# A Case of Beer: A study to determine if the visual design elements of Ontario craft beer packaging communicate their unique flavour profiles

By

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***Abstract***

The North American craft beer industry is expanding at a rapid pace. Revenue growth has been at, or near, the double-digit mark since 2009, while the overall beer industry's sales have remained stagnant. The *Ontario Craft Brewers Association* (OCB) represents over 35 craft breweries across the province of Ontario, declaring the slogan: "Taste. The difference." This research project examines whether or not the unique flavour profiles that differentiate craft beers from their competitors are effectively communicated through the products' packaging, as decoded by target consumers. The current literature on branding, graphic design, and semiotics in the food and beverage industry has not adequately addressed craft beer packaging in this context. This project seeks to address the aspects of visual communication in packaging (typography, colour, and imagery) and their effectiveness in connecting to the flavours of Ontario craft beers. Through data gathered by questionnaires distributed to a convenience sample of consumers, this research provides insight to graphic designers and craft beer brand champions as to whether or not their main competitive advantage is effectively communicated. Ultimately, consumers may be able to taste the difference, but this research determines whether or not they are able to see the difference.

## *I. Introduction*

This research project examines whether or not the unique flavour profiles, that differentiate craft beers from their competitors, are communicated effectively to target consumers through the products' packaging.

The *Ontario Craft Brewers Association* (representing over 35 craft breweries across the province of Ontario) states that: "...it's taste that we're obsessed with, and taste that distinguishes us from other beers, so naturally our slogan is *Taste. The difference*" (Ontario Craft Brewers Association, 2013a).

Furthermore, "it's clear that graphic design, typography, and beer have never been more closely linked than they are now as the era of craft brews takes off" (Mays, 2014, par.2). The rapid growth in the craft beer market in the last five years supports the notion that consumers can taste the difference. This study will aim to determine whether or not consumers can *see* the differences in flavour represented through the visual design of printed packaging.

### *A. Background*

The North American craft beer industry is expanding at a rapid pace. Revenue growth has been at, or near, the double-digit mark since 2009, while overall beer industry sales have remained stagnant (Koustas, 2012). The craft beer segment continues to grow between 20%-30% each year, proving to be fastest area of expansion within the *Liquor Control Board of Ontario's* (*LCBO*) beer category (Ontario Craft Brewers Association, 2014).

"Awareness of Ontario Craft Brewers increased substantially driven by several years of marketing efforts, brewery growth and consumer interest shifts" (Ontario Craft Brewers Association, 2014, p.2).

The *Ontario Craft Brewers Association* (2013b) defines Ontario craft brewers as small (maximum size of 400,000 hectolitres of total beer production per year), independent (locally-owned and not significantly controlled by a larger company), and traditional (promising to brew innovative beers). They typically produce beer in small batches with unique and experimental flavours. Craft breweries' key competitive advantage is small batch brewing resulting in unique tasting notes and creative flavour profiles. As of October 2014, craft breweries made up approximately 3.8% of the market share in Canada (Heaps, 2014).

Furthermore, craft brewing connoisseur and author, Stephen Beaumont, notes that global craft beer industry is growing at an expeditious rate and there is little to no saturation within individual markets (Beaumont, 2014). For example, as of October 2014 there were approximately 350 breweries in Canada, 500 breweries in France, 1100 breweries in the United Kingdom, and over 3000 breweries in the United States (Beaumont, 2014). There are currently over 60 nations with active beer cultures, including those demonstrating rapid growth such as in The Netherlands where roughly one new brewery opens each week (Beaumont, 2014). Brazil is leading South America in craft beer production, using Amazonian woods and fruits to give their beers unique flavour profiles. Indigenous hops are used in Australia and New Zealand to infuse local flavours into beer. Although

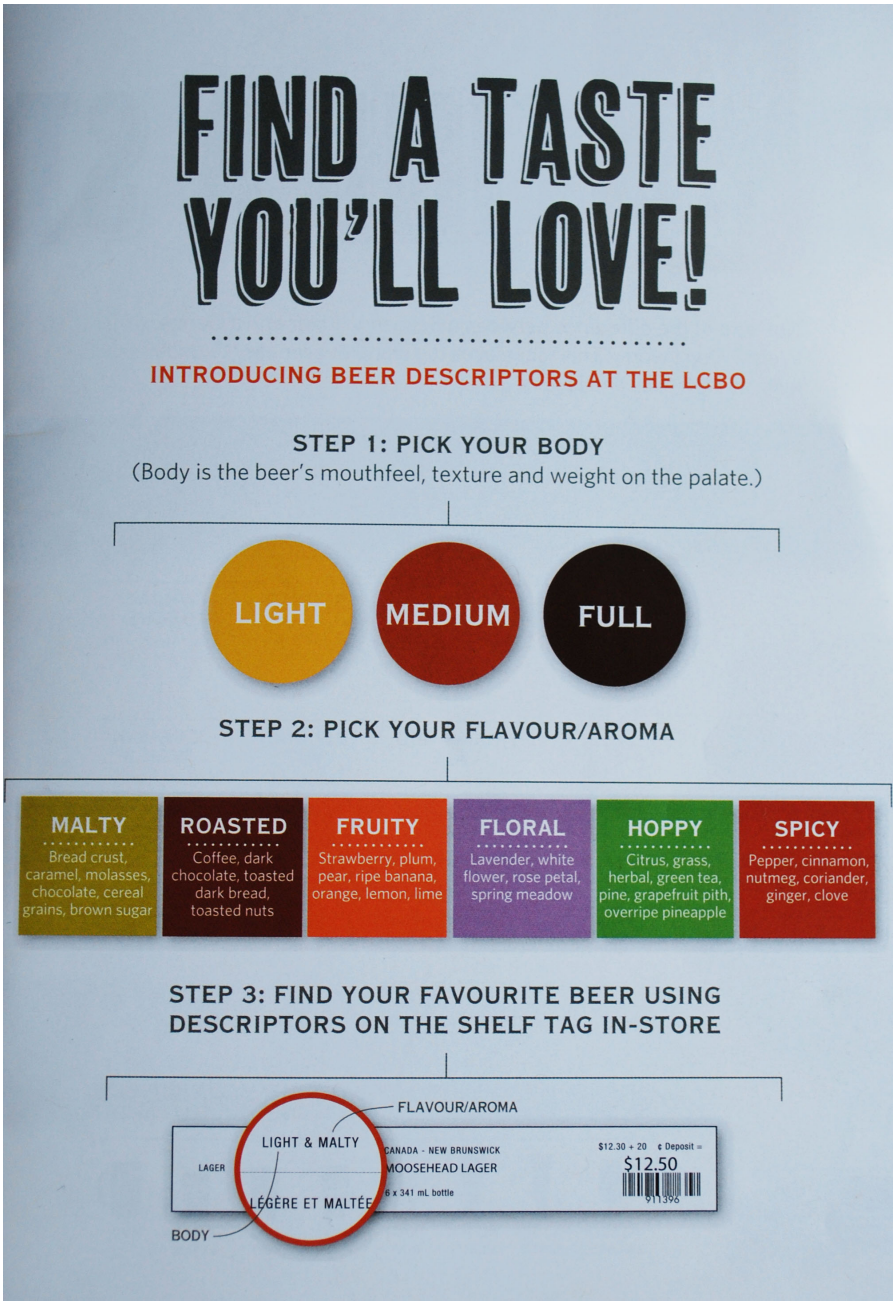
Japan's beer market is relatively mature, brewers are experimenting with unique ingredients such as sake yeast and different strains of rice for interesting flavours. Italian brewers have experimented with storing beer in wine barrels to add increased flavour complexity (Beaumont, 2014). In Ontario, craft brewers are continuously keeping abreast of "new flavours and styles utilizing fruits, spices, coffee, maple syrup, etc… They are beginning to experiment with various aging techniques utilizing oak or other aging vessels to create innovative flavours and products" (Ontario Craft Brewers Association, 2014, p.2). There is a clear desire and demand for unique beer products on a local and global scale.

Retailers (namely *The Beer Store* and *LCBO* in Ontario) are starting to embrace the craft beer trend and purchasing product to satisfy the expanded palates of their customers. *The Beer Store* (which is a private retailer run by three major international breweries) opened up ownership to Ontario craft breweries in January 2015 (Benzie, 2015). *The Beer Store* has traditionally made it difficult for small craft brewers in Ontario to sell their products within *The Beer Store* and this new initiative is a way on to store shelves for smaller breweries. Breweries with sales of less than five million litres per year will pay $100 for a preferred share in the company, whereas breweries producing more than five million litres per year will pay $1,000. All breweries will be charged the same listing fees as the three companies who own the retailer: Molson, Labatt, and Sleeman (Benzie, 2015). Lack of distribution options for small brewers and the lack of shelf space made available to craft breweries, were two recurring themes at the 2014 Ontario Craft Brewers conference (Heaps, 2014). Although the change to open up ownership of *The Beer Store* to craft

brewers was driven, in part, by Ontario Premier Kathleen Wynne threats to step in if the retailer did not provide greater access to small brewers, it appears as though an abundant supply of unique craft beers, rooted in creating unique flavour profiles for consumers, has created demand for unconventional beer products that retailers are now making available to customers. This will result in fewer obstacles than ever before for small brewers to obtain shelf space within Ontario beer retailers.

In continuing with the trend to offer greater craft beer options, the *LCBO* has introduced beer descriptors on their in-store shelf tags and they have provided supplementary printed material to educate customers on various flavour profiles. In the short printed publication released by the *LCBO* entitled *Beer World: Tap into the Adventure*, the inside front cover sets the stage for the revolution in craft brewing: "Like wine or whisky, beer is complex. It ranges from light to full, malty to spicy, and everything in between. Knowing about beer styles and tastes is the first step to choosing a beer that you'll love. So enjoy the variety and tap into the adventure!" (*Beer world: Tap into the adventure*, n.d., p.1). Customers are then presented with a decision tree, encouraging them to use a three-step system: select the body (mouthfeel, texture, weight), select the flavour/aroma (malty, roasted, fruity, floral, hoppy, spicy), and the retailer then encourages consumers to find their favourite beer using the body and flavour/aroma descriptors on the in-store shelf tag (i.e. light and malty) (*Beer world: Tap into the adventure*, n.d.).

Figure 1: Beer Decision Tree and In-Store Shelf Tag Example

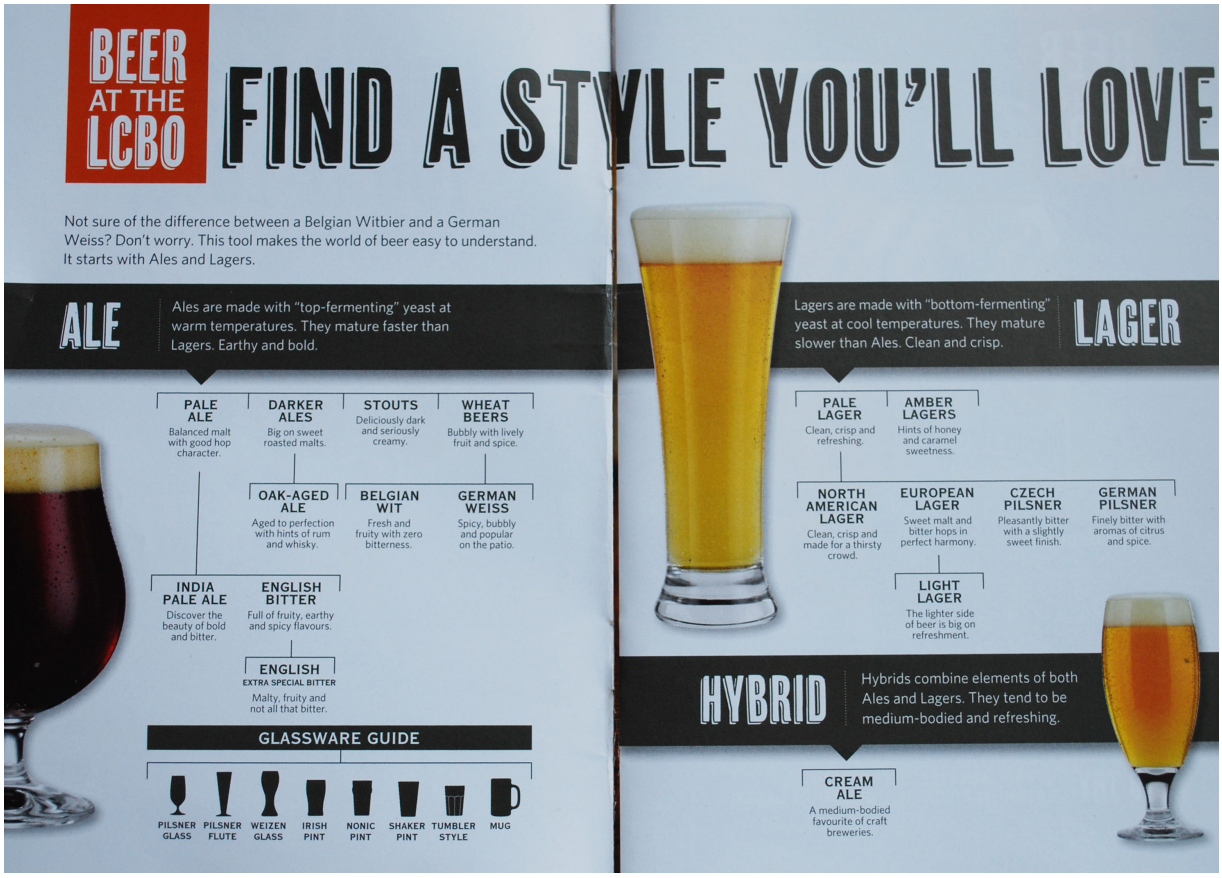



(*Beer world: Tap into the adventure*, n.d., p.2)

The *LCBO* publication, *Beer World: Tap into the Adventure*, also reveals an inherent problem with the ability for the beginner or novice beer drinkers to understand exactly

what types of flavours they are looking for. Beer can be subdivided into two basic categories (ale and lager), which is a direct result of the brewing yeast, however the selection process from one style of beer to the next can be confusing and convoluted. Consumers may ask, "What is the difference between a English Bitter and a German Weiss?" Both are in the ale category but the flavour characteristics couldn't be more different. The *LCBO* characterizes an English Bitter by "fruity, earthy, and spicy flavours", where as they characterize a German Wiess as "spicy, bubbly, and popular on the patio" (*Beer world: Tap into the adventure*, n.d., p.3).

