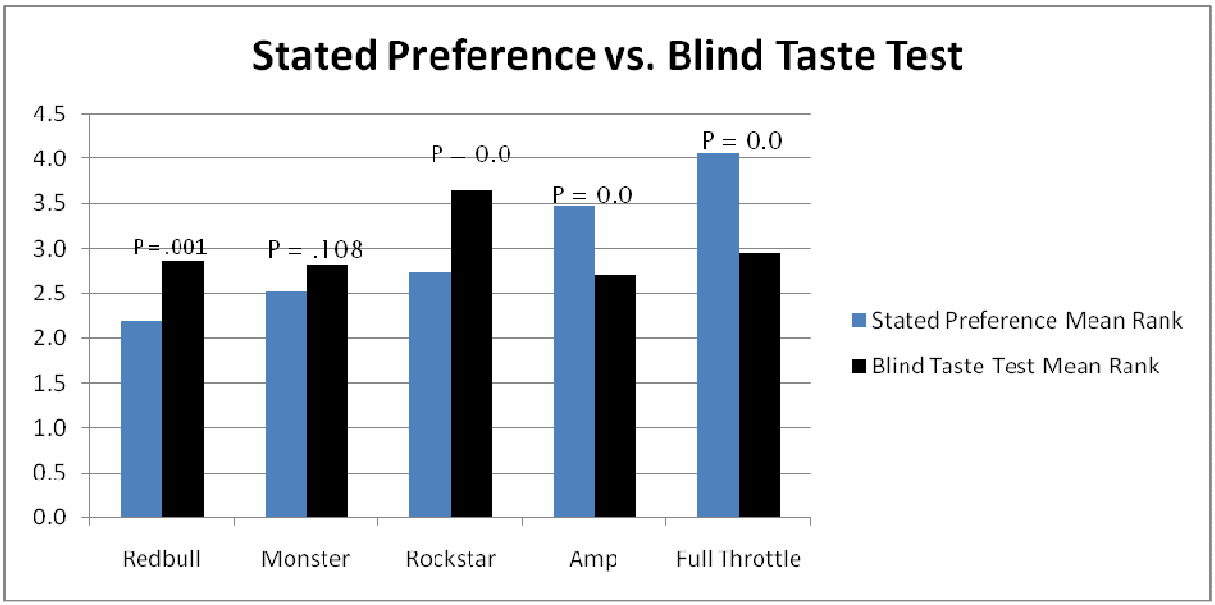

Figure 5: Stated Brand Preference vs. Blind Taste Test

The results from the blind taste test were very interesting. First, when analyzing the data using mean rank, Amp was the favorite with a mean rank of 2.7 and Rockstar was the least favorite with a mean rank of 3.7. However, Amp, Monster, Full Throttle, and Red Bull were all extremely close in the rankings, ranging from a low of 2.7 for Amp to a high of 3.0 for Full Throttle. This further shows that there is little product differentiation between the energy drinks.

We also examined blind taste results in terms of frequency being designated as most preferred (Figure 6). Monster was the leader with 19 (28%) favorite votes and Amp came in a close second with 18 (27%). Red Bull, the leader in stated preferences was fourth in terms of frequency most preferred with 11 (16%).

