

WILLINGNESS TO PAY A PREMIUM FOR GROUP NORMS AS A MEASURE OF
REFERENCE GROUP INFLUENCE

A Thesis

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of

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by

KEESHAN SELVAKUMAR

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ABSTRACT

WILLINGNESS TO PAY A PREMIUM FOR GROUP NORMS AS A MEASURE OF REFERENCE GROUP INFLUENCE

Keeshan Selvakumar
The University of Guelph, 2009

Advisors:
Professor Sunghwan Yi
Professor Paul Anglin

Researchers have studied the phenomenon of reference group influence in consumer settings for many years. Previous authors have typically measured influence as favouring group norms over alternatives, with no mention of paying a premium for group norms. The purpose of this study was to examine whether measuring reference group influence as willingness to pay a premium for group norms would change the pre-existing relationships between influence and its antecedents (consumption visibility, group identification, tie strength, and consumer need for uniqueness). A structural equation modeling strategy was employed to determine whether these relationships were maintained when consumers actually had to pay a premium to adhere to group norms. The results revealed that consumption visibility does play a direct and moderating role on willingness to pay premiums for group norms. More specifically, consumers with high identification and strong ties are only influenced by their reference group in public conditions. The results also suggest that the effect of need for uniqueness is not strong enough to elicit a reference group influence on consumer choices if the group norm costs more than the alternative.

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I INTRODUCTION

A person's behaviour is driven by their intentions. The theory of reasoned action (TRA) states that an individual forms these intentions with their own attitude toward the behaviour as well as any subjective norms encompassed in performing the behaviour (Fishbein & Ajzen, 1980). An individual's attitude toward behaviour can be either positive or negative. This assessment occurs when an individual weighs the consequences arising from performing the behaviour against the desirability of conducting the behaviour. For instance, an individual may feel compelled to buy organic food if he or she believes that the health benefits outweigh the increased price. The subjective norm, on the other hand, is the individual's perception of what other people think of the behaviour. The impact of another's opinion is largely based on how much the individual wishes to meet the expectation of the opinion giver. For example, even if many acquaintances in one's social network agree that organic food is a sham, the decision to buy organic or not will likely stem from those closer to the individual, such as his or her immediate family. Many consumer purchases are largely motivated by what we believe other people think (Bearden & Etzel, 1982); the premium we pay for brand name clothes, our choice of automobile to drive, and the type of stereo system we keep in our living room are just a few examples.

In a general sense, the purpose of this study is to understand exactly why people adhere to subjective norms in real consumer settings. More specifically, we want to investigate whether individuals will actually pay a premium for group-endorsed brands over similar

alternatives and if so, what factors cause them to do so.

1.1 Objectives, Design, and Methods

The present study focused on how group norm premiums affect our traditional understanding of reference group influence in consumer settings. Consumption visibility, group identification, tie strength, and need for uniqueness have all been linked to reference group influence in previous literature. The goal of the research was to determine which of these factors preserved their relationship in the presence of a group norm premium.

Varsity athletes across Canada were chosen as the study sample because they are part of an unambiguous social group and the group is not limited by uncontrollable factors such as race or social class. Data was collected through on-line surveys, as conducting an experimental study using naturalistic observation would have exceeded the time constraints of the study.

To test hypotheses, participants were given hypothetical scenarios where they had to choose between a group norm and an alternative brand. Each scenario also featured varying levels of price premiums for the group norm as well as varying levels of consumption visibility (private or public). The highest premium the participant would be willing to pay was taken as an indicator of reference group influence.

Group identification and need for uniqueness were measured by scales developed by previous researchers. Tie strength was assessed by a ratio of the number of close friends a participant had on their varsity team, and the total number of teammates they had on that same team. Participants' willingness to pay a premium for the group norm as a percentage was then compared to their scores on these scales in a structural equation model to determine which factors still play a pivotal role in reference group influence.

The results of the structural equation model suggest that consumption visibility, group identification, and tie strength may play a significant role on reference group influence in consumer settings. Although previous researchers have also proposed that individuals with a higher need for uniqueness will be less influenced by their reference group, this was not supported by statistically significant evidence in this study.

1.2 Overview of Thesis

The second chapter of the thesis will provide a comprehensive literature review of the reference group influence. The complexities of this subject will be examined, as previous researchers tend to differentiate between types of influences and groups that elicit these influences. Of special attention will be membership groups, which are the focus of this study. Afterwards, the concept of group identification will be discussed. While group identification is defined in many ways by previous literature, a common theme remains. This section will look at why individuals identify with groups and why this is related to influence. It will then focus on consumption visibility, which has been noted to play a

key role in reference group influence.

The third chapter will state the research objectives of the study. The objective of the study is to determine whether paying a premium for the group norm changes our current understanding of reference group influence in consumer settings. To accomplish this, relationships that have existed in the past were tested to determine whether individuals are actually willing to pay more for group norms, and if they are, why they are more willing to pay. The chapter will conclude by presenting the conceptual model and research hypotheses.

The fourth chapter will focus around the research methodology of the study. The sample population as well as recruitment strategy will be described in detail. Afterwards, the focus will shift to the research methods used in the study. As previously mentioned, the scales for group identification and need for uniqueness were taken from previous research. Reasoning as to why some scales were chosen will be included, as well as the reasoning behind creating scales for the other variables.

The fifth chapter will report the findings of the study. Three of the four structural paths hypothesized in the conceptual model reached statistical significance. While consumption visibility, group identification, and tie strength appeared to be definite links to willingness to pay a premium for the group norm, consumer need for uniqueness was only marginally significant.

The sixth and final chapter will discuss the findings of the structural equation model and its implications at both the theoretical and managerial levels. Limitations as well as future research directions will also be provided.

II LITERATURE REVIEW

The literature review section of the thesis will provide a broad analysis of the reference group influence. Different types of influence as well as different groups that influence individuals will be discussed. Membership groups, the focus of the study, will be reviewed in great detail. Topics related to reference group influence will be discussed afterwards. Group identification, which has been suggested as a cause of influence, will be examined, followed by the notion of consumption visibility. Both of these concepts have been viewed as a fundamental variable related to reference group influence in previous literature.

2.1 Reference Group Influence

A reference group is defined as a group conceived of having significant importance upon an individual's attitudes and behaviours (Park & Lessig, 1977). These groups also provide norms and values that influence consumer behaviour. Duetsch and Gerard (1955) suggested that two different types of reference influences existed. The first one is informational influence, which promotes the transfer of knowledge among group members. Knowledge may be communicated either directly through verbal interaction, or could be learned through observation. The second type of influence suggested is normative, which consists of any pressure to conform to group norms.

Unsatisfied with the normative component identified by Deutsch and Gerard (1955), Park

and Lessig (1977) argue that reference group influence is a three-dimensional concept, consisting of informational, utilitarian, and value-expressive influences; with the latter two being sub-dimensions of normative influence. When consumers are faced with options, especially if they are uninformed, they will seek out information to aid in their decision. *Informational influence* relates to individuals being swayed to behave in a certain manner due to opinion leaders, experts, or significant others. This type of influence is frequently seen in marketing, as companies often use either celebrity or expert endorsers to promote their products (McCracken, 1989). The more credible a source is, the more likely the consumers will be influenced.

Utilitarian influence occurs when an individual is expected to comply with the preferences or expectations of others if he or she believes that there will be a reward or punishment, and there is a motivation to gain the reward or avoid the punishment (Park & Lessig, 1977). This also becomes apparent when the individual's behaviour is known or visible to others. For example, a head of a household may be influenced to buy certain brands based on the influence of his or her family. These influences also highlight the fact that ignoring certain expectations may lead to some sort of punishment. For example, if a student wears something "uncool" to class, other classmates might give harsh glares and may even tease.

Value-expressive influence refers to every individual's motivation to enhance their self-image by associating themselves with positive referents and dissociating themselves from negative referents (Park & Lessig, 1977). For instance, if others view a certain product as

poor, a consumer may be inclined to dispose of it even though they themselves may feel neutral or even positive about it.

When measuring reference group influence, only one or two types of influence may actually play a role. For example, a cross-national study by Yang, He, and Lee (2007) found that when purchasing mobile phones, only utilitarian influence was statistically significant. That is, consumers were influenced to buy cell phones to comply with others but not because of opinion leaders and not to boost their self-concept. In this case, consumers were more influenced by the social rewards associated with their phones and by not standing out in public.

2.1.1 Reference Group Types

Reference groups can be just about anyone who influences behaviour, whether it is a family member or a close friend. Reference groups can be outside of your social network as well. Burnkrant and Cousineau (1975) argue that reference groups may be *normative* or *comparative*. Normative reference groups are groups that provide norms and values through direct interaction with the individual. Conversely, comparative reference influence is when an individual can observe the behaviour of a referent but cannot interact directly with the referent. Cocanougher and Bruce (1971) suggest a similar divide and argue that two types of reference groups exist: *socially proximal referents* and *socially distant referents*. As their names indicate, the former typically operates within an individual's close social network, while the latter works in the outskirts of an individual's

social domain. Both Cocanougher and Bruce's (1971) and Burnkrant and Cousineau's (1975) incorporate the notion of social distance when categorizing reference groups. More commonly however, reference groups can be categorized by the status of the individual relative to the group. Most researchers argue that reference groups fit one of three categories: aspirational, dissociative, and membership.