Figure 2: Beer Style Flow Chart




(*Beer world: Tap into the adventure*, n.d., p.3-4)

Furthermore, tastes can vary widely, even within the same style of beer. For example, one India Pale Ale (IPA) can have a completely different flavour profile from that of another IPA. *Lake of Bay Brewing Company* describes its *10 Point IPA* as "primarily citrus (grapefruit) with a subtle pine note. After the first scent, the malt aromatics come through – slight hint of toffee with some mild aromas of hay and straw. The body of the beer is roasted malts, dark toffee, a gentle molasses flavour and a touch of black licorice" (Lake of Bays Brewing Company, 2013). In contrast, *Flying Monkeys Craft Brewery* describes their *Smashbomb IPA* as having "grapefruit, lime, apricot melon, lychee, pineapple, mango, papaya and other tropical fruit flavours and aromas" (Flying Monkeys Craft Brewery, 2013). From hay and toffee to mango and papaya, it's often difficult to understand the taste profiles of a specific beer even within the same style of beer. Without having an education in beer making, it is very challenging for the average consumer to make an informed decision about flavour. Therefore, researching whether or not there are consistent visual cues for certain flavours and whether or not consumers understand these visual cues, will help determine if craft beer packaging effectively communicates important flavour information to consumers.

### *B. Theoretical Context – Semiotic Theory*

In this study, visual communication will be examined through a semiotic lens (including typography, imagery, and colour). The semiotic tradition is most relevant to this topic because it explores sign systems, meanings, and the overall medium to achieve common understanding (therefore clear communication) between individuals (Craig & Muller,

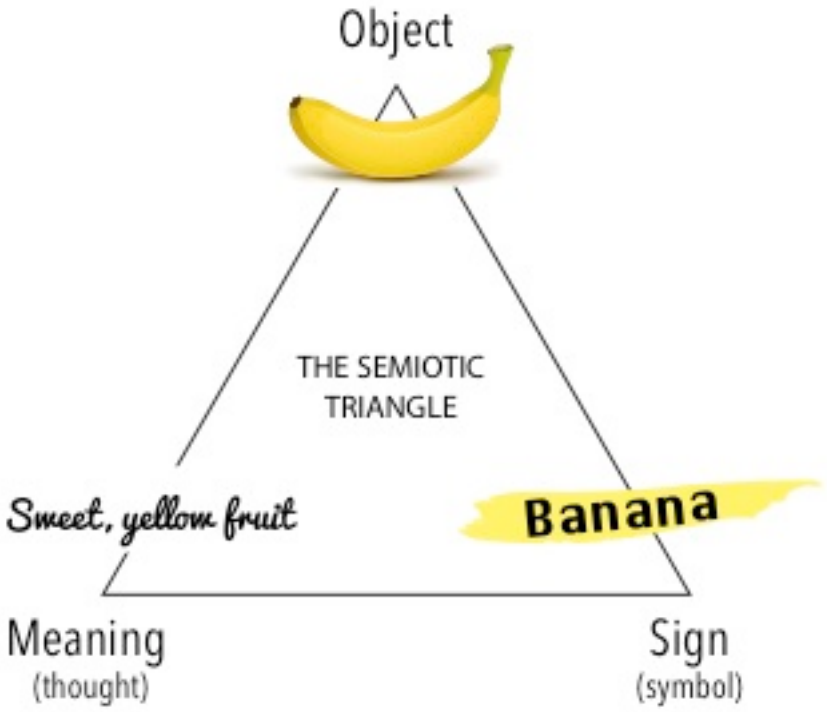
2007). Although the field of semiotics includes words and language, the focus will remain on non-linguistic, visual semiotics.

Semiotician Marcel Danesi simplified the study of semiotics into one question: “what does X mean?” (1994). In this question, “X” can represent anything and the role of a semiotician is to determine “X” in relation to “Y”. The study of semiotics has become "anything that is used, invented or adopted by human beings to produce meaning" (Danesi, 1994, p.4). Symbols are abstract carriers of information; therefore the receiver has to have knowledge of a symbol’s meaning and the relationship between the perceptual object and concept to make sense of it. Symbolic references have an inherent “code” that the receiver must learn before meaning is transferred. The term “semiosis” is the process by which meaning is achieved through signs (Haverkamp, 2012). In contrast to symbolic references, iconic references have concrete associations. There is a similarity between the icon and it’s meaning – the iconic image is a sign that literally resembles what the icon represents (Haverkamp, 2012). An example of a symbolic reference is the alphabet. The receiver has to learn the meaning of the symbols before relevance and understanding can be obtained. Conversely, an example of an iconic reference would be traditional male and female washroom signs whereby the image symbolically resembles what it is communicating.

The field of semantics addresses the relationship between signs and their meanings. Likewise, the “semiotic triangle” is a framework through which signs and meaning can be understood, which Ogden & Richards developed in 1923. The semiotic triangle is made

up of three components: the object, the meaning (of the object), and the sign (Amaglobeli, n.d.). An object obtains meaning that is expressed as a sign. For example, a banana (object) obtains meaning (sweet, yellow fruit) that is expressed as a sign (the word "banana").

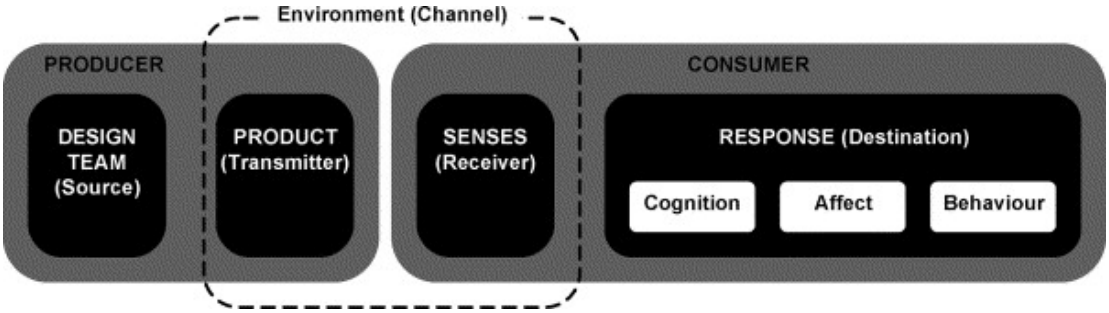
Figure 3: The Semiotic Triangle




Sign systems can address communication issues to allow important information to be understood by the majority of a society (a stop sign's shape, paired with its colour is a universally understood symbol in North America, for example). More complex ideas can also be communicated through signs, which is the case when communicating beer flavour profiles to consumers.

The figure below from Clarkson, Crilly, and Moultrie was constructed for their study about consumer response to the visual domain in product design. As shown in Figure 4, the traditional communication model (sender, channel, and receiver) has been modified to reflect the sociopsychological elements of consumer behaviour in response to packaging design. Packaging design can and does influence consumers to make spontaneous purchase decisions in-store, and the semiotic tradition can assist in communicating specific product information.

Figure 4: Semiotic Communication




(Clarkson, et al., 2004)

The branch of semiotics referred to as “design semiotics” or “product semiotics” examines the use of signs in product design, which is the primary framework for this research. Furthermore, pragmatics will also be examined, which studies the relationship between a sign and the human (user) who interacts with that sign. Clarity, appearance, usability, and ergonomics are all important pragmatic forms for design (Haverkamp, 2012).

## *II. Literature Review*

### *A. Introduction*

Current studies about packaging design and communication in the food and beverage industry have been examined to understand relevant research in this field, as well as to discover gaps in the research. For this literature review, the research has been divided into three subtopics: Packaging Design to Differentiate and Manage Brand Identity, Consumer Behaviour in Response to Packaging Design, and the Impact of Multisensory Elements on Informed Packaging Design.

### *B. Packaging Design to Differentiate and Manage Brand Identity*

It is important to begin by discussing the meaning of the term "brand". Zukauskas and Kupryte (2003) describe a brand as "not only a written or symbolic sign, [it] is a complex formation of various elements (physical, emotional, esthetical, symbolical, etc.) which consumers perceive as the added value" (Zukauskas & Kupryte, 2003, p.276). A brand has also been said to reflect the "promise" a company makes to customers about its product or service. A brand is only as strong as its ability to live up to what it promises; therefore brand perception ultimately lives in the minds of consumers. Haverkamp (2012) expands in this notion, emphasizing the importance of the visual identity of a brand across a variety of digital and physical channels, such as the Internet, radio, print media, and packaging. Strong visual brand identity enables organizations to communicate

consistent corporate philosophies and begin to build strong rapport with loyal customers. Logos are an important component of a brand's visual identity that help consumers quickly identify a company, product, or idea. Haverkamp (2012) suggests that it is "important to speak directly to the customer, to place him or her in a positive mood, and to present the image which distinguishes the manufacturer and the product" (p.252). Furthermore, Haverkamp (2012) reveals that once a positive feeling takes place with an established brand, further positive associations are possible, even if the future products are not up to this same standard, as determined by the individual. A brand's value increases as positive customer experiences with the brand remain consistent over time and effective brand identity design is a major contributor to future positive customer evaluations of the product. Researchers Zukauskas and Kupryte (2003) have written an article about building a competitive brand through design, specifically examining the Lithuanian beer market. They explain that graphic elements, such as colour, logotypes, and labels help maintain consistent visual identity, which builds strong brand recognition. These elements can be changed over time, but this should be done infrequently and very carefully. They have also noted that communication through beer packaging is important, however it cannot make up for poor quality. So although packaging design will help build a brand, it won't be the sole factor that helps to maintain that brand over a long period of time.

In a study about the role of packaging in the positioning of orange juice brands, Ampuero and Vila (2007) focused their research in the area of packaging design. There is growing insight into the ability of packaging design to help differentiate a product from its competitors, build strong brand identity, and maintain a competitive edge in the beverage

industry with little additional cost to the brand owners. This notion is amplified by decreased marketing budgets and consumers' preference for making a significant number of purchasing decisions at the point of sale. This is especially true for perishable goods. The study found that well-designed, simple packaging can act as an effective persuasive "silent salesman" to facilitate a purchasing decision (Ampuero & Vila, 2007). As discussed in Ampuero and Vila's (2007) research, the role of packaging is to contain, protect, preserve, and transport a product, and it is also a means to communicate a brand's message to be decoded by the customer. Ampeuro and Villa's two-part study involved eight expert interviews, as well as an experiment with the eight experts and 46 consumers. The participants examined four graphic elements on orange juice packaging, including colour, shape, typography, and image. They found that each orange juice positioning strategy was associated with its own set of agreed upon graphic variables to communicate the brand message. For example, they found that "accessible, reasonably priced orange juices are associated with large and roman letters, curved lines, figures with curved outlines, symmetrical compositions, and the presence of illustrations" (Ampuero & Vila, 2007, p.25). This was in contrast to "prestigious orange juices", for which dark colours with reverse-coloured, condensed italicized text appearing in lowercase was expected. The researchers emphasized the importance of pre-testing packaging design to ensure that target consumers decode the correct messages.

In a similar branding and identity management study, researchers conducted 620 face-to-face interviews at Australian Rules football matches to examine beer-buying tendencies in Australia. Pettigrew (2002) noted that "a recent study reported that Australian beer drinkers 'employ beer consumption as an effective form of [personal] image

management'" (Pettigrew, 2002, p.117). She also noted "…they demonstrated a need to monitor other's reactions to their choice of beer brand", which makes choosing the "right" brand a reflection on one's self (Pettigrew, 2002, p.117). Furthermore, in a study regarding regularities in buying behaviour and brand performance concerning Australian beer brands, Dawes (2007) found that when there is a great deal of competition in the marketplace (whether beer or otherwise), consumers are typically not attached to one specific brand, in accordance with the "repertoire buying" theory. This theory states that most buyers purchase a variety of brands within a given category, versus maintaining loyalty to one brand. This insight is important because individuals who appear to manage their personal image based on the beer they buy (Australian beer drinkers) and would therefore be ideal candidates to demonstrate loyalty to one brand, are not just buying one specific brand. This is great news for breweries because there is an opportunity to attract new business with the proper marketing activity, including point-of-sale packaging design.

In a related study by Wang (2013) regarding the influence of visual packaging on perceived food product quality, value and brand preference, he determined that packaging design factors (such as colour, typeface, logo, graphics, and size) form consumers' perceptions regarding brand preference. Using a seven-point Likert-scale, Wang surveyed 315 undergraduate business students in a Taiwanese university to determine how packaging design affects consumers' attitudes towards the quality and value of the contents contained within, as well as overall brand preference. Wang (2013) found that the visual elements of packaging design directly influence consumers' perceived quality of the food product and they also affect their brand preference. The visual design of the

packaging is therefore an important predictor of the evaluation of the contents within, as determined by the consumer. The author suggests that food firms must ensure that visual packaging design is at the core of their product development because it plays such an important role in consumer brand perception.

### *C. Consumer Behaviour in Response to Packaging Design*

In her book, *100 Things Every Designer Needs to Know About People*, psychologist for the design industry, Dr. Susan M. Weinschenk (2011) identifies several important considerations relating to behavioural response to packaging design. First, human brains cannot resist images of food, sex, or danger because these are primal needs that are processed by the "old brain" (or "reptilian brain"), which is the part of the brain most interested in survival. These three themes pique human curiosity and can help captivate attention. Furthermore, people are programmed to like surprises (Weinschenk, 2011). It has been shown that human brains not only enjoy surprises, but they crave the unexpected. Providing something different, whether on a website, billboard, or through packaging, is a way to engage the human brain to garner attention. Novel design execution can actually increase pleasure because human brains enjoy surprises (Weinschenk, 2011). Furthermore, trust has been shown to be the biggest predictor of happiness and consumers use the look and feel of designs as the first indicator of trust. In a study focusing on participants' rejection or acceptance of a health website being trustworthy, the overwhelming majority of those who found it to be untrustworthy, attributed design factors (such as colour, text size, name, poor navigation, and

unfavourable first impression of the look and feel) as the reasons for lack of trust in the website (Weinschenk, 2011). Design factors have a great deal to do with overall impression, the initial trust-rejection phase, and ultimately a consumers' desire to continue interacting with the brand.