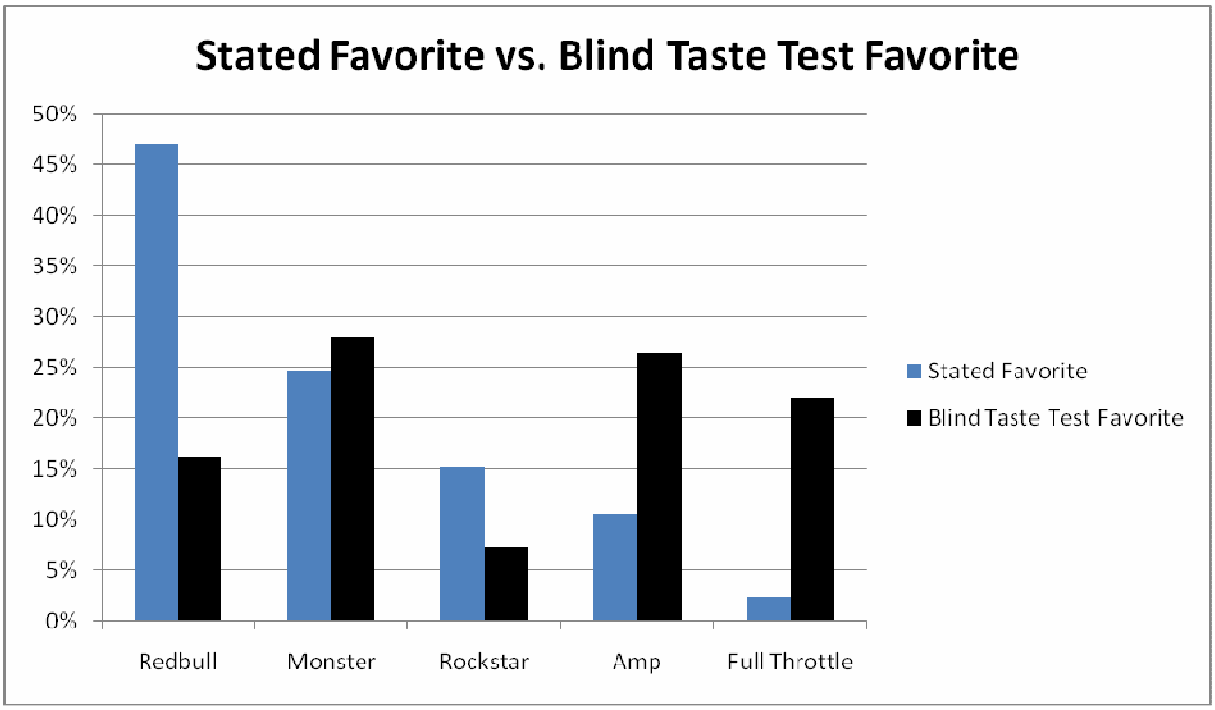

Figure 6: Stated Favorite vs. Blind Taste Test Favorite

H4: There will be less difference between stated and taste preferences with increased familiarity with energy drinks.

Hypothesis four stated that energy drink preferences will be stronger for those who regularly consume energy drinks. The goal for this hypothesis was to show that there was a closer relationship between stated brand preferences and the blind taste test for those who drink energy drinks more frequently. In order to do this, the survey results were split between those who were non-users (does not drink energy drinks), light users (0-1 energy drinks per week), and heavy users (over 2 energy drinks per week), and the differences between stated preferences and the blind taste test rankings were compared between the three groups. A Wilcoxon Signed Rank Test was used to show that participants who were considered heavy users had a statistically significant smaller difference between stated and blind preferences as compared to light users. Surprisingly, non-users also had a smaller difference between rankings of stated preferences and taste preferences. However, they had a small sample size of six, so this result may not be reliable (Appendix D).

SUMMARY

All four hypotheses were supported, and these results have significant implications for marketers. Generation Y has been classically described as immune to advertising, but this study debunks this notion. Although Generation Y may be immune to traditional forms of advertising, it is clear that alternative methods have proven extremely successful in forming brand preferences. The best example of this is Red Bull. They were clearly the stated brand preference favorite in this study and they use a wide promotional mix. Although Red Bull uses commercials and print advertising, it is typically a cartoon promoting their slogan "Red Bull gives you wiiiings" or some extreme sport with a large shock value. Beyond traditional advertising, Red Bull also sponsors numerous extreme sport athletes or teams such as: pro motocross rider Travis Pastrana, NASCAR driver Brian Vickers, and MLS team Red Bull New York. Red Bull also sponsors alternative events including the Red Bull Air Race World Championships and the Red Bull Flugtag competition, where people launch themselves into the water in their human-powered flying machines. This unique and aggressive advertising mix is able to penetrate Generation Y's advertising filters.