Veblen (1925) developed the idea of conspicuous consumption in *The Theory of the Leisure Class*. He argued that individuals conduct behaviour to impress others and therefore boost their self-esteem. While some authors have critiqued the ambiguity of his central propositions (e.g., Campbell, 1995), his theory is still prevalent in sociological as well as economics literature. Veblen argues that conspicuous consumers attempt to outdo others within their own social standing by emulating higher social classes. Aspirational groups are groups to which an individual's wishes to belong to. According to Bourne (1957), reference groups set levels of aspiration for consumers and then define the actual items they need to acquire to socially achieve it. Not surprisingly, it has been found that consumers have very accurate representations of the consumption choices of aspirational groups; Englis and Solomon (1995) found that middle-class, suburban undergraduates identified the consumption patterns of the "Money & Brains" (which served as an aspirational group in the study) more precisely than they did their own. In consumer behaviour research, Madrigal (2000) found that college football fans' intentions to purchase a sponsor's product were positively related with their identification with the team.

Sheth and Parvatiyar (1995) state that aside from human aspiration, the key motive for consumers to adhere to reference group influence is reduction of perceived risk. That is, individuals will actively avoid certain behaviours that may link them to unwanted associations. *Dissociative* groups are those whose behaviour a consumer does not want to be identified with. Even when individuals hold little to no information about this group, they are still perceived in a highly stereotypical manner (Englis & Solomon, 1995). White and Dahl (2006) found that males had more negative evaluations of products that were associated with females than gender-neutral products. The research developed two similar menus with only one difference; while both menus featured a 10 ounce steak, one named it the 'chef's cut' while the other named it the 'ladies' cut'. They found that when men were presented with the ladies' cut option, they were less likely to purchase the item than when they were offered the chef's cut option, despite both steaks being identical. Interestingly, this effect was more pronounced when the product was consumed publicly rather than in private. Although only a few products may be associated with a dissociative group, their highly stigmatizing effects cause consumers to completely avoid them (Englis & Solomon, 1995). Despite aspirational and dissociative groups both having strong reference group influences on behaviour, neither has been researched as much as membership groups.

2.1.2 Membership Groups

Membership groups are groups that an individual belongs to. Schofield and colleagues (2001) explain the process of becoming a member in three steps; we first define ourselves

as a member of a group, then we learn the attitudes and behaviours of that particular group, and finally we assign those attitudes and behaviours to ourselves (Schofield et al., 2001). Take university students for example; once admitted to a school, they will categorize themselves as a student of that university, fulfilling the first step. After communicating with other students on campus, they will learn the group norms (step two) and adopt them as their own (step three). Membership groups also have the uncanny ability to influence their members in more than one way. Feltman (1998) offers the example of family, which can offer knowledge (informational influence), an enhanced self-concept (value-expressive influence), and positive rewards (utilitarian influence).

If a person is a member of a group, they are generally more likely to espouse that group's behaviours. Terry and Hogg (1996) revealed that university students are more likely to adopt a regular exercise routine as well as engage in sun protective behaviours if other students did as well. In consumer behaviour research, Woodside (1972) found that housewives were more likely to take a chance on a riskier and unproven product if given support by an informal reference group. The housewives were unaware of the test conditions and were also given the opportunity to make their product decision in public or private to control for peer pressure. Regardless of who was present during their decision, the housewives' responses stayed constant; the group influenced them. Along the same line, Whittler and Spira (2002) found that Blacks who identify strongly with Black culture preferred advertisements featuring Black models over advertisements with White models. Not only did they acknowledge their preference, they also admitted their bias, indicating that this influence is not just present at an unconscious level.

Luo (2005) has found that different types of membership groups may facilitate opposite and contradictory influences. While investigating impulse buying in the presence of others, he found that peers increased the urge of purchase while family decreased the urge to purchase. The reference group influences on this particular behaviour were very different, despite peers and family both falling under the category of membership groups. Childers and Rao (1992) extended Bearden and Etzel's (1982) to distinguish between the influences of peer groups and family. Consistent with other studies, they too discovered that the influence exerted by these two membership groups can vary substantially. Peers may play a greater influence with luxury products, while family may influence necessity purchase decisions more.

2.2 Group Identification

Groups are a collection of individuals who either have direct or face-to-face interactions, or people that share a common distinction (Lau, 1989). Identification, on the other hand, refers to the perceived belongingness to a group (Bhattacharya, Rao, & Glynn, 1995).

Other researchers have agreed with this definition; Henry, Arrow, and Carini (1999) view group identification as "member identification with an interacting group" (p. 558), while Koch (1993) defines it as "awareness of membership in a reference group or psychological attachment to a group, or both" (p. 49). Common in all three definitions is an individual affiliating oneself with a group.

Group identification may arise from three different sources (Henry, Arrow, Carini, 1999).

Cognitive sources include the act of categorizing oneself with a group. Affective sources refer to the attraction a group member has to other members of the group, which can be increased as the member spends more time with the group, and if they share the same values and goals as the group. Behavioural sources comprise of co-operation and group accomplishment, which can further facilitate identification.

People generally identify with groups they like, groups they believe will provide them with positive rewards, and groups whose members are similar to them and close in proximity (Lau, 1989). Likewise, any groups offering the opposite are likely to discourage group identification (Turner, 1975). Lau (1989) also found that most individuals identify less with a group if their membership is ambiguous. While identification with race is strong because there is a clear distinction between ethnicities, identification with social class is weak for most because many are uncertain where they fall and if they fall in-between two classes.

Koch (1993) has reported that group membership need not be present for group identification to occur. This notion is not improbable, as most of us know someone who is not a member of a certain culture but identifies with it regardless (i.e., a Caucasian rapper identifying with African-American culture). While investigating reference group influence on voting behaviour, he found that individuals who were not members of certain groups, but identified with them, were just as likely to share the same political preferences as members. For instance, voters who identified strongly with the poor, but were not poor themselves, shared the same preferences for everything except food

stamps. Likewise, middle-aged adults who identified with the elderly (but were not elderly themselves) shared stronger opinions for Social Security and Medicare than those who did not. This study highlights that fact that positive rewards may not be required to facilitate group identification. While interesting, the results may be subject to certain limitations; namely Koch's operational definitions of certain groups and his subject pool. He defines the poor as those who earn an annual income of under \$10,000, but most of the people who identified with the poor in the study had incomes of \$15,000 to \$16,999. Unfortunately, Koch does not include any sources and reasons why he chose a cap of \$10,000; perhaps a more accurate operational definition of the poor could be individuals who make under \$17,000, thus falsely making the claim that group membership need not be present for group identification.

Fisher and Wakefield (1998) found that the factors that lead to group identification could be different depending on the nature of the group. Curious as to why sports fans of losing teams still remain loyal to their team, the researchers tested the importance of three different group identification factors on both fans of winning and losing professional sports teams. They found that while perceived group performance is most important to fans of successful teams, this factor is not an issue for fans of unsuccessful teams. For the latter, domain involvement (in this case, identification with the sport itself) is the most dominant factor. Since members of unsuccessful groups cannot pride themselves in the groups' accomplishments, domain involvement reduces any negative feelings of being associated with a loser (Fisher & Wakefield, 1998).

Terry and Hogg (1996) discovered that group identification can facilitate reference group influence. They found that perceived group norms towards regular exercise and sun-protective behaviour were more relevant if an individual strongly identified with the group versus identifying weakly and not at all. For low identifiers, perceived consequence of performing the behaviour played a greater role. A similar study conducted by Astrom and Rise (2000) found similar results when dealing with healthy eating. While high identifiers were more influenced by group norms, low identifiers were more likely to eat healthy if they saw few difficulties and most positive outcomes from consuming healthy food. Consistent in both studies is the positive role of identification in the relationship between group norms and behavioural intention; the greater the identification, the more likely group norms will influence a member's intention to perform a certain behaviour.

Webster and Faircloth (1994) found that Hispanics living in America that had high ethnic group identification were less likely to become assimilated into U.S. culture. More specifically, they found that high identifiers were much more influenced by value-expressive and utilitarian influences from their own culture than low identifiers. This finding demonstrates that it is incorrect to view members of a group as a whole; a reference group must acknowledge the fact that high identifiers and low identifiers will respond much differently to the various types of influences.

Developing strong member identification can be very attractive to business organizations. Battacharya and colleagues (1995) found that group identification with a major arts

museum was positively related to perceived prestige, donating activity, membership tenure, and visiting frequency. Interestingly, they found that the positive correlates just mentioned actually decreased with similar organizations (e.g., other museums) as identification with the focal museum increased. In other words, members who strongly identify with an organization are less likely to turn to competitors offering similar products or services. These results indicate that managerial implications for increasing group identification may include an increase of brand loyalty in customers.

2.3 Consumption Visibility

Bourne (1957) theorized that products that are easily seen and identified by others bring about the strongest reference group influences. Public products such as cars, cigarettes, and beer are good examples of these. Private products such as soap and refrigerators are less subject to this kind of influence as they are less subject for disapproval. Later on, Bearden and Etzel (1982) investigated reference group influence on four different product categories: necessity products that are consumed publicly, necessity products that are consumed privately, luxury products that are consumed publicly, and luxury products that are consumed privately. They compared consumer perceptions of reference group influence using 16 different products which fit into one of the four aforementioned categories. The results of their study found that luxury products as well as public products were at a greater risk of being influenced by reference groups.