Additionally, Weinschenk suggests that people make decisions unconsciously, even if they think their decision making process is a conscious effort. Factors in unconscious decision making include what others decide to purchase (related to ratings, reviews, and what others have said about the product or service), whether or not the purchase is consistent with one's persona, fear of loss or missing out on an opportunity, as well as other fears, drives, and motivations particular to the individual (Weinschenk, 2011). Based on these factors of unconscious decision making, it is critical that brand owners understand the underlying motivations behind their target consumers' purchase decisions in order to design the product's packaging in a way that taps into these unconscious thought patterns. The author also notes that even though decisions are primarily unconscious in nature, humans still desire rational and logical reasons for their purchases, so brand owners should be prepared to provide these reasons, even though it is the unconscious factors that are the true decision making power (Weinschenk, 2011). Finally, people are innately driven to create categories, as a way to make sense of the world around them. From the point of view of a consumers' response to packaging, the more organized the information, the better people remember that information, and studies show that people remember only four to seven items at once. Bearing this in mind, organizing information as logically as possible for an intended audience will help consumers make

sense of a product quickly and remember important information better (Weinschenk, 2011).

In a study about the influence of wine packaging affecting consumers' purchase decisions, Almanza and Barber (2006) used self-administered questionnaires to 1000 participants (35% response rate) and determined that respondents were indeed likely to make a wine purchasing decision based upon the packaging. Consumers typically prefer to form their own impressions of wine products based on viewing the labels in-store, versus being delivered advice through journals and/or specialized retail locations (Almanza & Barber, 2006). Furthermore, this study found that although it may be assumed that the front label of a wine bottle would be the primary medium for which to convince a consumer to purchase one product over another, it was determined that it is actually the wine label on the back of the bottle that was most critical for making a purchasing decision. The front label typically contains information such as the brand name, country of origin, and vintage. The back label typically contains information such as a description of the wine, style of the wine, and the type of grape used, which were all significant factors in the purchasing decisions of consumers studied. The researchers also noted that although labels are the primary source of customer information and a means for making purchasing decisions, few wine producers take into account the needs and wants of the customer when designing the label. Instead wine producers opt to provide the information that *they* feel is most important. This research demonstrates that the back label cues such as the style and description of the wine are incredibly important elements of the design of the packaging.

Additionally, both Adam and Ali (2014) and Moss (2008) examined the visual elements of milk packaging. Adam and Ali (2014) considered which visual elements most often influence consumers' buying behaviour of packaged milk products. A total sample size of 384 participants were surveyed through the use of questionnaires to examine elements of the package, encompassing both graphic design (colours, typography, and images) and structural design (material, size, and shape), and the influence of each on consumer behaviour. With regard to the aspects of the research most relevant to beer packaging design, specific colours on the packaging were found to have a positive correlation with consumer buying behaviour and the researchers suggest, "firms should focus on effective marketing communications so that consumers could recognize brand through colours and so its correlation with consumer buying behaviour could be increased" (Adam & Ali, 2014, p.155-156). Whether the milk packaging was green, blue, or red, all colours proved to uphold a similar familiar association for consumers purchasing milk products and are positively correlated with consumer buying behaviour. Similarly, researcher Moss (2008) studied New Zealand milk packaging signs in fulfillment for her Master's thesis. Through semiotic theory and by examining milk packaging from the year 1800 to today, she specifically studied the milk packaging perceptions of children. Moss conducted anonymous surveys with 13 ten-year-old children at a school in Wellington, New Zealand and determined that the colour red was the most appealing of the colours for the children and green was least appealing, because it signified sour milk. Furthermore, the colour yellow had the largest range of meanings for the children. Both studies demonstrate that colour can greatly affect (either positively or negatively) consumers' perceptions of a package, thereby affecting their purchasing decisions.

In a study about the influence of yogurt packaging design affecting the taste impression of the product, Becker, Rompay, Schifferstein, and Galetzka (2010) approached customers in a large German supermarket to participate in a "taste test" of a yogurt product. The participants were shown a 20 second video of a 360-degree rotational view of one of four packaging designs: angular package design with low saturated colours, angular package design with highly saturated colours, rounded package design with low saturated colours, and rounded package design with highly saturated colours (Becker et al., 2010). After watching the video, participants were provided with a yogurt sample to taste, which was identical for all participants. Following the video and taste test, participants were asked to complete a questionnaire on a computer screen that asked questions about taste intensity, product evaluation, and price expectation. The evaluation of taste was based on descriptive terminology, including "sharp", "bitter", and "mild" and high scores indicate a strong taste. The evaluation of the product was measured based on descriptive phrases such as "This is a superior product", "This is a eye-catching product", etc. Participants were also asked to estimate the price of the yogurt (Becker et al., 2010). Furthermore, participants' "sensitivity to design" was assessed, including their ability to recognize design, the importance of design to the individual, and their response towards design. Once all responses were tabulated, two groups were formed: participants with high sensitivity to design and participants with low sensitivity to design (Becker et al., 2010). There was a total sample of 151 participants representing a fairly equal distribution of male and female participants (74 male and 77 female) with a mean age of 30.7 years. The authors of the study determined that package colour intensity has a profound affect on perceived taste and even subtle colour manipulations can have a

significant impact, outweighing such cues as price and overall brand identity. They also determined that low saturated colours on packaging triggered higher price expectations than highly saturated colours on packaging. The authors therefore caution packaging designers to not design solely with the intention of differentiating from competitors (using eye-catching colours and shapes, for example) as this could have an undesirable impact on consumer perceptions (Becker et al., 2010).

Finally, in a study about the visual influence of packaging on in-store buying decisions, Clement (2007) determined that consumers find products attractive if the packaging is easy to understand. Based on the theory of flow and the perception of fluency, Clement reveals that in a competitive marketplace, if a consumer has difficulty differentiating the quality of one brand over another, the package that is able to break through the visual clutter has a much better chance of being chosen by the consumer. Attractive packaging garners attention and therefore helps to stand out amongst competitors in the short timeframe for in-store decision-making. He also notes that packaging that employs distinct visual features (shape, colour, orientation, contrast, or size, for example) will attract consumers' attention so much so that it can affect their buying behaviour regardless of their brand preferences. Ultimately, the author argues that packaging design should be seen as a strategic marketing tool because of the integral role it can play for in-store purchasing decisions (Clement, 2007).

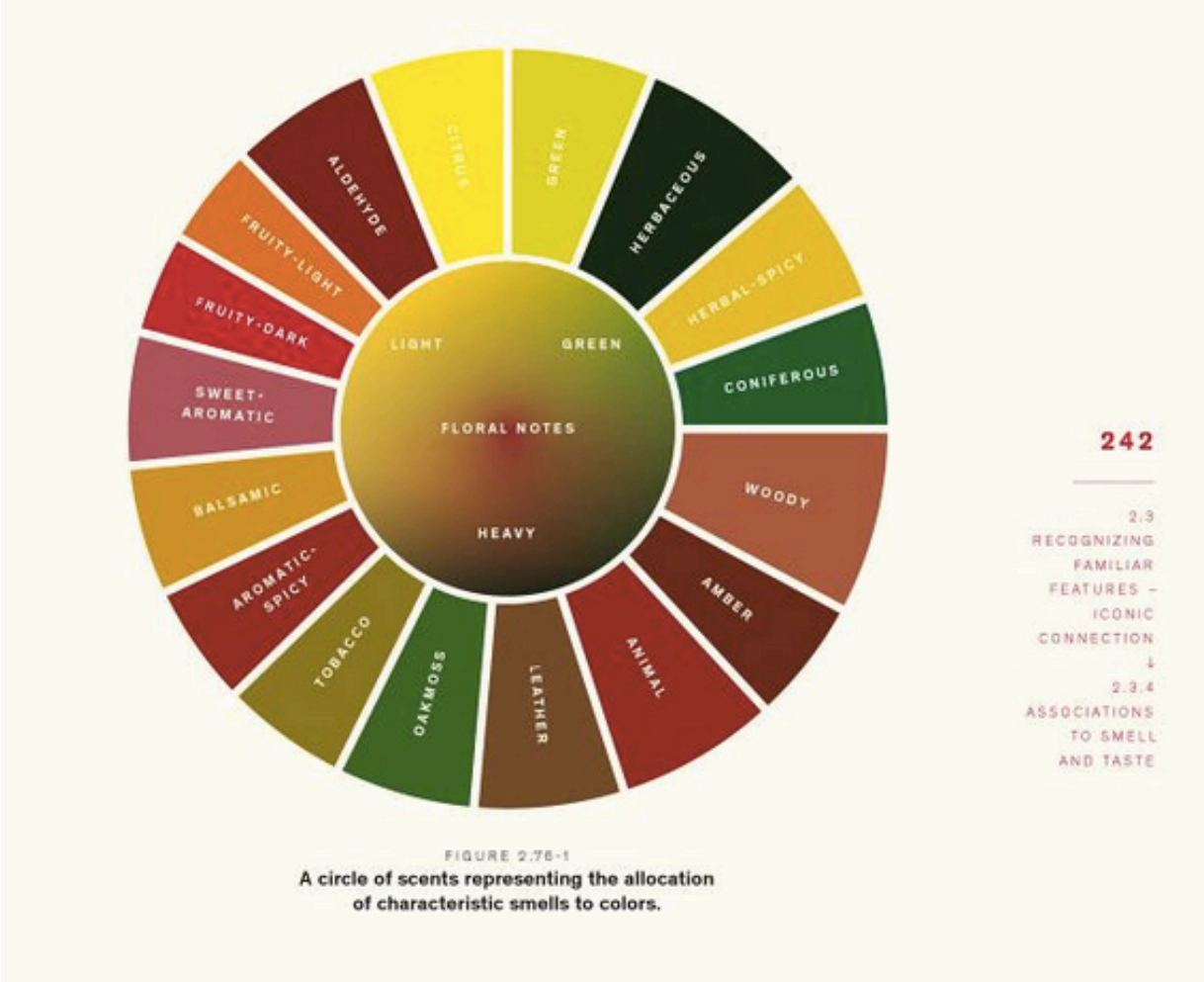
### *D. The Impact of Multisensory Elements on Informed Packaging Design*

In his book entitled *Synesthetic design: Handbook for a multisensory approach,* Haverkamp (2012) explores the way in which a variety of sensations can work together to increase the success of product design, including packaging design. Haverkamp states that human cognitive activity is rooted in perceiving or processing information while in a conscious state, however this never occurs in a single modality of sensory perception. Furthermore, half of the brain's resources are dedicated to visual perception and interpreting visual perception (Weinschenk, 2011). In the case of packaging design, visual perception is most common, however there are other human senses (modalities) at work, such as auditory (hearing), olfactory (smelling), gustatory (tasting), vestibular (sense of balance), tactility (touching), thermoreceptive (feeling temperature), proprioceptive (movement of the extremities), introceptive (organ activity), and nociceptive (feeling pain) (Haverkamp, 2012).

Haverkamp (2012) discusses design elements such as colour, typography, and imagery and ways in which they impact olfactory and gustatory sensory modalities. Colour strongly influences perceived smells; therefore colour is an important factor not only in the perception of the grocery or beverage product itself, but also the packaging containing the items. Sales are directly affected by the dissonance between expectation and reality of the colour of food and beverage products. Although the perception of colour, smell, and other sensory experiences are unique to the individual, colour systems have been developed, namely a colour circle for scents created by perfume designer, Karl-Heinz Bork (shown in Figure 5 below) (Haverkamp, 2012). In the middle of the circle there are four categories of senses described: two cross-sensory descriptors (light and heavy) and

two that make reference to specific smells (green refers to fresh, while floral notes refers to flowery scents). Throughout studies conducted using this framework, the research results are fairly consistent regarding smells associated to specific colours (Haverkamp, 2012).

Figure 5: *A Circle of Scents Representing the Allocation of Characteristic Smells to Colours*



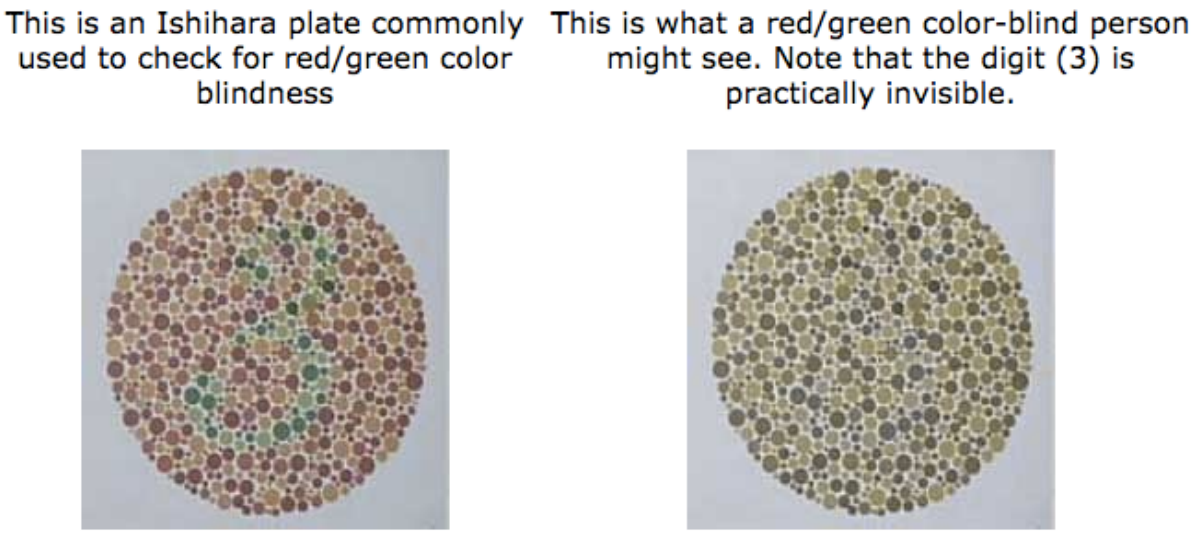

(Luckner, 2002)

Additionally, Haverkamp (2012) describes the way in which brand owners assign colour codes to the packaging of specific product categories, such as chocolate, in order to help consumers understand the bitterness or darkness of a specific variety. In certain examples, chocolate packaging will incorporate the colour blue to represent sweeter chocolate and the colour red for bittersweet chocolate. The author notes that these choices are not based on unconscious colour associations as described above, but instead derived arbitrarily, and therefore must be learned by the customer over time (Haverkamp, 2012). Although colour associations are initially learned through experience, they are later understood with little knowledge to the initial reference. Colours directly affect emotion and, therefore, they alter perception, however, colour symbolism is vastly different from one culture to the next. For example, the colour white is seen as a colour for mourning among many Eastern nations, whereas the colour black is seen in this regard in many Western nations (Haverkamp, 2012). It is noted that colour must have context, and therefore significance at the time that the product is offered, in order for meaning to be extracted. Additionally, the use of intense colours (metallic or fluorescent colours, for example) is suitable when trying to garner consumers' attention, as this signifies a special significance and can also elicit emotional impact (Haverkamp, 2012).