While traditional advertising techniques may not be nearly as effective with Generation Y as they were with previous generations (Sutherland & Thompson, 2001), this study provides evidence that Generation Y is not immune to such methods. However, advertising will need to transform into this alternative mode of thought of "guerilla marketing." Red Bull, for example, has a tremendous number of representatives that hit the streets to give out free samples. It is this street team that produces that one on one interaction and often creates first time users of the product. "Guerilla marketing," or alternative advertising, is going to be the answer to Generation Y. It has been proven in the study that this target can be reached and that there brand preferences influence their product performance evaluations

Beyond marketing and advertising, this study has a lot to say about the smaller players in the market. Energy drinks such as Amp have a taste advantage that they need to vocalize to their target market. If smaller competitors are able to highlight their product attributes, such as taste, that are superior to their competitors, they may be able to take away some market share.

What is important is to take into consideration the advertising methods used by the market leader and combine that with the unique message they have to offer.

Today, more than ever, Integrated Marketing Communications are vital to brand management. Since alternative methods of advertising are going to have to become part of the marketing mix, it will be vital to have a unified message to prove effective at reaching Generation Y. Millennials are the future consumers of the world, so finding ways to reach them is going to be essential to companies' success.

FUTURE RESEARCH

This study has focused on stated brand preferences versus a blind taste test for energy drinks. There is much more research in both the energy drink market as well as on Generation Y that can be completed. First, with regard to energy drinks, it would be interesting to see further research on consumption frequency and extreme sport athletes and how that differs from the general public. Furthermore, this study measures product performance as taste; future studies may try to use the level of energy "kick" each sample provides as their product performance variable. With regard to Generation Y, energy drinks are a product targeted specifically at them. In the future, it would be interesting to see if products not specifically targeted to Generation Y, still have significant differences between stated and actual brand preferences. These are just a few possibilities of future research that would prove insightful for marketers to try to reach Generation Y.