Bearden and Etzel (1982) provided the following definitions for their participants to

distinguish between private and public products:

“A public product is one that other people are aware you possess and use. If they want to, others can identify the brand of the product with little or no difficulty... A private product is one used at home or in private at some location. Except for your immediate family, people would be unaware that you own or use the product.” (p. 186)

There are certain problems with the aforementioned definitions however. First, there are many publicly consumed products whose brands are difficult to identify. For instance, a ‘brand’ of a tennis racket or a woman’s dress (both examples in Bearden and Etzel’s study) would be nearly impossible to classify for an anonymous viewer, without them having to interact with the owner of the product. It is not uncommon from a woman to hear: “I love those shoes. Where did you get them from?”

Secondly, there are many privately consumed products that are consumed exclusively at home are still in others’ awareness. Bearden and Etzel’s examples of videogames and refrigerators highlight this fact. While these products are used in private, the consumer is likely to have other people come to his house other than his or her ‘immediate family’ and these people would recognize the product and the brand of the product; it might not be uncommon for a homeowner to hear something like: “Wow! Is that the new Sony Plasma TV? Nice.”

Based on these two limitations, it appears that the main problem with Bearden and Etzel’s (1982) study is viewing consumption visibility as a dichotomy. Labelling some products as public and some products as private is erroneous as there are many products

that fall under both categories. For example, alcohol can be purchased at a bar or consumed at a gathering of friends, thus making it a public product. Conversely, alcohol can also be enjoyed at home without any social interaction, making it a private product. The physical product is not mutually exclusive to public or private. It is how these products are consumed, or the situation in which they are consumed, that determines their visibility.

A study by Grewal and colleagues (2004) extended Bearden and Etzel's model to the timing of repeat purchases of consumer durables. They used the public-private and luxury-necessity dimensions as well as adding a third dimension: the nature of the replacement decision. More specifically, they examined whether the replacement was due to performance failure (and thus forcing the consumer to replace it with a new product) or whether the replacement decision was due to a factor outside of durability issues (i.e., styling of newer models were more attractive). Surprisingly, they found that consumers take longer to replace products when they are not forced to make a decision. Since unforced decisions generate more excitement and intrinsic interest, consumers are more inclined to spend more time thinking about the purchase and considering alternatives.

2.4 Need for Future Research

Although the concept of reference group influence has been well documented thus far, no researchers to date have investigated whether paying a premium price for the group norm will affect a consumer's decision. Previous studies have asked participants to select

between a group norm and an alternative (e.g., Astrom & Rise, 2001) with no mention of financial consequence. While there is an implicit consequence of adhering to group norms considering healthy eating or exercise, these inconveniences are difficult to quantify.

In the real world, popular brands that are favoured by reference groups are generally more expensive than alternative brands that are not favoured by reference groups. However, some individuals tend to choose cheaper alternative brands while others are willing to pay extra for popular brands. The purpose of this study is to understand why people are willing to pay extra for group norms and what factors contribute to this willingness to pay. It is hypothesized that the same factors that have been found to contribute to reference group influence in previous literature, containing no monetary consequence when choosing the group norm, will still influence purchase if an individual has to pay a premium to select the group norm.

III RESEARCH OBJECTIVES

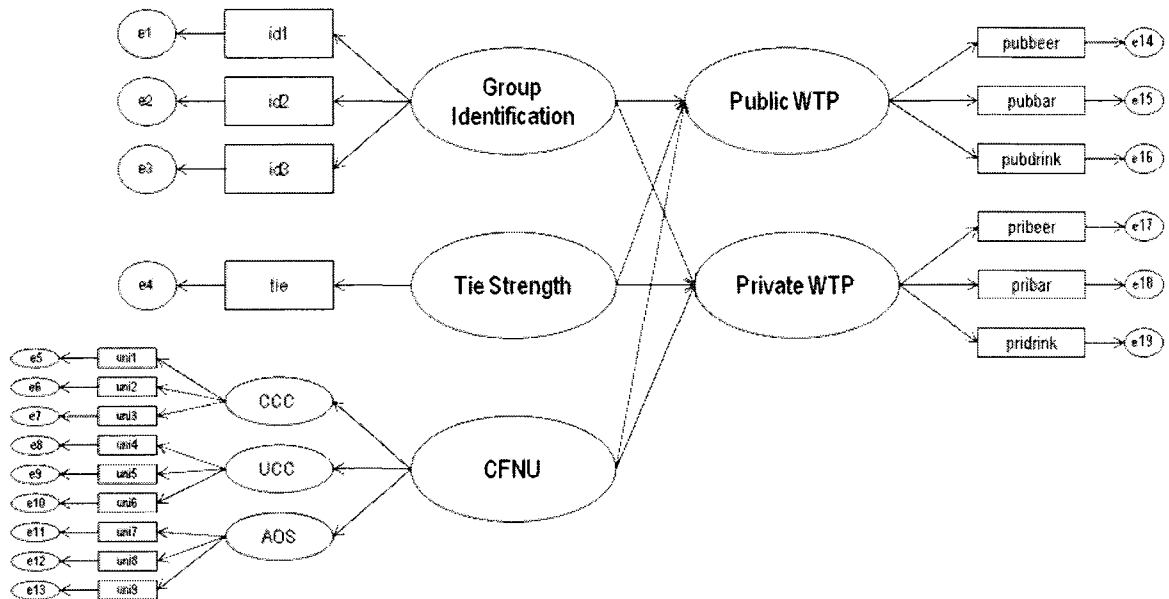
The purpose of this study is to investigate whether the relationships that have existed in previous reference group literature still exist when there is a premium to pay for the group norm. For example, does consumption visibility, which has noted to be an important variable in the relationship between group norms and behavioural intentions (e.g., Terry & Hogg, 1996), have a positive effect on willingness to pay a premium for group norms?

Consistent with the work of Bearden and Etzel (1982), consumer intentions to purchase public and private products will be used as the behaviours under scrutiny. It is hypothesized that there will be a significant difference between the two, with the purchase of public products being more susceptible to reference group influence than private products, causing consumers to be more willing to pay premiums for public products. It is also hypothesized that, while group identification and tie strength are also predicted to affect premium paying in a positive manner, consumer need for uniqueness will have the opposite effect, i.e. a higher need for uniqueness will cause consumers to be less willing to pay premiums on group norms.

3.1 Conceptual Model

A conceptual model was conceived to visualize all the variables to the study along with their relationships and measures. This model, shown in Figure 1, was later used to test the research hypotheses.

Figure 1 Conceptual Model



In this model, group identification, tie strength, and consumer need for uniqueness (CFNU) are expected to have different effects on willingness to pay premiums for group norms depending on the consumption visibility context. Group identification will be measured by three items, tie strength by a single item, and need for uniqueness will feature three second-order factors with three items each (nine total). Public and private willingness to pay will be treated as two separate factors with three items each. All variables and their measures will be discussed in more detail in the next chapter.

3.2 Hypotheses

Consistent with the work of Bearden and Etzel (1982), it is hypothesized that products

consumed in public will be under more reference group influence than products consumed in private due to their conspicuous nature. Therefore, the first hypothesis is given:

H1: The premium that consumers are willing to pay for group norms will be higher for the public consumption context than for the private consumption context.

Parallel to the results of previous researchers investigating group identification (e.g., Terry & Hogg, 1996; Astrom & Rise, 2001), it is hypothesized that members who identify strongly with their reference groups will be more influenced by that group than members who report low levels of identification. In other words:

H2: The premium that consumers with strong versus weak group identification are willing to pay for group norms will be higher for the public consumption context than for the private consumption context.

When group identification is strong, willingness to pay a premium for group norms will be higher in the public context compared to the private context. When group identification is weak however, the effect of public versus private consumption will be significantly smaller.

To control for differences between different reference groups, certain key characteristics that may vary between groups will be measured. Tie-strength has also been established as being an important characteristic for differentiating between various reference groups (Frenzen & Davis, 1990). The construct is typically conceptualized as a combination of the amount of time, the emotional intensity, the intimacy, and the reciprocal services between two people (Marsden & Campbell, 1984). Strong ties involve friendships with

frequent interpersonal contact while weak ties tend to be filled with more distant and less personal interaction. Strong tie relationships interact more often and exchange information more frequently than those in weak tie relationships (Brown & Reingen, 1987). Wirtz and Chew (2002) also found that stronger tie relations generate more word-of-mouth effects than weak tie relationships. Research by Levin and Cross (2004) in organizational settings also indicate that strong tie relationships also generate more knowledge transfers as the person receiving information is more likely to view the sender as trustworthy and competent. Therefore, the following hypothesis is given:

H3: The premium that consumers with strong versus weak ties are willing to pay for group norms will be higher for the public consumption context than for the private consumption context.

When tie strength is high, willingness to pay a premium for group norms will be higher when consumption is public rather than private. When tie strength is low, willingness to pay a premium for group norms will not be affected by consumption visibility. Tie strength, along with group identification, should promote reference group influence in a positive manner. Previous research in organizational psychology supports a link between the three concepts; Reagans (2005) argues that group identification increases the tendency for group members to develop strong ties amongst similar people. Therefore, if you identify with the group, you are more likely to build strong ties with those who are like yourself. While degree of contact as well as formality have also been noted as important characteristics of reference groups which may vary across different groups (Cocanougher & Bruce, 1971), most well-defined and unambiguous groups should maintain a high level of contact as well as formality. Ambiguous and informal groups are not the focus of this research as they generally have weak group identification (Lau,

1989).