Not all human beings are privy to seeing the range of available colours in the visible spectrum, as approximately nine percent of men and one-half percent of women are colour blind (Weinschenk, 2011). In most cases, colour blindness does not manifest as an inability to see all colours. It most commonly manifests as the inability to distinguish between reds, yellows, and greens. For that reason, colour should not be the only means used to indicate meaning. A redundant coding scheme (colour and line thickness or

colour and a hierarchical layout, for example) should be used to communicate important ideas (Weinschenk, 2011). Another way to improve the viewing experience for consumers who are colour blind is to design using a colour scheme that works for most of society by ensuring the design contain shades of yellows and browns versus reds, greens, and blues (Weinschenk, 2011). The Ishihara colour blindness test is a common means for determining colour blindness. A mosaic of different coloured circles that contain a different coloured numeric character in the center (green background of circles with a red numerical foreground, for example) is easily perceivable by individuals with full colour vision, but nearly impossible for colour-blind subjects to identify (Vischeck, 2008a).

Figure 6: The Ishihara Colour Blindness Test as Perceived by Individuals with Full Colour Vision and Individuals with Red/Green Deficiency




(Vischeck, 2008b)

Typography plays an important role in the sensory perception of packaging, not only from a psychological perspective (different typefaces elicit different meanings), but also

from a functional perspective (pattern recognition to assist with clear communication) (Weinschenk, 2011). Typography can be defined as "what communication looks like", as well as "the use of type to advocate, communicate, celebrate, educate, elaborate, illuminate, and disseminate" (Felici, 2012, p.ix). Although good typography is often thought to be "invisible", bad type choices can sabotage a design, ruining the aesthetics of a project, as well as making reading more difficult (Felici, 2012). Although there is great debate in the design community about the inherent readability differences between serif and sans serif typefaces, research shows no difference in comprehension, reading speed, or general preference between the two styles (Weinschenk, 2011). However, what does affect readability is a character's ability to conform to patterns housed in readers' memories. Typefaces that are overly stylized, such as ornate script faces or graffiti, interfere with the brain's ability to recognize patterns quickly, thereby slowing down the comprehension process. Furthermore, if individuals have trouble reading text because of the chosen typeface, they will unconsciously transfer the difficulty experienced to the meaning of the text itself, thereby perceiving that the subject of the text is difficult to understand (Weinschenk, 2011).

The correlation between taste and visual form (or image) manifests itself as follows: round lines and circular shapes have associations of sweetness, whereas fragmented lines and angular shapes associate with acidity, and irregular lines and shapes associate with bitterness (Haverkamp, 2012). Furthermore, associative forms that derive meaning and exist in the consumer's memory (the distinctive shape of an old-fashioned beer bottle or can, for example) enable a product to increase its market value based solely on product attributes that were already proven successful. Haverkamp (2012) refers to this as

"purposeful retro design" and "me-too products" that successfully evoke emotion to help drive the sale of a product (p.213).

### *E. Summary of the Literature*

In summary, the results of the studies discussed in this literature review suggest that visual elements of design (including colour, typography, and imagery) can all affect the brand image of a packaged product, consumer behaviour affecting purchasing decisions, as well as the way in which these design elements influence multi-sensory perception. The studies found that packaging design elements are important to understand from the perspective of target consumers, to determine the ways in which packaging will ultimately affect the success of the product on store shelves.

Most of the research examined here used questionnaires to gather information, as well as experiments where people reacted directly to packaging. Primary consumers and purchasing decision makers (of orange juice, milk, wine, and beer) were the subjects of the majority of the research, although consumers who are not key decision makers (children), as well as designers were also studied.

The major weaknesses found in the research include the limited study samples, as well as limited sample groups. For example, only eight designers and 46 consumers were examined in Ampuero and Vila's (2007) research and 10 children in Moss' (2008) thesis work. Furthermore, only patrons of Australian Rules football matches were examined in

Dawes (2007) research and university students enrolled in a business program at a single university in Wang's study (2013).

Through all of the research, the major gap that exists is determining how effectively packaging design of food and beverage products communicates core competencies of the brand to consumers, as decoded by consumers. More specifically, very little research has been done regarding packaging communications of craft beer, which is an area showing significant growth in an overall stagnant beer market. This research will therefore examine the communication of unique flavour profiles (the core competency of craft beer brands) through packaging design, as decoded by target consumers.

## *III. Methodology*

### *A. Research Question*

The current literature concerning branding, graphic design, and semiotics in the food and beverage industry has not adequately addressed craft beer packaging. Other beverages have been studied to understand visual cues in packaging, including milk, orange juice, and wine, however it is difficult to find anything of this nature relating to the beer market, and more specifically, the craft beer market. Studies focusing on the connection between the description of the product on a package and consumers' interpretation of that product have not been thoroughly examined.

Therefore, the primary research question derived from the literature review is as follows: *If unique flavour profiles and non-traditional tasting notes differentiate craft beers from their competitors (national beer brands, as well as other craft breweries), does the packaging/labeling of craft beer effectively connect to the tasting notes as decoded by target consumers?*

This research is important because distinctive flavour profiles are craft breweries' primary differentiator; therefore this research will be informative to craft brewers, as well as food and beverage brand owners in general, to see if their packaging designs (including typography, colours, and imagery) communicate unique flavours to target consumers.

### *B. Research Design*

The research design method selected is cross-sectional, as it will examine a single point in time. This research falls into the discovery paradigm, as the nature of the findings attempt to classify objects and the process will be systematic and repeatable. Furthermore, this study is considered exploratory, as there is currently little research in this area.

Other types of research design (such as longitudinal and case studies) are less suitable for this project because of the nature of the topic being studied and the time frame in which this research will take place. Longitudinal studies are categorized by data being collected at different points in time and on at least two occasions, however this research was conducted in a single academic semester. Furthermore, case studies typically use several

data gathering methods and are rich in qualitative data. This research project used one data gathering method where primarily quantitative data was collected.

### *C. Study Population and Sampling Method*

The study population consists of target consumers of craft beer and the convenience sample aims to resemble some of the study population. According to Danny Brager, VP Client Services for market research firm The Nielson Company, craft beer drinkers are most easily categorized by age. A total of 32.9% of craft beer consumers are Millennials (consumers who are approximately 19-34), 23.9% are Gen X'ers (approximately 35-50) and 34.6% are Baby Boomers (approximately 51-70) (Pierre, 2013). Furthermore, male craft beer drinkers dominate the market, composing 71.9% of the total volume of craft beer consumers and Caucasian craft beer drinkers make up 85.6% of the total market (Pierre, 2013).

Participants in this research study were of legal drinking age when they participated in the study and they were provided with an electronic survey. Surveys were distributed to a list of friends, family, colleagues, and students within the School of Graphic Communications Management at Ryerson University in Toronto, Ontario. Participants were asked to complete a short survey questionnaire available via *Google* Forms. A total of 148 respondents completed the questionnaire in its entirety.

### *D. Data Gathering Method*

Both quantitative and qualitative information was gathered through a questionnaire (although the questions that asked for qualitative responses were optional) and participants' answers remained confidential. The questionnaire was comprised of two sections: introductory questions and questions about specific packaging design examples. In the first section, participants were asked demographic questions (age and gender), questions about beer purchasing habits, the participant's level of expertise regarding craft beer, as well as questions about what participants believe beer tastes like in general. In the second section, participants were asked about their understanding of the flavours represented in seven craft beer packaging design examples. The questionnaire took under 10 minutes to complete and it was designed in a visually pleasing way to reduce the likelihood of respondent fatigue resulting in non-completion.

Other sampling methods (such as in-depth interviews or content analysis) were not used because of the desired quantity of information (a goal of between 100-150 surveys), as well as the sample population being surveyed. If the goal of the research was to learn what packaging elements graphic designers believe communicate unique tasting notes, then in-depth interviews may have worked effectively. Furthermore, if the goal of this research was to understand if there was commonality between craft beer packaging design (colour, typography, and imagery) and tasting notes, content analysis may have been an effective technique. Because this research is focused specifically on target consumers' perception and the decoding of semiotic elements on craft beer packaging, questionnaires were used.

In the first section of the questionnaire, participants were asked demographic questions (age and gender), as well as questions to address their purchasing habits as a beer drinker (how often they purchase beer, how often they purchase craft beer, as well as whether or not they have ever purchased craft beer based on the appearance of the label alone). The survey also asked participants to self-assess (rank themselves) according to how much they know about the topic of craft beer on a five-point scale from "beginner" to "expert". The final aspect of this initial section of questions contained a list of 20 flavours (cinnamon, citrus, and toffee, for example) and participants were asked to identify what beer tastes like to them, generally speaking. This same list of 20 flavours was used in subsequent questions about specific packaging examples and this question helped to determine if there was a bias in respondents' answers, by cross referencing the flavours they selected in this question to the flavours identified in each of the seven packaging examples. This could indicate that participants were relying on their pre-existing ideas about how beer tastes, versus what the label was visually communicating.

In the second section of the questionnaire, participants were asked to view seven packaging examples (one at a time and in the same order for all participants) and identify the flavours that they believe are represented in the designs. They were first asked if they had ever tasted the beer example they were about to evaluate. This helped to determine whether or not their prior tasting of the product influenced their flavour choices. Participants were then asked to select all of the flavours in the list that they felt were communicated through the label displayed. The same list of 20 flavours used in the first section was presented to participants for all seven packaging examples in the second

section. Participants also had an opportunity to add their own flavour descriptors for each packaging example by selecting "other" and inputting free-form text. The list of 20 flavours was chosen because each one is a flavour contained within one or more of the seven craft beer packaging examples. After participants selected all of the flavours they believed were represented in the image, they were asked two multiple choice questions about the most important visual cue they used to make their flavour choices (fonts, colours, images/graphics, beer name, additional words, other), as well as the least important visual cue they used to make their flavour choices (using the same list as the previous question). Finally, for each of the seven packaging examples participants had an opportunity to add additional comments about the labels, which was the qualitative data collected in this research.

The closed-format questions used helped to establish consistency in the results. The specific packaging examples used were chosen either because they were seasonal brews or less common craft beers that most consumers would not have seen or tried. The specific examples were also selected because they did not outwardly state the flavour of the beer in their title. For example, *Kawartha Lakes Brewing Co.'s Raspberry Wheat Ale* was not selected because the name gave too much about the flavour profile of the beer, versus relying on the colour, typography, and imagery on the label. This helped reduce the chance for error or bias. Furthermore, these beers were chosen because their flavour profile and tasting notes were available to the researcher, helping to increase the validity of information for this study. A range of craft beer products (all from different Ontario craft brewers) was chosen to provide a more representative sampling of beers from which

to study. Open-ended questions were used sparingly and only for "additional comments", which allowed the participant to enter in free-form text with no character limit. The "additional comments" section was the only part of the questionnaire that was optional to answer. Overall, the questionnaires helped to uncover whether or not the visual cues on craft beer packaging provide a common understanding of what was contained inside, as decoded by target consumers.

### *E. Data Analysis*

The questionnaire was administered through *Google Forms*, which kept a real-time record of responses collected and contained in a *Google Spreadsheet* on the *University of Alberta's Google Drive*. Once the survey was closed, the spreadsheet results were extracted and placed into a *Microsoft Excel* document for further analysis. Based on the data, the list of flavors for each of the seven packaging examples were imported into a word cloud generating site (www.wordle.net) where patterns regarding the most frequently selected flavours began to emerge visually. Word clouds provide graphical representation of the data and are suited to exploratory qualitative analysis, but are also helpful in identifying trends in a closed-format quantitative study where participants are asked to select from a series of keywords (BetterEvaluation, 2014). Once the text is imported, word clouds can be formatted to customize the typeface, orientation, and colour scheme. A consistent typeface and orientation was used for all word clouds, however the colour scheme was modified for each one to best represent the most commonly selected flavours for each packaging example. For instance, for the packaging examples that have "cinnamon" as one of the top flavours selected, the word cloud was assigned a brown

color scheme to coincide with this popular flavour. This helps to visually communicate the common flavor profiles. The flavours selected most often by the participants were then compared to the actual flavours described by the brewing companies, who crafted the products, to see how correct or incorrect the flavour choices were overall.