APPENDICES

Appendix A – Demographic Statistics

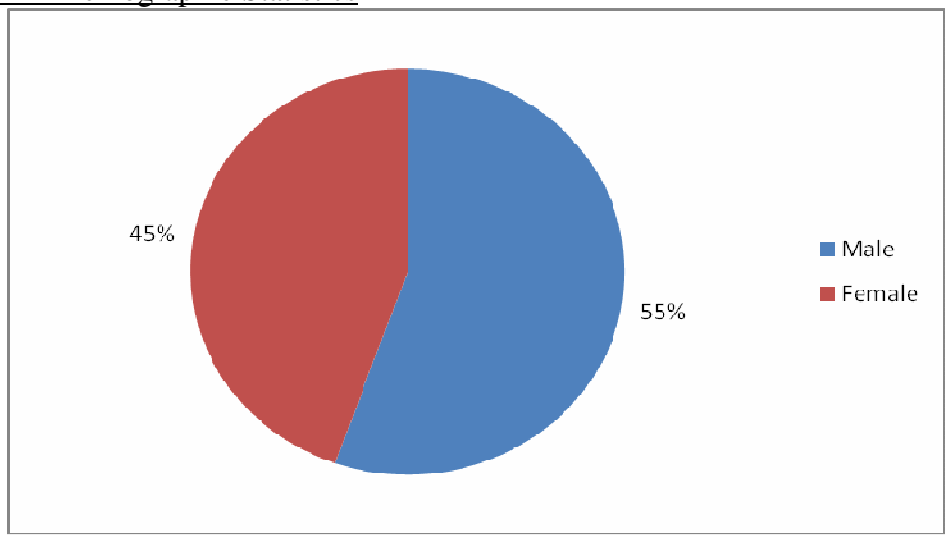

Figure 7: Participant Gender Breakdown

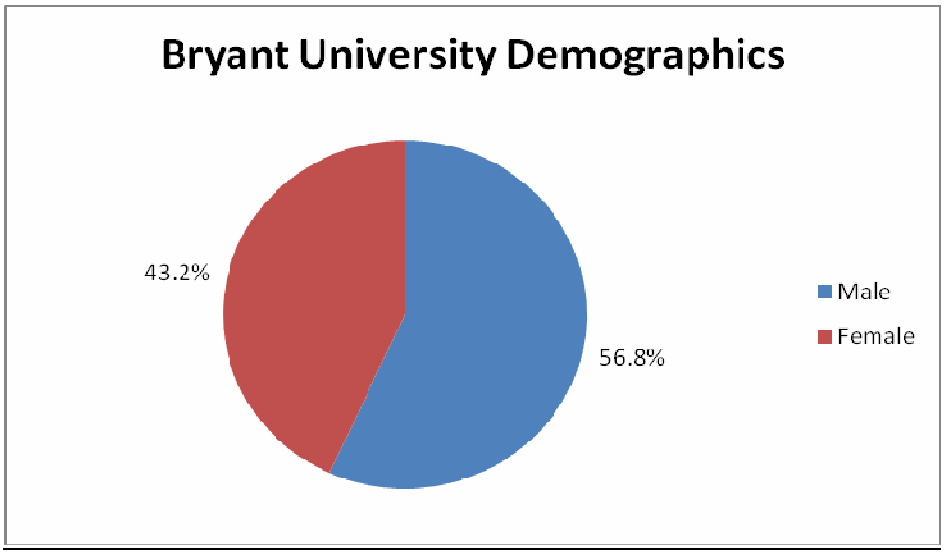

Figure 8: Bryant University ("Bryant University," 2008)

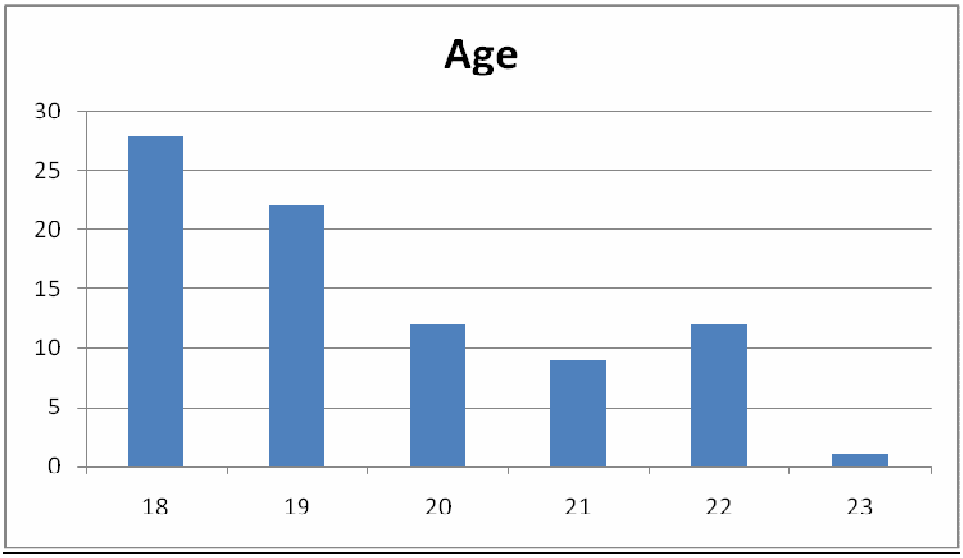

Figure 9: Age Distribution

Appendix B – sample blind taste test form

Email address:_____

You are making a decision whether or not to participate. Your signature indicates that you understand and accept the risks of drinking energy drinks. You may withdraw at any time without penalty or loss of benefits to which you may be entitled after signing this form should you choose to discontinue participation in this study.

_____ _____
Signature Date

Part II

Please taste each of the samples and take a drink of water in between each sample. Once you have completed tasting each sample, please consult your notes and rank the samples accordingly.

Favorite _____

Second Favorite _____

Third Favorite _____

Fourth Favorite _____

Least Favorite _____

Taste Notes

A._____

B._____

C._____

D._____

E._____

Appendix C – Wilcoxon Output

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
TTAmp - SPAmp	Negative Ranks	42(a)	29.81	1252.00
	Positive Ranks	13(b)	22.15	288.00
	Ties	13(c)		
	Total	68		
TTMonster - SPMonster	Negative Ranks	22(d)	26.45	582.00
	Positive Ranks	33(e)	29.03	958.00
	Ties	13(f)		
	Total	68		
TTRockstar - SPRockstar	Negative Ranks	16(g)	20.94	335.00
	Positive Ranks	43(h)	33.37	1435.00
	Ties	9(i)		
	Total	68		
TTRedBull - SPRedBull	Negative Ranks	14(j)	24.29	340.00
	Positive Ranks	38(k)	27.32	1038.00
	Ties	16(l)		
	Total	68		
TTFullTHr - SPFullThr	Negative Ranks	38(m)	32.14	1221.50
	Positive Ranks	15(n)	13.97	209.50
	Ties	15(o)		
	Total	68		