While group identification and tie strength are all variables which may increase reference group influence, other variables which may produce the opposite effect must also be taken into account. Of special note is an individual's need for uniqueness, which is characterized by the tendency to distinguish oneself from other people (Snyder & Fromkin, 1977). Individuals who are high on the trait are more likely to seek variety and select options which have not already been chosen by others, leading to the final hypothesis:

H4: The premium that consumers with low versus high needs for uniqueness are willing to pay for the group norm will be higher for the public consumption context than for the private consumption context.

Unlike the previous variables, a decrease in need for uniqueness should increase the effect of reference group influence. This effect should be significantly larger in the public context, as the presence of the reference group during the purchase offers the consumer enough motivation to incur a monetary loss. Furthermore, consumers with high need for uniqueness are willing to pay little premium for the group norm regardless of the social visibility of product consumption. Ruvio's (2008) study confirmed that consumers who score high on need for uniqueness measures are more likely to purchase different products which may be outside of group norms. She found that Israeli mall shoppers who had a high need for uniqueness thought that satisfying this need through consumption behaviour was a safe way to express themselves while leaving their social assimilation unthreatened.

IV RESEARCH METHODOLOGY

To choose products for testing, a preliminary list of 10 products was created from items in previous research (Bearden & Etzel, 1982; Terry & Hogg, 1996; Astrom & Rise, 2001) as well others which the author thought would be suitable. Three products (beer, energy bars, and sports drinks) were then chosen for the study based on their relevance to the test subjects. Each participant received scenario questions concerning each product in two visibility scenarios (public and private), for a total of six different scenario questions. Other items assessing group identification, tie strength, and need for uniqueness were also given to each participant and will be discussed in greater detail in this section.

4.1 Sample

The reference groups under examination were various varsity sports teams at 52 different universities across Canada. These groups were chosen as they are very clearly defined and do not force individuals into certain groups such as those based on race and social class. To recruit participants, an e-mail recruitment message (Figure 2) was sent to every university varsity team coach across Canada using the Canadian Intersport database (available on-line at www.universitysport.ca). Coaches were asked to forward the recruitment message to their players (Figure 3). A minimum goal of two hundred participants was set to have a large enough sample size to conduct structural equation modeling. While a total of 333 athletes participated by the study's completion, only 220 entries from that number were selected for the data analysis procedures as many

participants failed to complete the entire survey.

Figure 2 Recruitment Email to Coach

Dear Coach,

My name is Keeshan Selvakumar and I am a graduate student at the University of Guelph in the Department of Marketing and Consumer Studies. For my Master's thesis, I am conducting a survey experiment with the university's varsity athletes (all teams). The study consists of filling out an on-line questionnaire which should take approximately fifteen minutes. The purpose of the study is to discover how athletes' purchase decisions are influenced by their teammates.

I am e-mailing you to ask whether you could forward my message on to the players of the team you coach. Your help would be greatly appreciated. If willing, you can just reply this e-mail and I will get back immediately. This study has been approved by the University of Guelph's Research Ethics Board (REB). A printable copy of the survey can also be sent upon request. The on-line version is located at:

<https://surveys.ccs.uoguelph.ca/limeSurvey/index.php?sid=39999&lang=en>

Thank you,
Keeshan Selvakumar
BA(Hons), MSc Candidate

Figure 3 Recruitment Email to Athlete

Hello Athlete,

My name is Keeshan and I am a graduate student at the University of Guelph in the Department of Marketing and Consumer Studies. For my Master's thesis, I am conducting a survey with the university's varsity athletes. If you could please take fifteen minutes out of your day to complete the

on-line survey, it would be greatly appreciated. It is available at:

<https://surveys.ccs.uoguelph.ca/limeSurvey/index.php?sid=39999&lang=en>

If you have any questions or concerns, do not hesitate to contact me at kselvaku@uoguelph.ca.

Thank you,
Keeshan Selvakumar
BA(Hons), MSc Candidate

4.2 Research Measures

To measure group identification, the group identity scale provided by Brown and colleagues (1986) was considered due to its popularity with other researchers investigating the phenomenon of group identification as a cause of group influence (e.g., Terry & Hogg, 1996; Astrom & Rise, 2001). The authors originally created the scale to assess intergroup differentiation in industrial organizations, which they found positively related to conflict in the workplace. This scale was then adopted by Terry and Hogg (1996) and Astrom and Rise (2001) in their reference group influence experiments. However, a newer three-item version of the scale adapted by Stewart and Garcia-Prieto (2008) was used as it was most current and was more appropriate for structural equation modelling due to the smaller amount of items. While other measures of group identification were considered, they were deemed as inappropriate for the purposes of the study; many of the items in Henry, Arrow, and Carini's (1999) three-dimensional scale focused too much on the group as a whole (e.g., members of this group like one another) rather than the individual's perception of their own identification; the Inclusion of Other

in the Self (IOS) scale was designed only for the purpose of romantic relationships (Aron, Aron, & Smollan, 1992) and would be useless in assessing varsity athletes; Smith, Murphy, and Coats' (1999) Group Attachment Questionnaire, while used before as a measure of group identification (Coats et al., 2000), was never intended to measure the construct. The authors state that it is used to assess a factor "distinct from relationship attachment and any other measures of group identification" (p. 94).

In their study of relationships, Marsden and Campbell (1984) found that the predictors of tie-strength (predominately group membership) are not necessarily strongly related to the concept, which serves as valid grounds to view tie-strength as distinguishable from group identification; just because one is part of and identifies with a group does not mean that he or she has strong ties with the group. To measure tie-strength, various methods used in previous research were contemplated. Researchers have measured tie-strength in numerous ways; from the "closeness" of the relationship, to the duration of friendship, to the frequency of contact (Marsden & Campbell, 1984). Due to the fact that university sports team members were being used as the sample population, frequency of contact and duration of friendship may not hold much variability as most players meet religiously on a practice regimen and have not known each other before entering university. Therefore, the closeness or intimacy of the relationships between team members was used as it has been found to be the best indicator of strength (Marsden & Campbell, 1984); individuals with weak ties only view the other group members as acquaintances or teammates but not good friends. To operationalize this measure, participants were asked how many group members they shared a close friendship with, as well as how many members in the group

there are in total (therefore, assuming all ties which were not strong ties were weak ones). A ratio of strong ties to weak ties was then taken as an assessment of tie strength. While previous research has used methods such as asking participants about their relationships with each group member (Marsden & Campbell, 1984), a ratio seemed more reasonable as some sports teams can have over forty members. In addition to these two measures, the number of close friends a participant had outside of the team was recorded, if a need to compare strong ties within the team and outside of the team arose.

Need for uniqueness was measured using a scale developed by Tian, Bearden, and Hunter (2001). The rationale behind choosing their scale over the other ones available in literature was that their survey was designed specifically for a consumer's need for uniqueness. Rather than using Snyder and Fromkin's (1977) general view of the trait as a need for individuals to distinguish themselves from the rest of the group, Tian and colleagues chose to focus on consumer purchases. More specifically, they define consumer need for uniqueness as the "pursuit of differentness relative to others that is achieved through the acquisition, utilization, and disposition of consumer goods for the purpose of developing and enhancing one's personal and social identity" (p. 50). The original survey consists of 31 questions and three factors; creative choice conformity, unpopular choice counterconformity, and avoidance of similarity. They, respectively, describe an individual who is unique to create their own personal style, an individual who is unique to deviate from group norms, and an individual who is unique to reestablish their differentness (Tian et al., 2001). For the purposes of this study, only three items per factor were chosen for the on-line survey based on their factor loadings. On a five-point

Likert scale, participants rated how strongly they agreed or disagreed with statements relating to their need for uniqueness. For example, a participant who strongly agrees with the statement “when a style of clothing becomes too commonplace I usually quit wearing it”, it becomes apparent that this person may have a high need for uniqueness when it comes to consumer decisions.

All hypotheses in this research predict that variations in the measures previously mentioned will increase or decrease a group member’s reference group influence. In order to assess this dependent variable, participants were given purchase scenarios where they may be susceptible to reference group influence. In order to operationalize reference group influence in these scenarios, willingness to pay (WTP) was used as a measure to differentiate the participants’ personal choice versus that of the group. This method has been successfully utilized in past experiments dealing with purchase influences (e.g., Ajzen & Driver, 1992). While Ajzen and Driver (1992) were attempting to assess how likely consumers would pay a premium when given moral or ethical considerations, this study was more interested in the premium individuals would pay for a brand endorsed by their reference group. Furthermore, the previous authors used degree of difficulty as how likely they would pay a premium for something (i.e., “for me to pay a reasonable fee would be easy/difficult”). Conversely, this study set up two scenarios per product, with one including group influence and one excluding it (Table 1).