The actual flavors in each of the seven craft beer examples were compared to individual participants' responses. A conditional formula was written in *Microsoft Excel* to determine which participants were most correct in their identification of flavours and how many flavours each individual selected correctly overall. For example, the first label shown to all participants was *Channel Ocho Mexican Spiced Ale* by *Beau's All Natural Brewing Company*, which contains seven of the 20 flavours listed in the questionnaire. The conditional formula was used to determine how many of the seven flavours each participant selected correctly (no correct guesses would amount to a score of 0/7 and a perfect guess would result in a score of 7/7). The conditional formula is as follows:

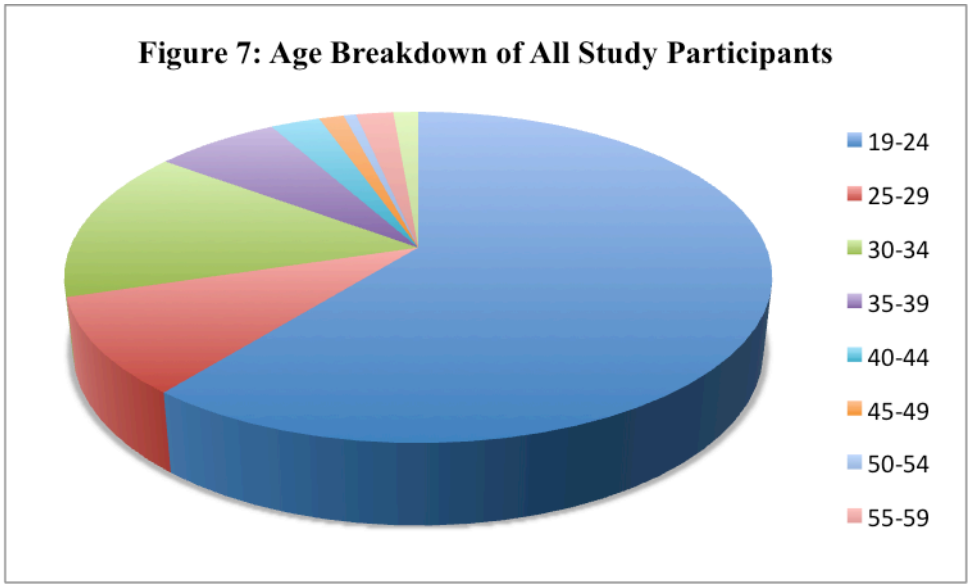
=IF(ISERROR(FIND("Banana",K3)),0,1)+IF(ISERROR(FIND("Chilies",K3)),0,1)+
IF(ISERROR(FIND("Chipotle",K3)),0,1)+IF(ISERROR(FIND("Cinnamon",K3)),0,1)+IF
(ISERROR(FIND("Cocoa",K3)),0,1)+IF(ISERROR(FIND("Fig",K3)),0,1)
+IF(ISERROR(FIND("Fruit",K3)),0,1)

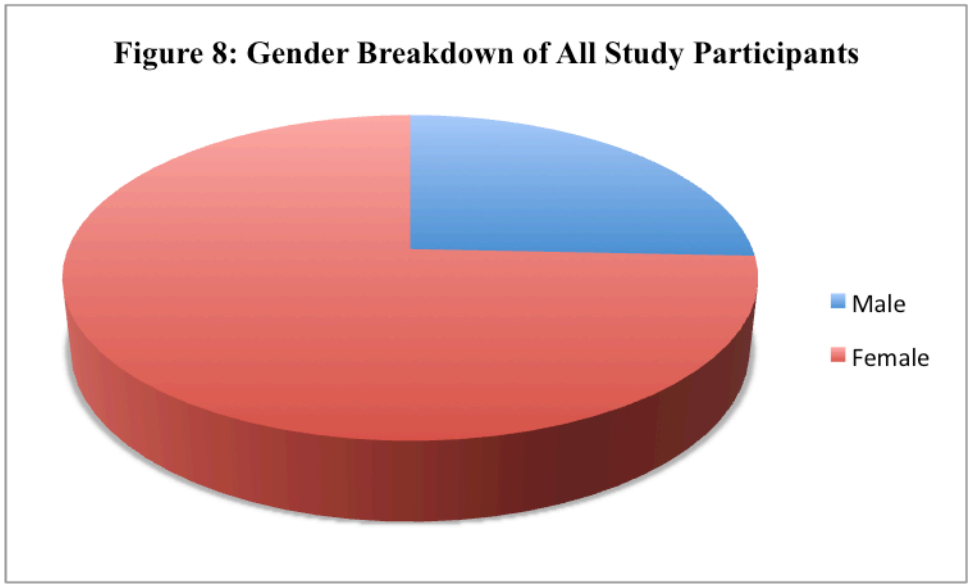
Using the ISERROR function in *Microsoft Excel*, the conditional formula above acts as a measure to determine whether or not a participant chose the correct flavour in a given packaging example (Tech on the Net, 2015). For the first packaging example (*Channel Ocho Mexican Spiced Ale*), the conditional formula above searched the appropriate cell to determine how many of the seven correct flavours individual participants selected correctly. A single number (from zero to seven) was generated from this formula, which

represents the participant's score out of seven. This technique was used across all seven packaging examples to help rank the accuracy of each participant's answers. The top ranked respondents (the individuals who identified the most correct answers overall) were then examined to determine if there were trends in the primary visual element they used to make their guesses for each label (fonts, colours, images/graphics, beer name, additional words, or other). Further analysis was conducted to determine whether or not a specific persona or "muse" could be modeled based on the common demographic and/or purchasing habits of these top-ranked individuals. Conversely, it was important to analyze respondents who selected the least correct flavour choices and therefore ranked at the bottom. What visual signals did they most predominately rely on to choose their flavours? What does this group look like from a demographic and purchasing behaviour standpoint? These are the types of questions this analysis helped to answer.

## *IV. Findings*

### *A. Demographics of Study Participants (n=148)*




Almost two-thirds of study participants (60.8%) fall into the 19-24 age bracket. The second most represented age bracket is 30-34 year-olds (14.9%). The remaining participants (24.3%) are spread across the other age brackets, with participants

represented up to 64 years of age. Nearly three-quarters of participants (74.3%) are female and the remaining quarter (25.7%) is male.

**Figure 9: Beer Buying Habits of All Study Participants**



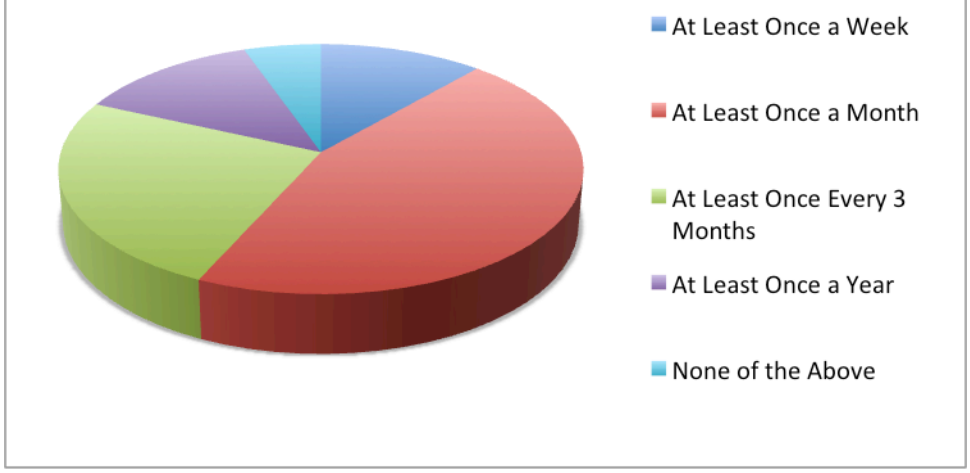
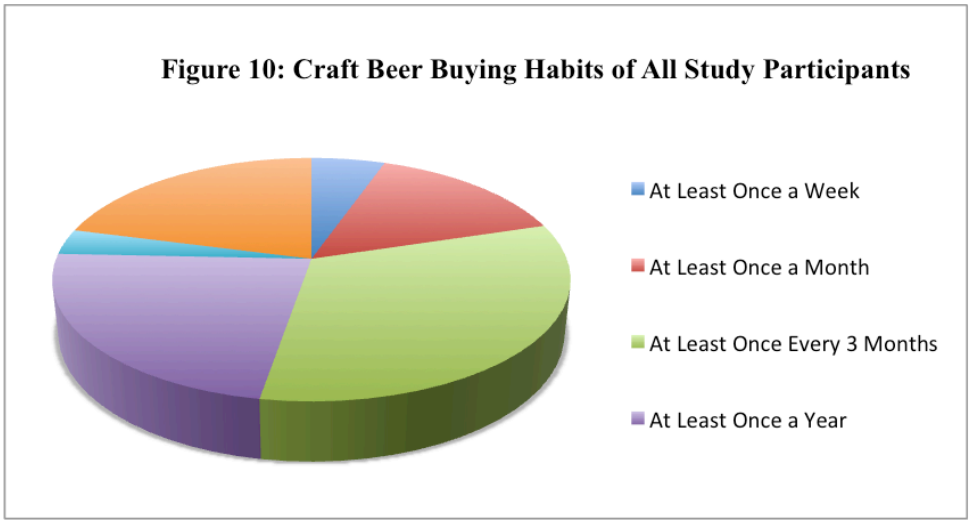



**Figure 10: Craft Beer Buying Habits of All Study Participants**



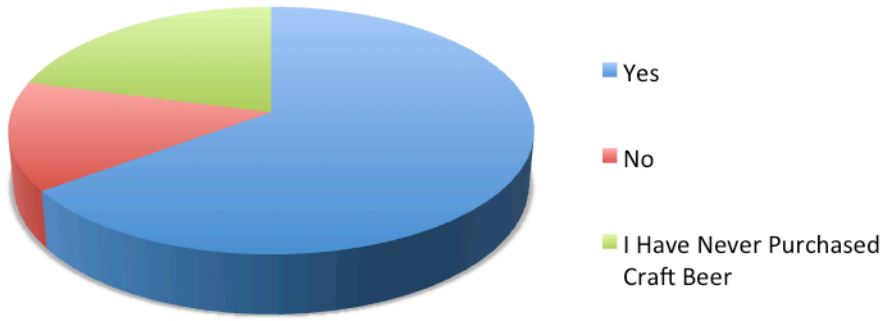



Almost one-half of participants (45.3%) buy bottled or canned beer from a retailer such as the *LCBO* or *The Beer Store* at least once a month. One-quarter of participants (25%) buy beer at least once every three months. The remaining participants' beer purchasing habits range from buying beer at least once a week (11.5%) to buying beer at least once a year (12.8%), as well as not fitting into any of the options listed (5.4%),

presumably buying beer less often than once a year. All participants (100%) have purchased beer from a retailer.

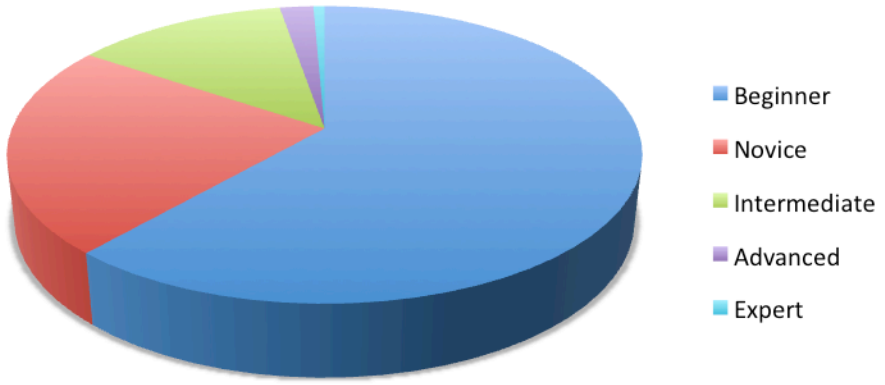
Most participants purchase craft beer from a retailer at least once every three months (32.4%) or at least once a year (23%). Of all participants, 16.2% have never purchased craft beer from a retailer. The remaining participants purchase craft beer from a retailer at least once a month (14.9%), at least once a week (5.4%), as well as not fitting into any of the options listed (8.1%).

**Figure 11: Craft Beer Purchases Made Solely on the Label of All Study Participants**




Almost one-third of participants (64.9%) have purchased a craft beer solely based on the label. Almost one-quarter of participants have never purchased craft beer (21%), and the remaining participants have never purchased craft beer based solely on the label (14.2%).

**Figure 12: Self-Assessed Level of Craft Beer Expertise of All Study Participants**



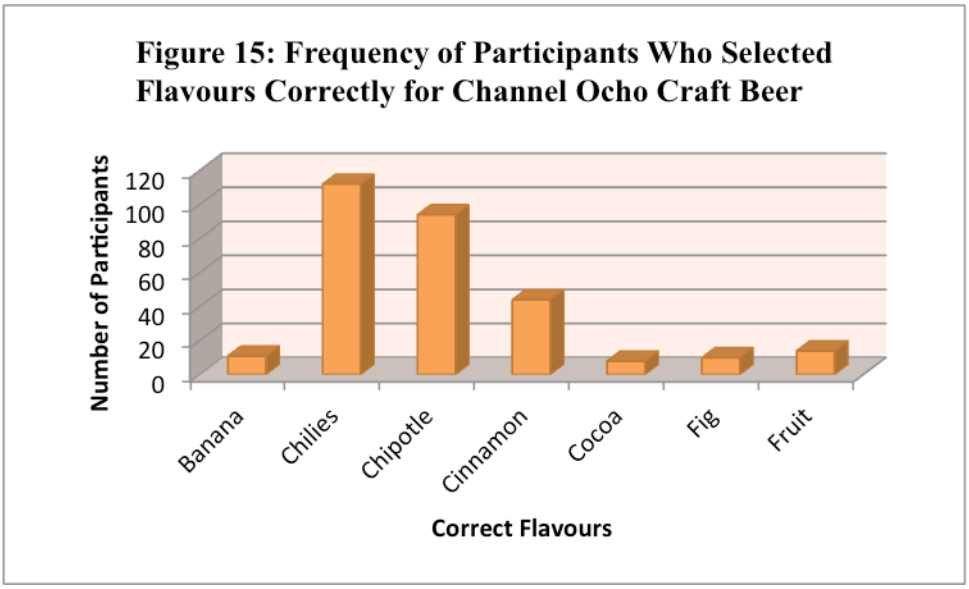

Lastly, almost one-third of participants (61.5%) assessed themselves as beginners in the world of craft beer. The second most commonly self-assessed level of expertise is novice (23%), followed by intermediate (12.8%), advanced (2%), and expert (0.7%).

### *B. Individual Label Analysis of Seven Craft Beer Samples (n=148)*

Figure 13: *Beau's All Natural Brewing Company's Channel Ocho Mexican Spiced Ale* Label


(Channel Ocho Mexican Spiced Ale, n.d.)