a TTAmp < SPAmp
b TTAmp > SPAmp
c TTAmp = SPAmp
d TTMonster < SPMonster
e TTMonster > SPMonster
f TTMonster = SPMonster
g TTRockstar < SPRockstar
h TTRockstar > SPRockstar
i TTRockstar = SPRockstar
j TTRedBull < SPRedBull
k TTRedBull > SPRedBull
l TTRedBull = SPRedBull
m TTFullTHr < SPFullThr
n TTFullTHr > SPFullThr
o TTFullTHr = SPFullThr

Test Statistics(c)

	TTAmp - SPAmp	TTMonster - SPMonster	TTRockstar - SPRockstar	TTRedBull - SPRedBull	TTFullTHr - SPFullThr
Z	-4.133(a)	-1.606(b)	-4.239(b)	-3.230(b)	-4.526(a)
Asymp. Sig. (2-tailed)	.000	.108	.000	.001	.000

a Based on positive ranks.
b Based on negative ranks.
c Wilcoxon Signed Ranks Test

Appendix D- Wilcoxon Output 2

FAMILIARITY GROUP 1: Does Not Drink Energy Drinks
Wilcoxon Signed Ranks Test

Ranks(p)

		N	Mean Rank	Sum of Ranks
TTAmp - SPAmp	Negative Ranks	3(a)	2.33	7.00
	Positive Ranks	1(b)	3.00	3.00
	Ties	1(c)		
	Total	5		
TTMonster - SPMonster	Negative Ranks	1(d)	1.50	1.50
	Positive Ranks	3(e)	2.83	8.50
	Ties	1(f)		
	Total	5		
TTRockstar - SPRockstar	Negative Ranks	0(g)	.00	.00
	Positive Ranks	4(h)	2.50	10.00
	Ties	1(i)		
	Total	5		
TTRedBull - SPRedBull	Negative Ranks	0(j)	.00	.00
	Positive Ranks	3(k)	2.00	6.00
	Ties	2(l)		
	Total	5		
TTFullTHr - SPFullThr	Negative Ranks	5(m)	3.00	15.00
	Positive Ranks	0(n)	.00	.00
	Ties	0(o)		
	Total	5		

a TTAmp < SPAmp
b TTAmp > SPAmp
c TTAmp = SPAmp
d TTMonster < SPMonster
e TTMonster > SPMonster
f TTMonster = SPMonster
g TTRockstar < SPRockstar
h TTRockstar > SPRockstar
i TTRockstar = SPRockstar
j TTRedBull < SPRedBull
k TTRedBull > SPRedBull
l TTRedBull = SPRedBull
m TTFullTHr < SPFullThr
n TTFullTHr > SPFullThr
o TTFullTHr = SPFullThr
p NO_zeroone_twomore = .00

Test Statistics(c,d)

	TTAmp - SPAmp	TTMonster - SPMonster	TTRockstar - SPRockstar	TTRedBull - SPRedBull	TTFullTHr - SPFullThr
Z	-3.362(a)	-1.627(b)	-3.302(b)	-2.830(b)	-4.374(a)
Asymp. Sig. (2-tailed)	.001	.104	.001	.005	.000

a Based on positive ranks.
b Based on negative ranks.
c Wilcoxon Signed Ranks Test
d NO_zeroone_twomore = 1.00

FAMILIARITY GROUP 2:Drinks 0-1 Energy Drinks Per Week
Wilcoxon Signed Ranks Test

Ranks(p)