Table 1 Scenario Questions

Product	Visibility Condition	Hypothetical Situation	Question
Energy Bar	Public	You are at a grocery store with your teammates a couple of hours before a game against a rival team. You went in looking for an energy bar to keep you fuelled during the game later. There are only two brands of energy bars available, Centrum and Promax. Even though most of your teammates are picking up Centrum, you hold no personal preference towards either brand.	Which brand of energy bar would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Centrum.
Energy Bar	Private	You decide you want to go to the grocery store to pick up a five-pack of energy bars for home usage; something to eat before the gym or a run. Once you enter, you discover there is a sale on Promax and Centrum is at regular price. You know most of your teammates prefer Centrum, though you hold no personal preference towards either brand.	Which brand of energy bar would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Centrum.
Beer	Public	You are at a pub with your teammates. Even though there is a special on Old Vienna, all your teammates decide to purchase pints of Drewry's. Everyone has already ordered their drinks and the waitress turns to you to ask you what you want. Though all your teammates tend to like Drewry's, you hold no personal preference towards either brand.	Which brand of beer would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Drewry's.
Beer	Private	You decide you want to pick up some beer tonight after the game. Even though you are going home by yourself, you just want to relax and enjoy a cold beer. You stop by the store to pick up a six-pack. There is a sale on Old Vienna and Drewry's is at regular price. Most of your teammates prefer Drewry's, though you hold no personal preference towards either brand.	Which brand of beer would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Drewry's.

Sports Drink	Public	You are at a grocery store with your teammates a couple hours before a game against a rival team. You went in looking for a sports drink to keep you fuelled during the game later. There are only two brands of sports drinks available, Ultima and Endura. Everyone else has pretty much made their purchase decision. Even though most of your teammates are picking up Ultima, you hold no personal preference towards either brand.	Which brand of sports drink would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Ultima.
Sports Drink	Private	You decide you want to go to the grocery store to pick up a three-pack of sports drink for home usage because you are running out. You typically keep these at home to drink after the gym or a run. Once you enter the store, you discover there is a sale on Endura and Ultima is at regular price. You know most of your teammates prefer Ultima, though you hold no personal preference towards either brand.	Which brand of sports drink would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Ultima.

Note. For each given option, participants were asked to choose between selecting the alternative, the group norm, or 'not sure'.

For example, if 'beer' was the product in question, two scenarios were given:

Scenario A: You are at a pub with your teammates. Even though there is a special on Old Vienna, all your teammates decide to purchase pints of Drewry's. Though they tend to all like Drewry's, you hold no preference towards either brand.

Scenario B: You decide you want to pick up some beer tonight after the game. Even though you are going home by yourself, you just want to kick back and enjoy a cold one. You stop by the store to pick up a six-pack. There is a sale on Old

Vienna and Drewry's is at regular price. Most of your teammates prefer Drewry's, though you hold no preference towards either brand.

Unlike the study by Ajzen and Driver (1992), this study used real monetary figures. After being given a scenario, participants were asked which product brand they would select in four different pricing scenarios. In each pricing scenario, the premium reduced significantly. The first pricing scenario included a very large premium for the group norm, while the last pricing scenario had a very small premium for the group norm. Willingness to pay was captured at the point in which the participant went from choosing the cheaper alternative or not knowing which brand to choose, to paying a premium for the group norm (in the above example, Drewry's). For example, if a participant was not willing to pay a premium of 25% of the group norm, was not sure about paying a 20% or 15% premium, but was sure about paying a 10%, his or her reported willingness to pay would be 10% (more than the cheaper alternative). The reasoning behind giving the participants an option of four different pricing levels as opposed to letting them state the premium they were willing to pay was to make the scenario as realistic as possible, i.e. in the real world, consumers do not tell merchandisers how much to charge for their products. To control against any pre-existing biases towards known brands, minor and obscure brands that the participants would be unfamiliar with or would have no preference for were used in the hypothetical scenarios.

V RESULTS

Three hundred and thirty-three varsity athletes participated in the on-line survey. From that number, 92 responses were deleted due to being partially incomplete. 21 other responses were deleted as they were suspected of being randomly chosen by the participant (e.g., a participant willing to pay a 5% and 20% premium but not a 10% premium). The final sample size was 220. Participants were mostly female, comprising 58.2% of the sample. A large portion of the participants were also first-year university students (36.4%). Despite most of them being rookies, the average participant spent a grand total of 21 hours a week with their team; 14 hours for team-related purposes (e.g., practice) and 7 hours outside of official team business (e.g., going to the bar). This means that although most had not known their group members for very long, they still managed to spend a significant amount of time with them. Descriptive statistics (Table 2) for all major variables are provided below.

Table 2 Descriptive Statistics

Variable	Mean	Std. Deviation	Residual Variance
WTP - Energy Bar / Public	7.68	9.86	50.50
WTP - Energy Bar / Private	3.86	6.14	15.17
WTP - Beer / Public	9.45	11.67	109.69
WTP - Beer / Private	5.34	6.94	38.39
WTP - Sports Drink / Public	6.16	8.96	25.19
WTP - Sports Drink / Private	2.93	5.12	9.59
WTP - All Products / Public	23.30	23.40	25.62
WTP - All Products / Private	12.14	14.37	9.26
Group Identification	17.01	3.52	n/a
Tie Strength	0.31	0.24	n/a
Need for Uniqueness	24.50	6.56	n/a

Note. WTP = Willingness to Pay a Premium (as a Percentage).

As evidenced by the table above, residual variances are higher in public conditions than private conditions. The public purchase of beer in particular has a very high variance (109.69) indicating that there is not much consensus amongst consumers of how to behave when faced with a premium. On the other hand, the private purchase of sports drinks displays a low variance (9.59) suggesting that consumers share a general consensus in willingness to pay a premium. By and large, most consumers have the similar opinions in the private scenarios as variability in the public scenarios is greater.

Mean willingness to pay percentages in the public conditions are also higher than the private scenarios. That is, people are willing to pay higher premiums if they have to buy the product in the presence of their group than by themselves. The statistics also reveal that beer elicits the most reference influence, followed by energy, while sports drink appears to elicit the smallest group effect. Table 3 reports on the correlation between all of the major variables.

Table 3 Correlation Matrix

	PUBWTP	PRIWTP	GI	Tie	CNFU	Team Size
PUBWTP	-					
PRIWTP	0.49**	-				
GI	0.00	-0.03	-			
Tie	0.05	0.00	0.50**	-		
CNFU	-0.01	0.13	0.09	0.13*	-	
Team Size	-0.14*	-0.09	-0.15*	0.38**	0.02	-

Note. PUBWTP = Willingness to Pay a Premium (as a Percentage) in Public Condition, PRIWTP = Willingness to Pay a Premium (as a Percentage) in Private Condition, ID = Group Identification, TIE = Tie-Strength, CNFU = Consumer Need for Uniqueness, ** = Correlation is significant at the 0.01 level. * = Correlation significant at the 0.05 level.

A positive correlation between willingness to pay premiums for group norms in private conditions and willingness to pay in public conditions suggests that individuals who are more easily influenced in public scenarios are also more influenced in private scenarios as well. In other words, the same people who pay more for group norms in the presence of their reference groups also do so in the absence of their reference group. Furthermore, group identification and tie strength are closely related indicating that participants who identify strongly with their reference groups also have a greater proportion of close friends in the group. Surprisingly, tie strength was found to be positively correlated with need for uniqueness, indicating that individuals with closer friends also tend to have a desire to individualize. From the demographic information taken from participants, team size revealed to be related to numerous factors such as public willingness to pay, group identification, and tie strength. More specifically, individuals in larger groups were more susceptible to being influenced in public scenarios, had low group identification scores, but had a greater proportion of friends in comparison to their smaller group counterparts. Due to the unpredicted relationships this variable held, team size was included in an alternative model. While the team size model possessed a marginal fit, it was inferior compared to the study's hypothesized model. The results of this comparison will be discussed further in Section 5.2.

5.1. Preliminary Tests

Willingness to pay. To measure group identification, participants were given six scenario questions consisting of three products (energy bars, sports drinks, and beer) by two conditions (public versus private purchase). Each scenario also included four questions,

used to assess how much a premium a participant would pay for the brand his or her reference group endorses. Cronbach's coefficient alpha ranged from .77 to .88 for all six scenarios indicating adequate reliability (Nunnally, 1978). All product scenarios also were representative of their consumption visibility conditions, as indicated by their standardized loadings (Table 4).

Table 4 Standardized Loadings for Products

Product	Public	Private
Sports Drink	0.83	0.80
Energy Beer	0.69	0.77
Beer	0.44	0.45

Consumption visibility. Cronbach's coefficient alpha was .87 for all private scenarios and .87 for all public scenarios. The most influential scenario was the public purchase of energy bars (mean willingness to pay was 9.5% premium), while the least influential was the private purchase of sports drinks (2.9% premium). On average, participants were willing to pay a 7.8% premium for the group norm in the public scenarios but only a 4.0% premium in the private scenarios. This difference was found to be statistically significant and will be discussed in further detail in Section 5.3. For purposes of the structural equation model, willingness to pay was divided into two factors based on consumption visibility (public or private) to compare the effects of all latent variables.

Group identification. Group identification was measured with a three-item scale developed by Stewart and Garcia-Prieto (2008). Cronbach's coefficient alpha was .89, indicating adequate reliability. An exploratory factor analysis using a principal component extraction method and a varimax rotation of three self-report items was

conducted. The Kaiser-Meyer-Olkin measure of sampling adequacy was .70, indicating the present data were suitable for principal component analysis. Similarly, Bartlett's test of sphericity was significant ($p < .001$), indicating sufficient correlation between the variables to proceed with the analysis. Using the Kaiser-Guttman retention criterion of eigenvalues greater than 1.0, only one component was extracted. This factor (eigenvalue = 2.48) accounted for 83% of the total variance. Standardized factor loadings for group identification can be found in Table 5.