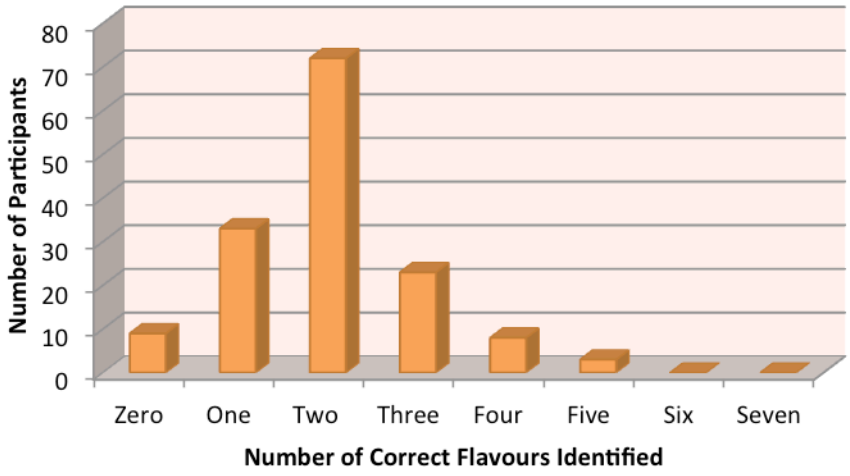
Figure 14: *Channel Ocho* Word Cloud of Flavours Selected by Participants


As visually communicated through the word cloud for *Channel Ocho* craft beer, the most commonly selected correct flavour was chilies with over three-quarters of participants (75.7%) identifying this flavour correctly. Notably, chipotle was also

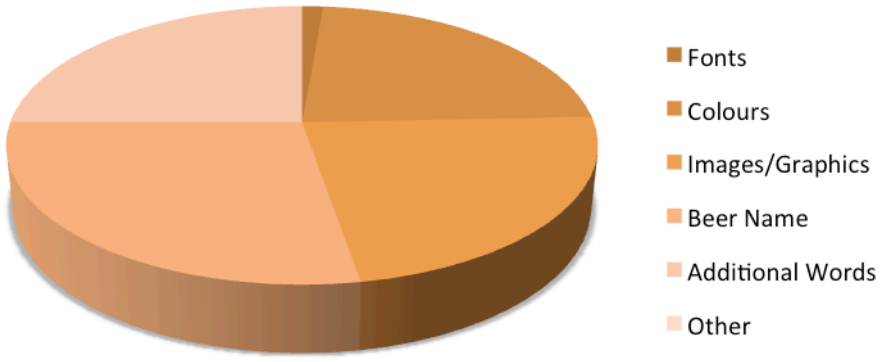
correctly identified by a large number of participants (63.5%). Cinnamon was correctly identified by a smaller percentage of participants (29.7%) and fruit, banana, fig, and cocoa were identified by an even smaller percentage, as each of these four flavours was identified correctly by fewer than 10% of participants. Ginger, nutmeg, citrus, apple wood, orange peel, and smoke were the most commonly selected incorrect flavours, as they do not exist in *Channel Ocho* craft beer.

**Figure 16: Frequency of Number of Correct Flavours Identified for Channel Ocho Craft Beer**



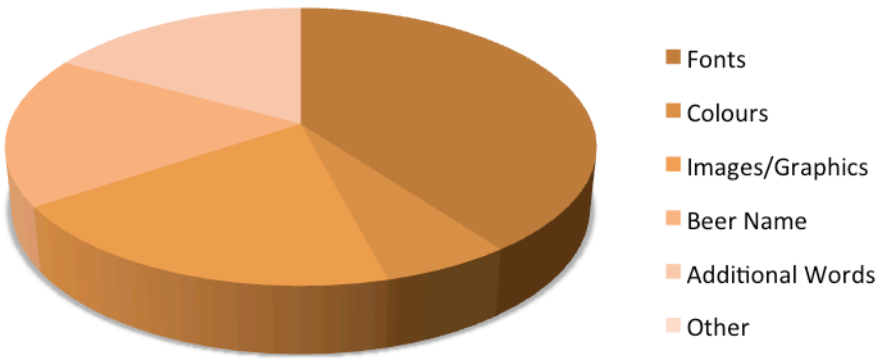

Almost half of all participants in the study (48.7%) identified two of the seven correct flavours. All participants (100%) identified five or fewer flavours correctly.

**Figure 17: The Most Important Visual Cue Used to Make Flavour Choices for Channel Ocho Craft Beer**




The distribution of visual elements on the label that participants identified as the most important cue to make flavour choices was fairly even amongst the top four visual cues. Colours (23%), images/graphics (23%), beer name (27.7%), and additional words (25%) on the label were the most common visual cues used to select the flavours in the craft beer.

**Figure 18: The Least Important Visual Cue Used to Make Flavour Choices for Channel Ocho Craft Beer**



The least important visual cue that participants did not use to make flavour choices for this craft beer label was fonts (39.9%).

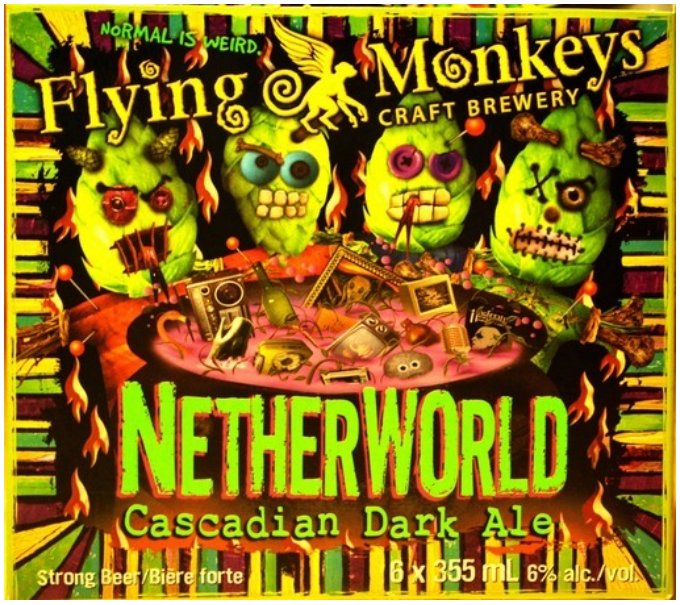
Participants' qualitative observations concerning the flavours they associated with the visual cues for *Channel Ocho* craft beer include the following comments:

> "The cactus and figure on top of the TV, combine w/ yellow colour and name were important to my flavour choice, but the TV itself was not."

> "Can't tell much about the beer from the label. Seems an odd label for beer - I guess you can watch TV while drinking it... I guessed the flavour profile from "...spiced beer." Label does not provide any real info on taste etc."

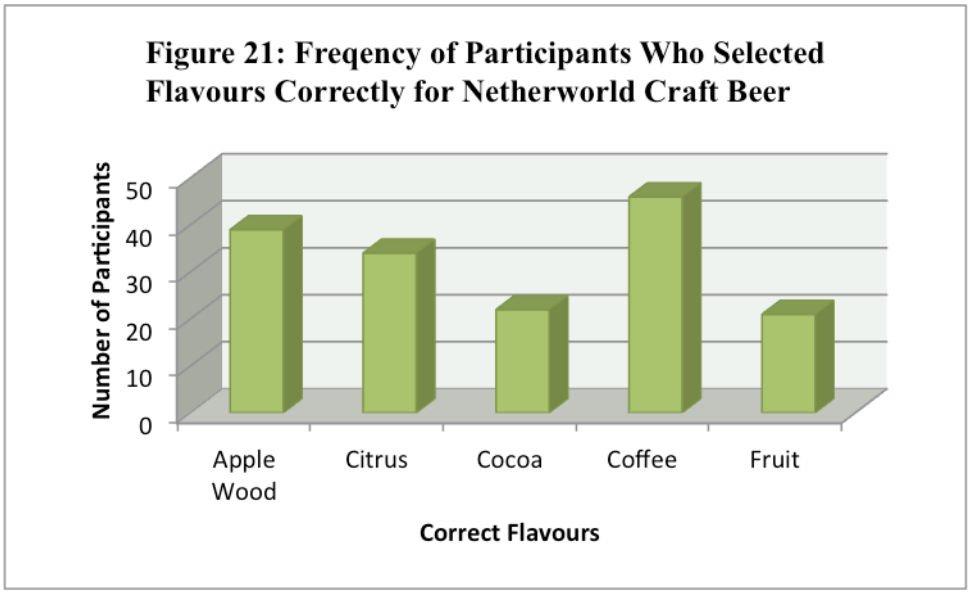
> "After seeing the word "Mexican Spiced", I started associating Mexican flavours (like chilies, coffee) with the label."

Figure 19: *Flying Monkeys Craft Brewery's Netherworld Cascadian Dark Ale* Label



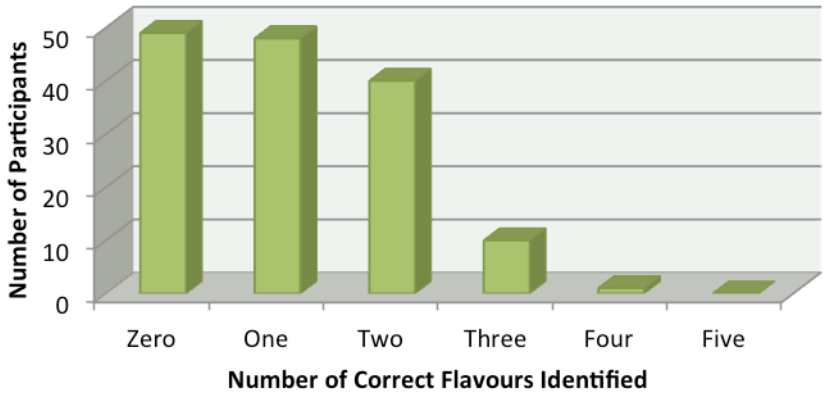

(Netherworld Cascadian Dark Ale, n.d.)

Figure 20: *Netherworld* Word Cloud of Flavours Selected by Participants




As visually communicated through the word cloud for *Netherworld* craft beer, the most commonly selected correct flavour was coffee with almost one-third of participants (31.1%) identifying this flavour correctly. Notably, apple wood and citrus flavours were identified correctly by approximately one-quarter of participants (26.4% and 23%, respectively). Finally, cocoa and fruit were correctly identified by slightly fewer than 15% of participants (14.9% and 14.2%, respectively). Smoke was the most commonly selected flavour as seen in the word cloud, however this flavour is not present in this craft beer. Cinnamon, caramel, chilies, orange peel, and nutmeg were all flavours commonly incorrectly identified, as they do not exist in *Netherworld* craft beer.

**Figure 22: Frequency of Number of Correct Flavours Identified for Netherworld Craft Beer**




Approximately one-third of participants (33.1%) did not identify a single flavour correctly and another third (32.4%) identified only one of five flavours correctly. The vast majority of participants (99.3%) identified three or fewer of the five identified flavours correctly.

**Figure 23: The Most Important Visual Cue Used to Make Flavour Choices for Netherworld Craft Beer**

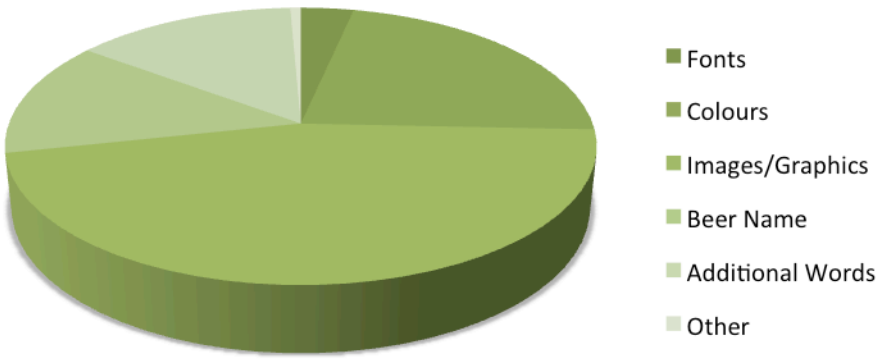
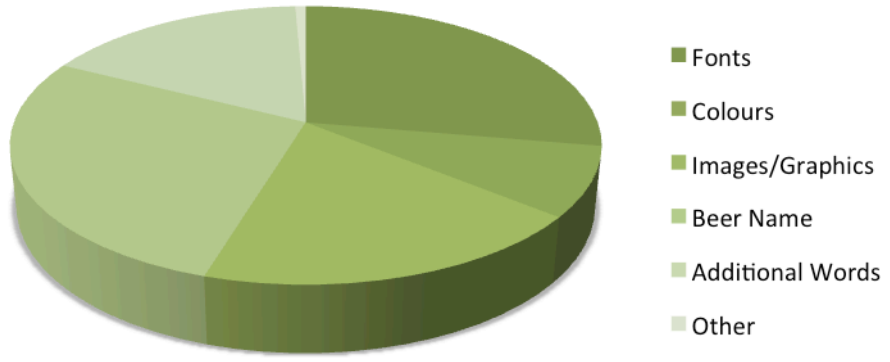


**Figure 24: The Least Important Visual Cue Used to Make Flavour Choices for Netherword Craft Beer**




The majority of participants (45.9%) identified images/graphics as the most important visual cue for identifying flavours. Fonts were identified as the least commonly selected visual cue to make determinations regarding flavour (3.4% of participants). The option "other" had a lower percentage, however the single participant did not enter any free-form text to explain their selection. Similarly, fonts and beer name were identified equally as the least important visual cues for selecting flavour (each representing 27.7% of participants) for *Netherworld* craft beer.

Participants' qualitative observations concerning the flavours they associated with the visual cues for *Netherworld* craft beer include the following comments:

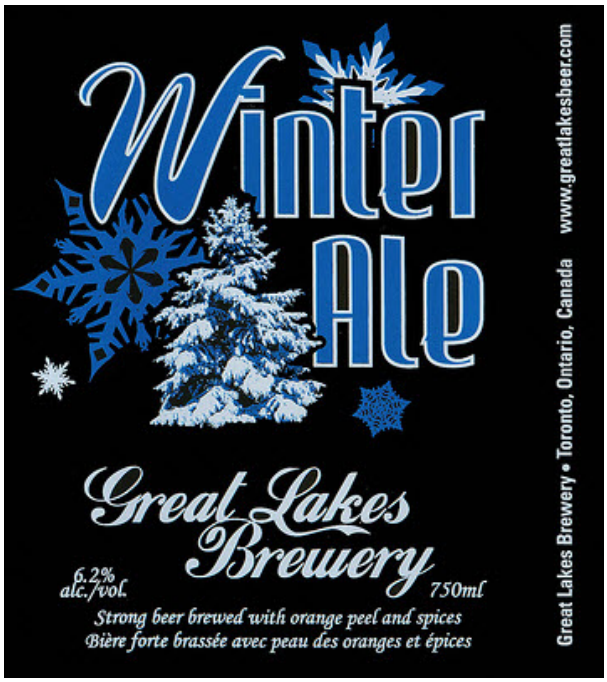
> "Probably would not try this one - graphics are not one I would relate to tasty (or edible!) or one that would catch my attention in a positive way. It is a dark ale so I thought of caramel and toffee etc."