		N	Mean Rank	Sum of Ranks
TTAmp - SPAmp	Negative Ranks	30(a)	22.77	683.00
	Positive Ranks	11(b)	16.18	178.00
	Ties	7(c)		
	Total	48		
TTMonster - SPMonster	Negative Ranks	16(d)	18.25	292.00
	Positive Ranks	24(e)	22.00	528.00
	Ties	8(f)		
	Total	48		
TTRockstar - SPRockstar	Negative Ranks	13(g)	14.77	192.00
	Positive Ranks	29(h)	24.52	711.00
	Ties	6(i)		
	Total	48		
TTRedBull - SPRedBull	Negative Ranks	10(j)	19.00	190.00
	Positive Ranks	29(k)	20.34	590.00
	Ties	9(l)		
	Total	48		
TTFullTHr - SPFullThr	Negative Ranks	29(m)	22.00	638.00
	Positive Ranks	8(n)	8.13	65.00
	Ties	11(o)		
	Total	48		

a TTAmp < SPAmp
b TTAmp > SPAmp
c TTAmp = SPAmp
d TTMonster < SPMonster
e TTMonster > SPMonster
f TTMonster = SPMonster
g TTRockstar < SPRockstar
h TTRockstar > SPRockstar
i TTRockstar = SPRockstar
j TTRedBull < SPRedBull
k TTRedBull > SPRedBull
l TTRedBull = SPRedBull
m TTFullTHr < SPFullThr
n TTFullTHr > SPFullThr
o TTFullTHr = SPFullThr
p NO_zeroone_twomore = 1.00

Test Statistics(c,d)

	TTAmp - SPAmp	TTMonster - SPMonster	TTRockstar - SPRockstar	TTRedBull - SPRedBull	TTFullTHr - SPFullThr
Z	-2.539(a)	-.314(a)	-2.217(b)	-.847(b)	-.136(b)
Asymp. Sig. (2-tailed)	.011	.754	.027	.397	.892

a Based on positive ranks.
b Based on negative ranks.
c Wilcoxon Signed Ranks Test
d NO_zeroone_twomore = 2.00

FAMILIARITY GROUP 3: Drinks More than 2 Energy Drinks Per Week
Wilcoxon Signed Ranks Test

Ranks(p)

		N	Mean Rank	Sum of Ranks
TTAmp - SPAmp	Negative Ranks	9(a)	5.78	52.00
	Positive Ranks	1(b)	3.00	3.00
	Ties	5(c)		
	Total	15		
TTMonster - SPMonster	Negative Ranks	5(d)	7.30	36.50
	Positive Ranks	6(e)	4.92	29.50
	Ties	4(f)		
	Total	15		
TTRockstar - SPRockstar	Negative Ranks	3(g)	5.00	15.00
	Positive Ranks	10(h)	7.60	76.00
	Ties	2(i)		
	Total	15		
TTRedBull - SPRedBull	Negative Ranks	4(j)	4.88	19.50
	Positive Ranks	6(k)	5.92	35.50
	Ties	5(l)		
	Total	15		
TTFullTHr - SPFullThr	Negative Ranks	4(m)	7.88	31.50
	Positive Ranks	7(n)	4.93	34.50
	Ties	4(o)		
	Total	15		

a TTAmp < SPAmp
b TTAmp > SPAmp
c TTAmp = SPAmp
d TTMonster < SPMonster
e TTMonster > SPMonster
f TTMonster = SPMonster
g TTRockstar < SPRockstar
h TTRockstar > SPRockstar
i TTRockstar = SPRockstar
j TTRedBull < SPRedBull
k TTRedBull > SPRedBull
l TTRedBull = SPRedBull
m TTFullTHr < SPFullThr
n TTFullTHr > SPFullThr
o TTFullTHr = SPFullThr
p NO_zeroone_twomore = 2.00

Test Statistics(c,d)

	TTAmp - SPAmp	TTMonster - SPMonster	TTRockstar - SPRockstar	TTRedBull - SPRedBull	TTFullTHr - SPFullThr
Z	-2.539(a)	-.314(a)	-2.217(b)	-.847(b)	-.136(b)
Asymp. Sig. (2-tailed)	.011	.754	.027	.397	.892

a Based on positive ranks.
b Based on negative ranks.
c Wilcoxon Signed Ranks Test
d NO_zeroone_twomore = 2.00

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