Table 5 Standardized Loadings for Group Identification

Item no.	Items	Estimate
2	Do you feel like you belong in your team?	0.96
3	Do you feel that you are really a part of your team?	0.88
1	How much do you identify with your team?	0.75

Tie Strength. Participant's tie strength to other members of their reference group was calculated by dividing the amount of close friends they had in the group by the total number of group members. On average, participants felt that just a little over thirty percent teammates were strong ties. Sample means for team size and close friends on team were 28.30 and 6.95, respectively, indicating that individuals who are part of larger groups tend to have a larger portion of strong ties in their group compared to individuals who are part of smaller groups.

Consumer need for uniqueness. Cronbach's coefficient alpha was .85 for the Tian, Bearden, and Hunter's (2001) consumer need for uniqueness (CNFU) scale, indicating adequate reliability. An exploratory factor analysis using a principal component

extraction method and a varimax rotation of nine self-report items was conducted. The Kaiser-Meyer-Olkin measure of sampling adequacy was .80, indicating the present data were suitable for principal component analysis. Similarly, Bartlett's test of sphericity was significant ($p < .001$), indicating sufficient correlation between the variables to proceed with the analysis. Using the Kaiser-Guttman retention criterion of eigenvalues greater than 1.0, a three-factor solution provided the clearest extraction and accounted for 77% of the total variance. This is consistent with the results found by Tian, Bearden, and Hunter (2001) during their scale development.

Each factor had three items and was equivalent to the factors found by the authors. The first factor, creative choice conformity (eigenvalue = 4.14), accounted for 46% of the variance; the second factor, unpopular choice counterconformity (eigenvalue = 1.70), accounted for 19% of the variance; and the third factor, avoidance of similarity (eigenvalue = 1.12), accounted for 12% of the variable. Corrected item-total correlation ranged from .81 to .85, and Cronbach's coefficient alpha ranged from .79 to .92, indicating good subscale reliability. Standardized factor loadings for consumer need for uniqueness can be found in Table 6.

Table 6 Standardized Loadings for Need for Uniqueness

Item no.	Items	CCC	UCC	AOS
2	Having an eye for products that are interesting and unusual assists me in establishing a distinctive image.	0.83		
3	The products and brands that I like best are the ones that express my individuality.	0.76		
1	I actively seek to develop my personal uniqueness by buying special products or brands.	0.74		
5	I have often violated the understood rules of my social group regarding what to buy or own.		0.85	
6	I have often gone against the understood rules of my social group regarding when and how certain products are properly used.		0.83	
4	When it comes to the products I buy and the situations in which I use them, I have often broken customs and rules.		0.57	
9	The more commonplace a product or brand is among the general population, the less interested I am in buying it.			0.92
7	I often try to avoid products or brands that I know are bought by the general population.			0.90
8	As a rule, I dislike products or brands that are customarily purchased by everyone.			0.85

Note. CCC = Creative Choice Conformity component, UCC = Unpopular Choice Counterconformity component, AOS = Avoidance of Similarity component.

5.2 Model Comparison and Fit

A structural equation modeling strategy via Mplus 5.2 (Muthen & Muthen, 2008) was employed in estimating parameters. Both the hypothesized model (Figure 4) and an alternative model including team size (Figure 5) were compared to ensure proper evaluation. While structural equation modeling is predominately used in conjunction with continuous variables (which tie strength and willingness to pay a premium are not), it was

still acceptable for the purposes of this study as we were utilizing the method to compare the effect of different paths depending on their product visibility condition.

Figure 4 Hypothesized Model

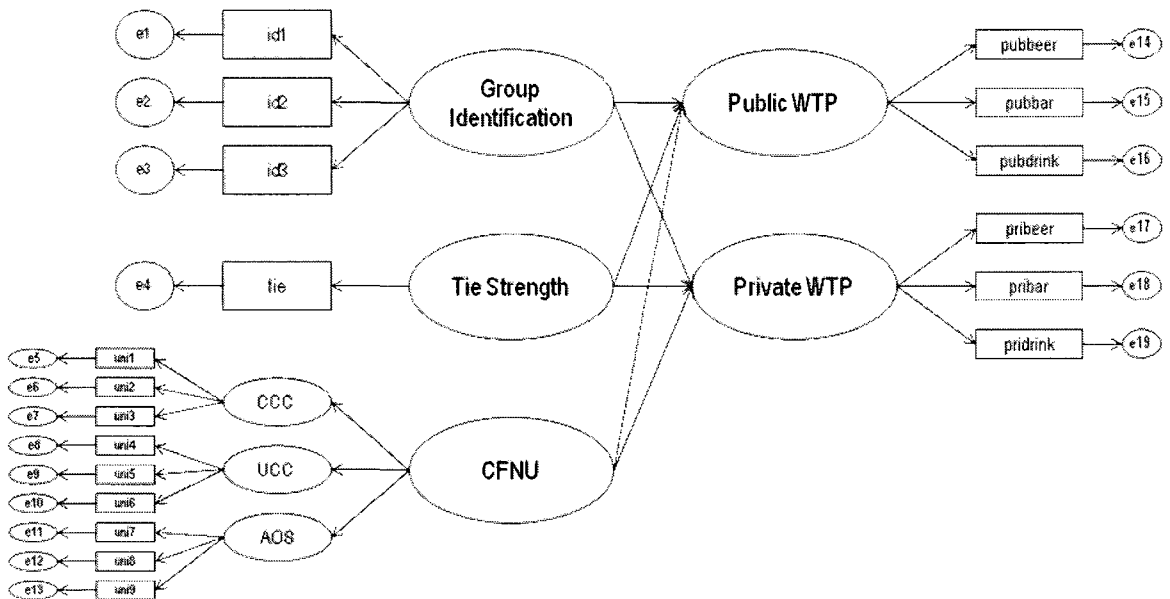
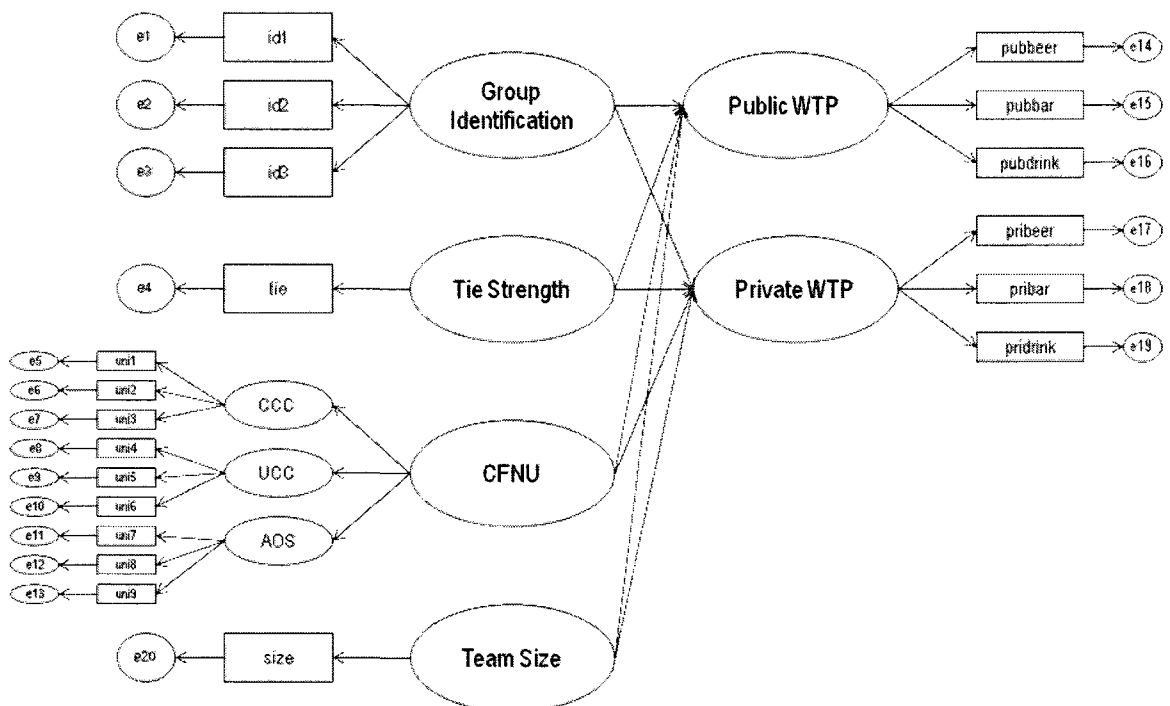


Figure 5 Alternative Model



In a comparison of fit indices, the hypothesized model proved to be fitting better (Table 7).

Table 7 Fit Statistics for the Two Competing Models

Models	df	Scaled χ^2	CFI	TLI	RMSEA	SRMR
M1	140	176.85	0.98	0.98	0.04	0.05
M2	154	196.49	0.98	0.97	0.04	0.05

Note. CFI = Comparative Fit Index, TLI = Tucker-Lewis Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, M1 = Hypothesized Model, M2 = Alternative Model.