"This particular brand has some of the worst design out there. Very muddled and confusing."

"This label doesn't really give me many clues as to its flavor."

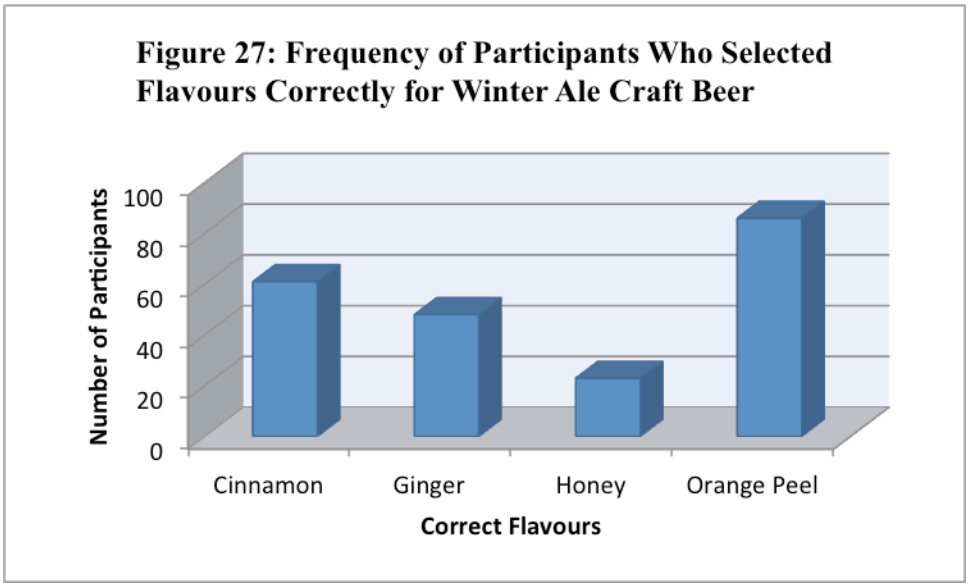
"Love this illustration, and I like the design for flying monkey's hoptical illusion as well."

Figure 25: *Great Lakes Brewery's Winter Ale* Label




(Winter Ale, n.d.)

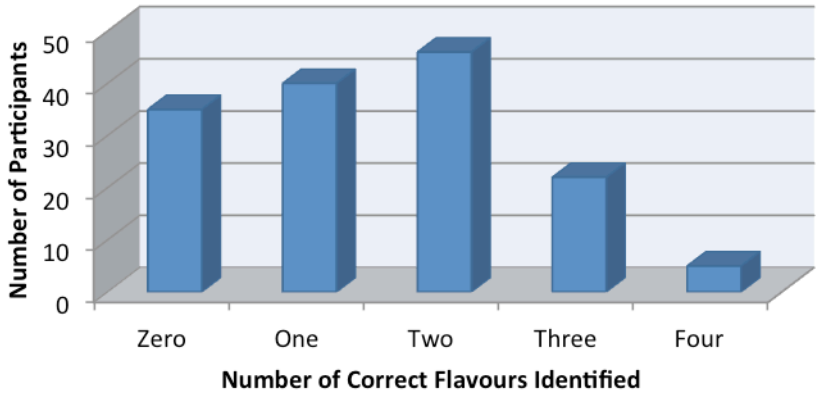
Figure 26: *Winter Ale* Word Cloud of Flavours Selected by Participants


As visually communicated through the word cloud for *Winter Ale* craft beer, the most commonly selected correct flavour was orange peel with over half of all participants (58.1%) identifying this flavour correctly. Notably, cinnamon was also correctly identified by a large percentage of participants (41.2%). Ginger was the third most

commonly selected correct flavour identified by 32.4% of all participants. Lastly, honey was identified by the smallest percentage of all participants, with 15.5% correctly identifying this flavour. Nutmeg, vanilla, and citrus were the most commonly selected incorrect flavours, as they do not exist in *Winter Ale* craft beer.

**Figure 28: Frequency of Number of Correct Flavours Identified for Winter Ale Craft Beer**




Almost one quarter of participants (23.7%) did not identify any of the four flavours correctly. The majority of participants identified one or two of the four flavours correctly (58.1%). A small percentage of participants (3.4%) identified all four flavours correctly.

**Figure 29: The Most Important Visual Cue Used to Make Flavour Choices for Winter Ale Craft Beer**

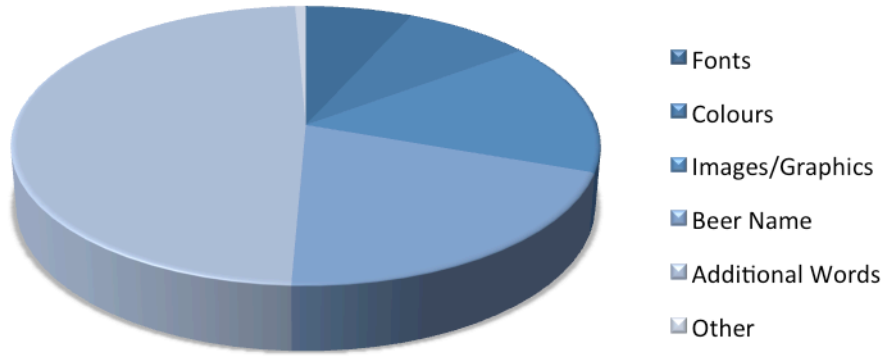
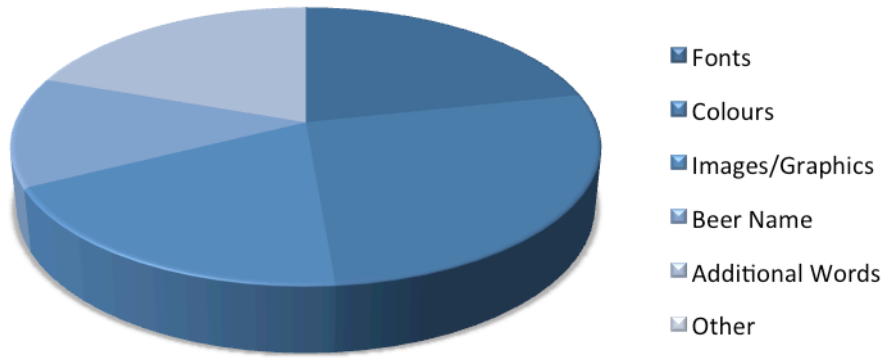



**Figure 30: The Least Important Visual Cue Used to Make Flavour Choices for Winter Ale Craft Beer**




Almost half of all participants (48.6%) relied on additional words on the craft beer's label as their most important visual cue for correctly identifying flavours. Participants relied on the beer name as the second most important visual indicator (20.3%), images/graphics as the third most important visual indicator (15.5%), and colour as the fourth most important visual indicator (8.1%). Both fonts (6.8%) and "other" (0.7%) were the least selected option for visual cue most relied upon. The participant who

selected “other” indicated that they have tasted the beer before and that’s how they selected their responses. Notably, this participant who has tried the craft beer before did not identify any of the four flavours correctly. The least important visual cue that participants did not use to make flavour choices for this craft beer label was colour (27%). All other responses indicated that the four additional visual cues were fairly evenly distributed in the following order: fonts (21.6%), additional words (19.6%), images/graphics (18.9%), and beer name (12.8%).

Participants’ qualitative observations concerning the flavours they associated with the visual cues for *Winter Ale* craft beer include the following comments:

> “The blue and white on black along with the icy graphics clearly indicates winter has something to do with the product.”

> “Word description makes me think more of a mulled spiced flavour vs mint/winter crisp one.”

> “With a name like Winter Ale you think of more winter themes, but you also read the description and it tells you what the beer should taste like.”

> “Looks like it tastes cool, and has a winter theme to it. I imagine it to be minty.”

Figure 31: *Lake of Bays Brewing Company's Spring Maple* Label


(Spring Maple, n.d.)

Figure 32: *Spring Maple* Word Cloud of Flavours Selected by Participants

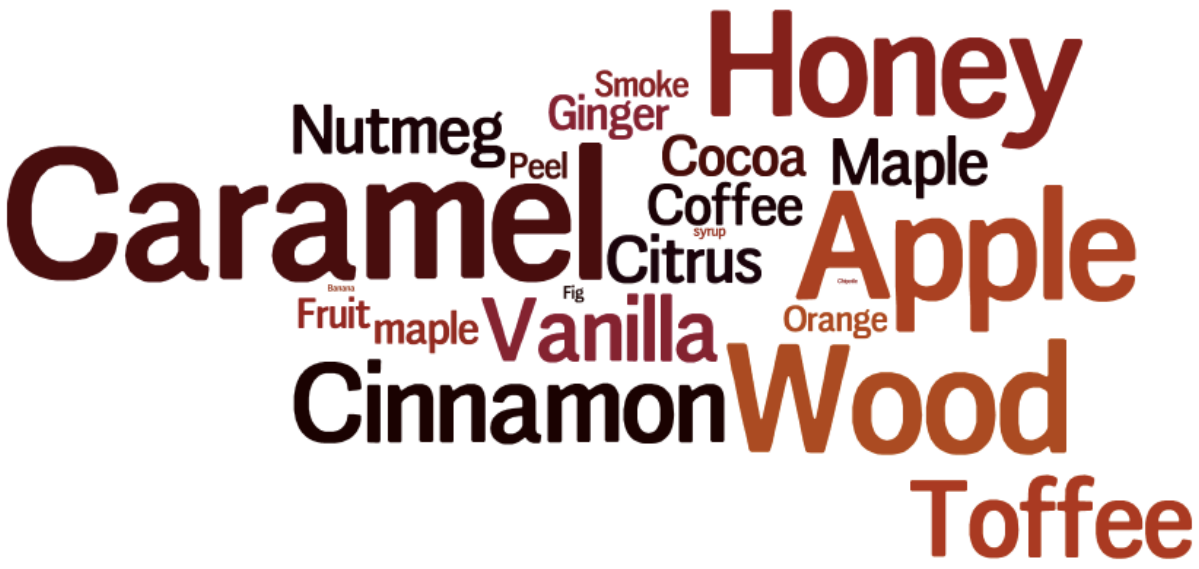
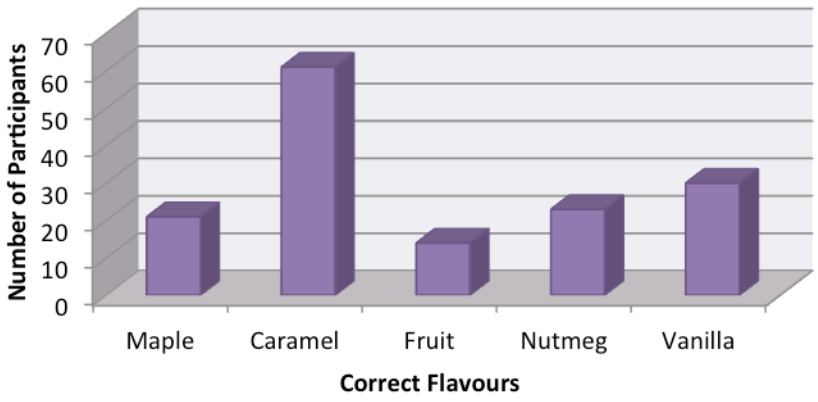
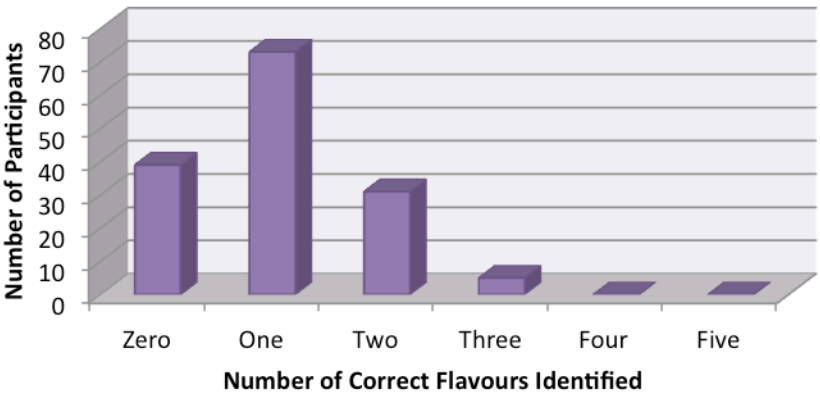


**Figure 33: Frequency of Participants Who Selected Flavours Correctly for Spring Maple Craft Beer**




As visually communicated through the word cloud for *Spring Maple* craft beer, the most commonly selected correct flavour of the five flavours was caramel with just under half of all participants (41.2%) identifying this flavour correctly. Vanilla was the second most commonly identified correct flavour by 20.3% of all participants. Maple and fruit were the least often correctly identified flavours (14.2% and 9.5% of participants, respectively). Honey, apple wood, toffee, and cinnamon were the most commonly selected incorrect flavours, as they do not exist in *Spring Maple* craft beer.

**Figure 34: Frequency of Number of Correct Flavours Identified for Spring Maple Craft Beer**



Almost half of the participants in the study (49.3%) identified only one of the five correct flavours. Approximately one-quarter of participants (26.4%) did not identify any flavours correctly. All participants (100%) identified three or fewer flavours correctly).