The chi square, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error approximation (RMSEA), and standardized root mean square residual (SRMR) were employed to assess model fit. A non-significant chi-square value, CFI and TLI values greater than 0.95, and RMSEA and SRMR values closer to zero are all indicative of a well-fitting model. For each indicator, the hypothesized model outperformed the alternative model. Although its chi-square test-statistic was significant, $\chi^2(154) = 176.85, p = .02$, indicating an unacceptable fit between the proposed model and the observed data, the CFI and the TLI yielded values of .98 and .976, respectively, indicating a good fit. The RMSEA and SRMR also provided support for the model, yielding values of .035 and .048, respectively. The reason why the all fit indices except the chi square statistic indicate a good fit may lie in the sample size of the study (220). Kenny (2003) argued that for large models with cases above 200, chi square is almost always significant, suggesting poor fit will occur only when there are trivial differences between the model and the data. A more appropriate fit index may be the CFI, which has

been touted as the fit statistic of choice (Byrne, 1998), and is much greater than the .90 cutoff for good fit in the present study.

All of the measured variables correlated with their respective factors at a strong level. Although none of the six structural paths were statistically significant individually, it should be noted that they were in fact directionally correct (see Table 8).

Table 8 Coefficients of Structural Paths

Structural Path	Raw Estimate	SE	<i>p</i> -Value
PUBWTP - ID	0.10	0.46	0.84
PUBWTP - TIE	1.90	1.91	0.32
PUBWTP - CNFU	-0.61	0.91	0.51
PRIWTP - ID	-0.25	0.28	0.37
PRIWTP - TIE	0.46	1.20	0.69
PRIWTP - CNFU	1.05	0.56	0.06
PUBWTP - PRIWTP*	10.23	2.77	0.00
ID - CNFU*	0.07	0.04	0.08
TIE - ID*	0.12	0.02	0.00
TIE - CNFU*	0.02	0.01	0.05

Note. PUBWTP = Willingness to Pay (As a Percent) in Public Condition, PRIWTP = Willingness to Pay (As a Percent) in Private Condition, ID = Group Identification, TIE = Tie-Strength, CNFU = Consumer Need for Uniqueness, * = Paths not hypothesized.

For example, a high group identification score leads to a greater willingness to pay in the presence of a reference group but has the opposite effect in private conditions, although neither is statistically significant. For example, these results demonstrate that even though the overall fit of the model to the data appears acceptable, the hypothesized structural paths were not supported by the data.

5.3 Hypothesis Testing

Wald tests of parameter constraints were used to test the proposed hypotheses of the study. Consumption visibility, group identification, and tie strength all reached significance while consumer need for uniqueness was found to be marginally significant (Table 9).

Table 9 Wald Test of Parameter Constraints for Latent Variables

Variable	Value	df	<i>p</i> -Value
Public Conspicuousness	70.89	3	0.00
Group Identification	4.98	1	0.03
Tie Strength	29.52	1	0.00
Need for Uniqueness	2.97	1	0.09

To test the effects of product visibility, willingness to pay a premium for products in the public scenarios were compared to willingness to pay a premium for products in the private scenarios, with all other paths being constraint and excluded from the analysis. To test the effects of group identification, the relationship between group identification and willingness to pay a premium was added while the other two remained restricted. The difference between the value of the test with and without group identification is the value in Table 9. The same process was repeated for tie strength and consumer need for uniqueness.

Hypothesis 1. The first hypothesis states that people will be more willing to pay a premium for the group norm if it is a public product rather than a private product. A Wald test of parameter constraints was performed comparing the willingness to pay for the

product pairings in the public condition to the same products in the private condition. The test was found to be statistically significant, $p = .00$, indicating that in the public condition, participants were more willing to pay a premium for the product brand that their group endorsed. Though all products were tested jointly, mean values (previously mentioned in Table 2) were significantly higher in the public condition than the private condition. This result gives support to the first hypothesis which states that people will be more willing to pay a premium for the group norm if it is a public product rather than a private product.

Hypothesis 2. The second hypothesis states that group identification positively affects willingness to pay a premium for group norms in the public condition but not in the private condition. We found that increasing group identification by one unit increased the premium by 0.10% in the case of a public product, when averaged across respondents, and decreased the premium by 0.25% on average in the case of a private product. A Wald test of parameter constraints was conducted to compare the effect of group identification on willingness to pay premiums in public conditions to the effect of group identification on willingness to pay premiums in private conditions. The result was significant, $p = .03$. This result gives support to the second hypothesis and suggests that the effect of group identification is significant in the public context but not in the private context.

Hypothesis 3. The third hypothesis states that tie strength positively affects willingness to pay a premium for group norms in the public condition but not in the private condition. As previously mentioned, tie strength was defined as the number of close friends a

participant had in their group divided by the total number of group members. An increase in tie strength can occur by either the addition of strong ties or the subtraction of weak ties. For example, an individual in a group of ten members with four strong ties will have a tie strength ratio of 0.4. To increase tie strength to 0.5, the individual would either have to convert one of his weak ties to a strong tie or remove two weak ties from the group altogether. We found that increasing tie strength by 0.1 units increased the premium by 0.19% in the case of a public product, when averaged across respondents, and by 0.05% on average in the case of a private product. A Wald test of parameter constraints was conducted to compare the effect of tie strength on willingness to pay premiums in public conditions to the effect of tie strength on willingness to pay premiums in private conditions. The result was significant, $p = .00$, indicating that individuals with strong ties were more likely to pay a premium for the group norm as those with weak ties when product consumption is public. This result gives support to the third hypothesis and suggests that the effect of tie strength is significant in the public context but not in the private context.

Hypothesis 4. The fourth hypothesis states that a consumer's need for uniqueness negatively affects their willingness to pay for group norms in the public condition but not in the private condition. We found that increasing consumer need for uniqueness by one unit decreased the premium by 0.61% in the case of a public product, when averaged across respondents, and increased the premium by 1.05% on average in the case of a private product. A Wald test of parameter constraints was conducted to compare the effect of need for uniqueness on willingness to pay premiums in public conditions to the

effect of need for uniqueness on willingness to on pay premiums in private conditions. The test was marginally significant effect, $p = .09$, indicating that a lower need for uniqueness may increase willingness to pay a premium for the group norm in the presence of the reference group. This result suggests that the effect of need for uniqueness is only marginally different from zero in the public context, providing little support for the last hypothesis.

Reagans (2005) argued that group identification increases the tendency for group members to develop strong ties amongst similar people. Along with three of the four hypotheses reaching statistical significance, the path between tie strength and group identification was also significant, $p = .00$, giving some support to Reagans' notion. Furthermore, consumer need for uniqueness was positively related to both tie strength and group identification at marginal levels ($p = .05$ and $p = .08$, respectively), suggesting that individuals with high needs for uniqueness may identify and develop strong ties with group members more than individuals with low needs for uniqueness.

VI DISCUSSION

The present study examined the effects of consumption visibility, group identification, tie strength, and consumer need for uniqueness on willingness to pay a premium for reference group norms. Based on previous research, individuals were hypothesized to be more influenced if they identified with the reference group (Terry & Hogg, 1996; Astrom & Rise, 2000), had strong ties with other group members (Brown & Reingen, 1987; Wirtz & Chew, 2002; Levin & Cross, 2004), expressed a low need for uniqueness (Snyder & Fromkin, 1977; Tian, Bearden, & Hunter, 2001; Ruvio, 2008), and purchased the product in the presence of the group (Bourne, 1957; Bearden & Etzel, 1982). The purpose of the study was to investigate whether the relationships between these aforementioned factors still maintained their effect if reference group influence was operationally defined as willingness to pay a premium for group endorsed brands. The study found that consumption visibility, group identification, and tie strength preserved its direct link when individuals were asked whether they would pay extra to adhere to group norms. Consumer need for uniqueness, on the other hand, was only marginally affected consumers' willingness to pay a premium and did not reach statistical significance in the data analysis portion of the study.

6.1 Theoretical Implications

In a general sense, we can conclude that reference group influence is strong enough to cause consumers to pay premiums for group norms. The results of the study indicate that

based on an individual's tie strength and group identification, along with the presence or absence of their reference group at the point of purchase, they would either pay more or less for a group-endorsed brand over alternative brand even if they had no personal preference towards either brand.

We can also conclude that willingness to pay a premium for group norms is yet another way to measure reference group influence. Previous reference group studies have predominately asked participants to choose between two options with no consequence (e.g., Astrom & Rise, 2001). One of the main purposes of using willingness to pay as a dependent variable was to quantify the strength of exactly how strong reference group influence is in consumer settings, where the obvious consequence of choosing the group norm is paying more than the alternative.

Based on the results of this study, an individual's need for uniqueness is not enough alone to cause the individual to pay more. One possible explanation could be that need for uniqueness acts as a precursor to influencing behaviour only when an individual faces no negative effects from adhering. For example, you may take your own need for uniqueness when purchasing a pair of new shoes into consideration only if it is not significantly more expensive than another pair you were considering. On the other hand, the presence of the group at the point of purchase, combined with the amount of group identification and strong ties you have with the group, can elicit a strong enough reference group influence that may cause the individual to pay a premium for the group norm.

6.2 Managerial Implications

From a managerial standpoint, it is inferred that the conspicuousness of a product alone may be enough for an influence to occur. In other words, managers may be able to charge premiums for popular product brands whose purchase would be made in the presence of a group (e.g., purchasing a glass of wine at a restaurant) but not in the absence of the group (e.g., buying wine at a grocery store). This is also true for group identification and tie strength, which is similar to what has been found in previous studies (Childers & Rao, 1992; Luo, 1995), provided that the reference group is not absent during the time of consumption. This finding is parallel to the logic that different groups may elicit different types of influence. For example, the presence of an immediate family may bring different levels of influence than the presence of numerous co-workers, as an individual may report different levels of group identity and tie strength between these groups.

While the direct effect of consumer need for uniqueness on willingness to pay a premium for the group norm was marginally significant, a manager must be wary of using only marginally significant results in any business strategy. The effects of this relationship may not be large enough to translate into real world results. Therefore, products that are tailored express individuality should not be subjected to large premiums. For example, a leopard-print iPod should not be significantly more expensive than a generic solid black iPod as a consumer will not be willing to pay extra for the unique theme, even if they have a high need for uniqueness.

6.3 Limitations

The study has a few limitations that are not uncommon to see with any type of survey research. First, survey research does not translate to exact behaviour in social settings. Participants were given scenario questions and were asked to imagine that they were in that situation. They did not use their own money and they could not see the products, nor was their reference group actually present. Moreover, most individuals like to believe that they are not influenced by others and will overestimate their need for uniqueness while underestimating their willingness to pay. While obtaining observed behaviour through experimentation would have been optimal and prevented against any respondent bias, it was not realistic, given the time constraints of the research, and therefore self-reported data was utilized.

Second, willingness to pay was measured by a scale created by the author and was not an established one from literature. While this was out of necessity (as no other currently available scales fit the needs of the study), there may be questions surrounding the validity and reliability of the scale. This may be further compounded by the sample of varsity athletes, as reference group influence research usually looks at groups in the workplace (Brown et al., 1986). While using a different sample helps further extend reference group outside of organizational settings, it may help explain why the results in the present study are somewhat different to those found in previous studies.

Finally, the study does have a limited scope as only three types of disposable products were used. Other product categories may elicit different responses. For example, Grewal and colleagues (2004) found that consumer durables generate more interest and excitement, causing consumers to spend more time thinking about the purchase: for example, the effect of consumption visibility may be negated if the product in question was an automobile rather than a sports drink. On the same note, other factors like tie strength and group identification may play a larger role in the context of influencing the purchase of consumer durables, however this is just speculation.

6.4 Future Research

Suggestions for future research include the examination of willingness to pay a premium on consumer durables to determine whether need for uniqueness would play a significant role on influence. The influence of a group makes on the purchase of a drink and on the purchase of a computer would most likely be different. The study similar to the present study could be conducted with the exception of using consumer durables as the products being tested.

While an experimental study using observed data may be time-consuming, it would be interesting to see how differently individuals behave compared to their self-reported data. An observational study could be designed mimicking purchase scenarios of different products while using fellow group members as confederates. In the scenario, the participant would view his group members selecting a more expensive brand over a

cheaper yet similar alternative, much like the scenario questions created for the present study. The participant would then choose between paying a premium for the group norm and settling for the cheaper alternative. Another scenario replicating a private purchase would also take place, with the absence of fellow group members this time. The results of this study would help to confirm the results of the present study and to indicate whether self-reported data is adequate when investigating reference group influence.

A more general study using more than one reference group (e.g., family, friends, and co-workers) could be conducted to confirm whether different groups are able to elicit different responses in willingness to pay, outside of the group identification and tie strength factors. The present study could be replicated with an added group, perhaps student peers outside of the varsity team, to compare whether the two groups facilitate different reference group influences which in turn affect their willingness to pay premiums for group endorsed brands differently.

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APPENDICES

Appendix 1 Consent Form

Varsity Sports Survey

You are asked to participate in a research study conducted by Keeshan Selvakumar, Dr. Sunghwan Yi, and Dr. Paul Anglin, from the Department of Marketing at the University of Guelph.

If you have any questions or concerns about the research, please feel free to contact Keeshan Selvakumar at kselvaku@uoguelph.ca.

PURPOSE OF THE STUDY

The purpose of this study is to examine the purchasing behaviour of varsity athletes. More specifically, we are interested in the effects of team culture and group dynamics have on buying products.

PROCEDURES

This survey consists of both multiple choice and short answer questions. It should take approximately ten minutes to complete.

POTENTIAL RISKS AND DISCOMFORTS

There are no reasonably foreseeable risks, discomforts, or inconveniences involved in participating in this study.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

There are no real benefits to participants, though the results of this study may contribute to literature dealing with reference group influence, group identification, tie-strength, and group similarity.

CONFIDENTIALITY

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

If you wish to proceed and begin the survey, please press the NEXT button.

[Load Unfinished Survey](#)

[Next >>](#)

[Exit and Clear Survey](#)

Appendix 2 Sample Willingness to Pay Item

Varsity Sports Survey

0% 100%

PART A

Please imagine the following scenario:

You are at a grocery store with your teammates a couple of hours before a game against a rival team. You went in looking for an energy bar to keep you fuelled during the game later. There are only two brands of energy bars available, Centrum and Promax. Even though most of your teammates are picking up Centrum, **you hold no personal preference towards either brand.**

[Exit and Clear Survey]

Varsity Sports Survey

0% 100%

PART A

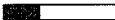
*** Which brand of energy bar would you buy given the following pricing scenarios? Please remember that most of your teammates prefer Centrum.**

	PROMAX	NOT SURE	CENTRUM
A bar of Centrum is \$5.00 and a bar of Promax is \$3.50. Which would you most likely pick?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A bar of Centrum is \$5.00 and a bar of Promax is \$3.75. Which would you most likely pick?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A bar of Centrum is \$5.00 and a bar of Promax is \$4.50. Which would you most likely pick?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A bar of Centrum is \$5.00 and a bar of Promax is \$4.75. Which would you most likely pick?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[Exit and Clear Survey]

Appendix 3 Group Identification Items

Varsity Sports Survey

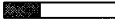
0%  100%

PART G

Please answer the following questions about the varsity sports team you are a part of.

[Resume Later](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey

0%  100%

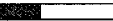
PART G

***Please answer as quickly as possible. Do not puzzle over and we are looking for your first impression.**

	Not At All						A Great Deal
How much do you identify with your team?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel like you belong in your team?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel that you are really a part of your team?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

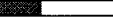
Appendix 4 Tie Strength Items

Varsity Sports Survey
0%  100%

PART H

The following questions refer to the varsity sports team you are a part of and your social network.

[Resume Later](#) [Next >>](#) [\[Exit and Clear Survey\]](#)


Varsity Sports Survey
0%  100%

PART H

¹How many members are there on your sports team?

Only numbers may be entered in this field

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)


Varsity Sports Survey
0%  100%

PART H

²How many teammates do you consider close friends?

Only numbers may be entered in this field

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0%  100%

PART H

³How many close friends do you have who are not members of the team?

Only numbers may be entered in this field

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Appendix 5 Need for Uniqueness Items

Varsity Sports Survey
 0%  100%

PART I

*Rate how well each statement describes you from 1 (strongly disagree) to 5 (strongly agree).

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I actively seek to develop my personal uniqueness by buying special products or brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having an eye for products that are interesting and unusual assists me in establishing a distinctive image.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The products and brands that I like best are the ones that express my individuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When it comes to the products I buy and the situations in which I use them, I have often broken customs and rules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have often violated the understood rules of my social group regarding what to buy or own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have often gone against the understood rules of my social group regarding when and how certain products are properly used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often try to avoid products or brands that I know are bought by the general population.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a rule, I dislike products or brands that are customarily purchased by everyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The more commonplace a product or brand is among the general population, the less interested I am in buying it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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[\[Exit and Clear Survey\]](#)

Appendix 6 Demographic Measures

Varsity Sports Survey
0% 100%

PART J

This last section relates to demographic information about yourself.

[Resume Later](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0% 100%

PART J

What varsity team are you a part of?

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0% 100%

PART J

How long have you been a member of this team?

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0% 100%

PART J

What faculty of the school are you a part of?
choose one of the following answers

- College of Arts
- College of Biological Science
- College of Management & Economics
- College of Physical & Engineering Science
- College of Social & Applied Human Sciences
- Ontario Agricultural College
- Ontario Veterinary College
- Other
- No answer

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0% 100%

PART J

What gender are you?

- Female
- Male

[Resume Later](#) [<< Previous](#) [Next >>](#) [\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0%  100%

PART J
What school year are you in?

Only numbers may be entered in this field

[Resume Later](#)

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[\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0%  100%

PART J
What is your hometown?

[Resume Later](#)

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[\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0%  100%

PART J
How would you describe the size of your high school?
Check any that apply

- Small
- Medium
- Large

[Resume Later](#)

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[\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0%  100%


PART J
How many hours per week do you meet with your team for team-related purpose (e.g., practice, games)?

Only numbers may be entered in this field

[Resume Later](#)

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[\[Exit and Clear Survey\]](#)

Varsity Sports Survey
0%  100%

PART J
How many hours per week do you meet with your team for non-team-related purpose (e.g., hanging out, going to the bar)?

Only numbers may be entered in this field

[Resume Later](#)

[<< Previous](#) [Submit](#)

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