**Figure 35: The Most Important Visual Cue Used to Make Flavour Choices for Spring Maple Craft Beer**

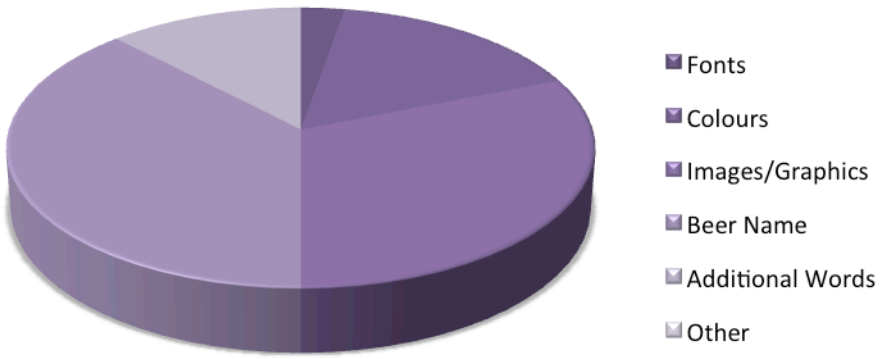
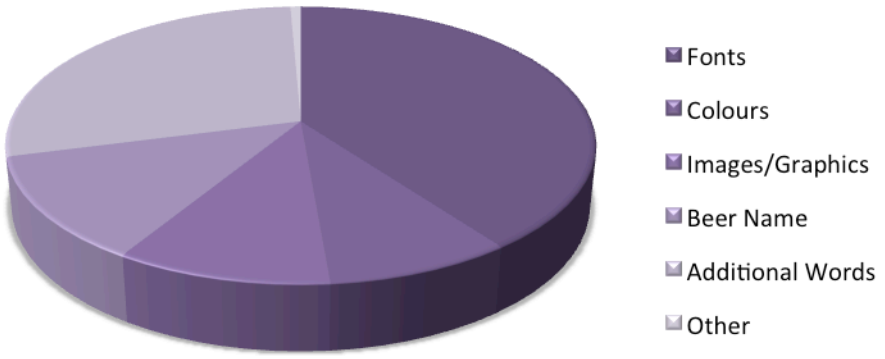



**Figure 36: The Least Important Visual Cue Used to Make Flavour Choices for Spring Maple Craft Beer**



The most important visual cue participants used to make flavour choices was the beer name (37.8%), followed by images/graphics (31.1%), colours (16.2%), additional words (12.2%), and fonts (2.7%). The least important visual cue that participants did not use to make flavour choices for this craft beer label was fonts (39.9%), followed by additional words (28.4%). Beer name (12.2%), colours (8.8%), and images/graphics (10.1%) had a fairly equal distribution.

Participants' qualitative observations concerning the flavours they associated with the visual cues for *Spring Maple* craft beer include the following comments:

> "I'm not sure what this beer is. There is nothing, besides the name, indicating the flavour. I'm personally unaware of what a Belgian Blonde Ale is. Perhaps a more experienced beer drinker would know exactly, but I haven't a clue."

> "I would assume it would have a slight maple flavour due to the picture and name of the beer 'spring maple'."

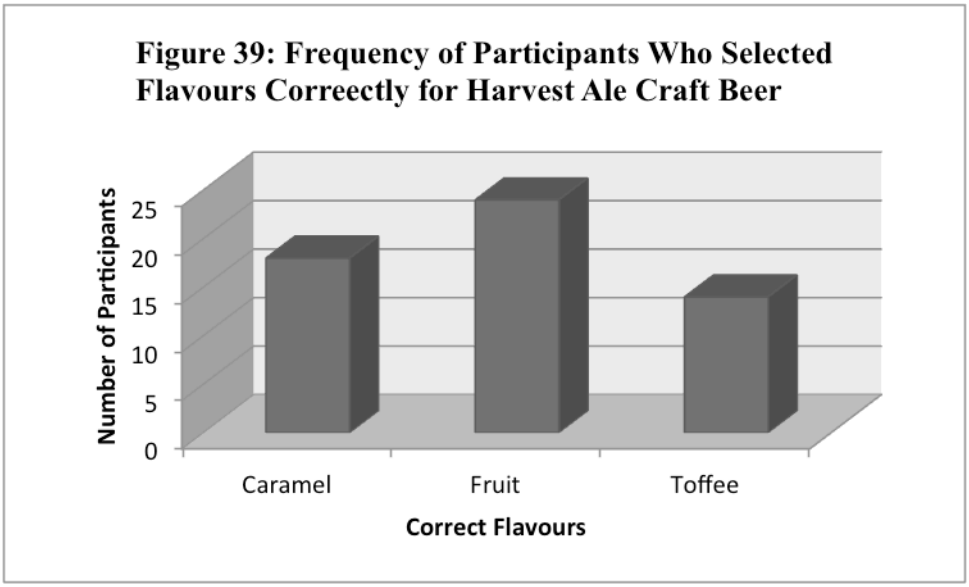
> "I really like the simplicity of this design, it really ties in with what I thought the flavours were."

> "The image was important too, it is a maple syrup harvest!"

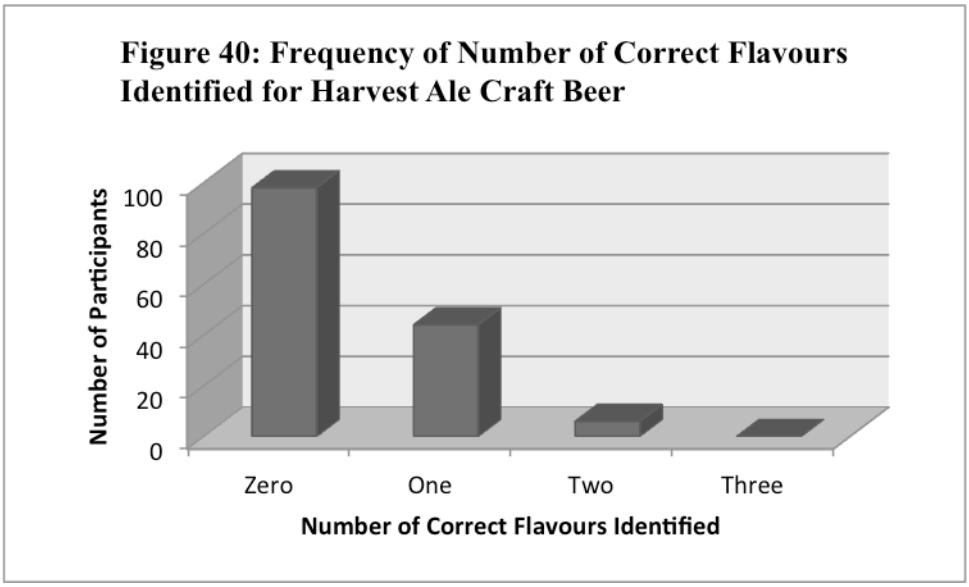
Figure 37: *F&M Brewery's Harvest Ale* Label


(Harvest Ale, n.d.)

Figure 38: *Harvest Ale* Word Cloud of Flavours Selected by Participants

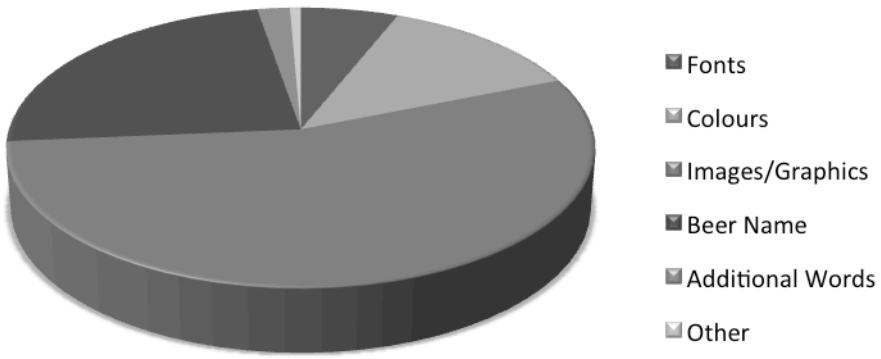


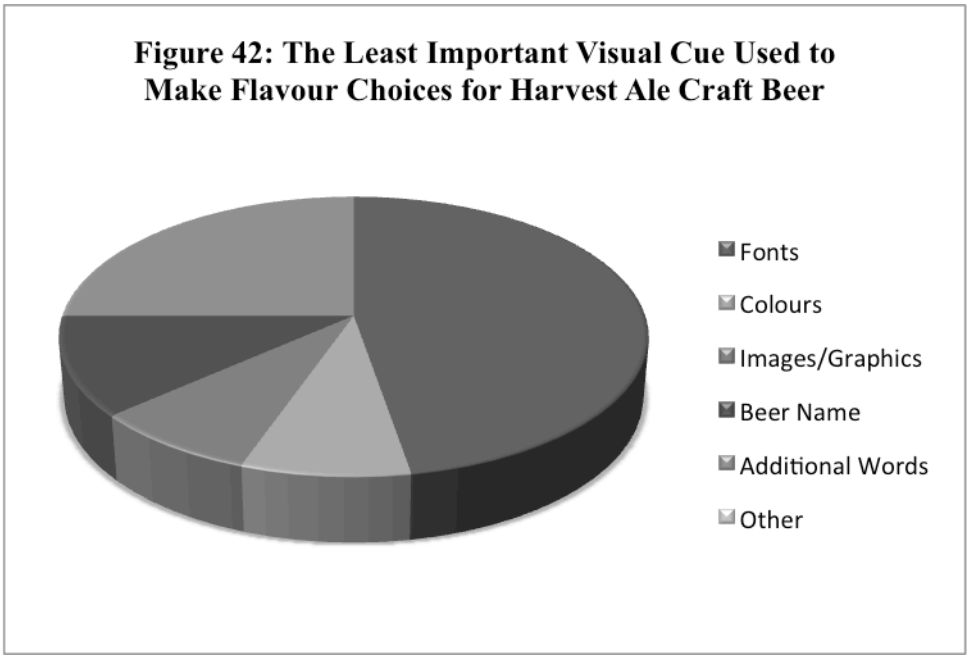

As visually communicated through the word cloud for *Harvest Ale* craft beer, the most commonly selected of the three correct flavours was fruit with only a small percentage of participants (16.2%) identifying this flavour correctly. Caramel was the second most commonly identified correct flavour by 12.2% of all participants. Toffee was the least correctly identified flavour by 9.5% of participants. Apple wood, honey, ginger, smoke, and cinnamon were the most commonly selected incorrect flavours, as they do not exist in *Harvest Ale* craft beer.



Two-thirds of the participants in the study (66.2%) identified zero of the three correct flavours. The remaining third of participants identified either one or two correct flavours (29.7% and 4.1%, respectively). None of the study participants identified all three flavours correctly.

**Figure 41: The Most Important Visual Cue Used to Make Flavour Choices for Harvest Ale Craft Beer**






The most important visual cue participants used to make flavour choices was the images/graphics (54.7%), followed by beer name (23.6%), colours (12.6%), fonts (6.1%), additional words (2.0%), and other (0.7%). The one respondent who selected "other" did not enter free-form text. The least important visual cue that participants did not use to make flavour choices for this craft beer label was fonts (47.3%), followed by additional words (25.0%). Beer name (11.5%), colours (8.1%), and images/graphics (8.1%) had fairly equal distribution.

Participants' qualitative observations concerning the flavours they associated with the visual cues for *Harvest Ale* craft beer include the following comments:

> "The words indicating "all nature, no preservatives" would be the first thing that would draw me in and secondly the image of the harvest moon and the

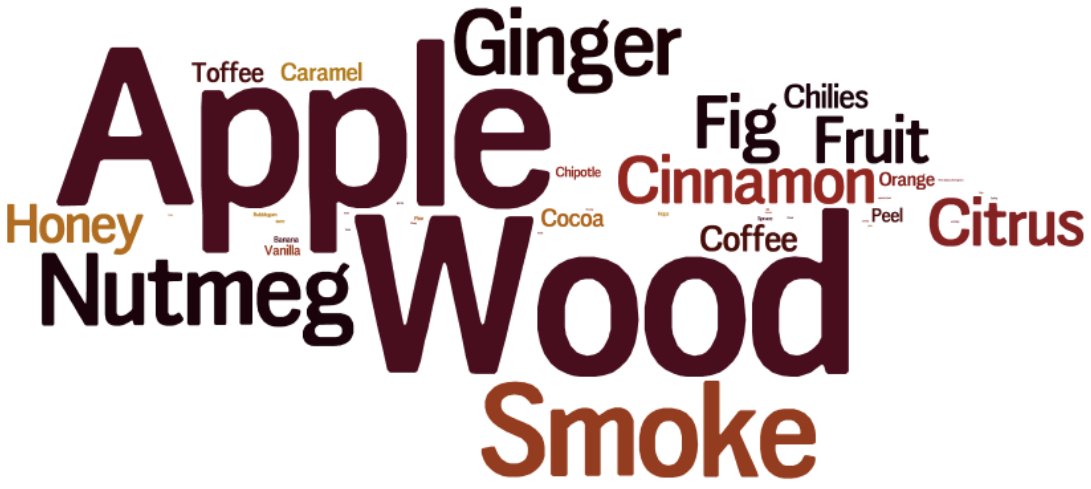
grain field. There is no indication of the product other than the fact that it is called "Beer". It's not clear what you are buying from a flavour point of view."

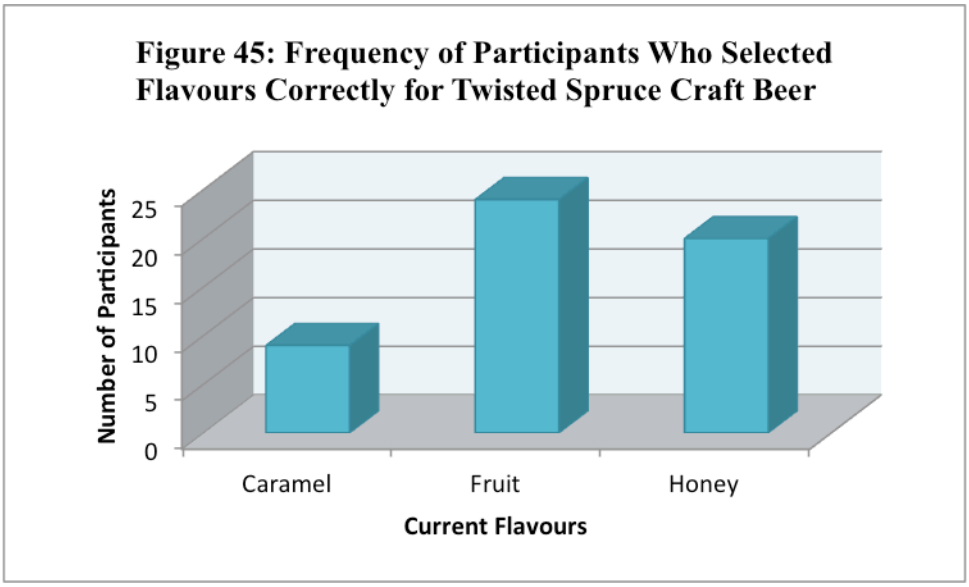
"With the name and picture, a hoppy beer?!?"

Figure 43: *Highlander Brew Co.'s Twisted Spruce* Label


(Twisted Spruce, n.d.)

Figure 44: *Twisted Spruce* Word Cloud of Flavours Selected by Participants

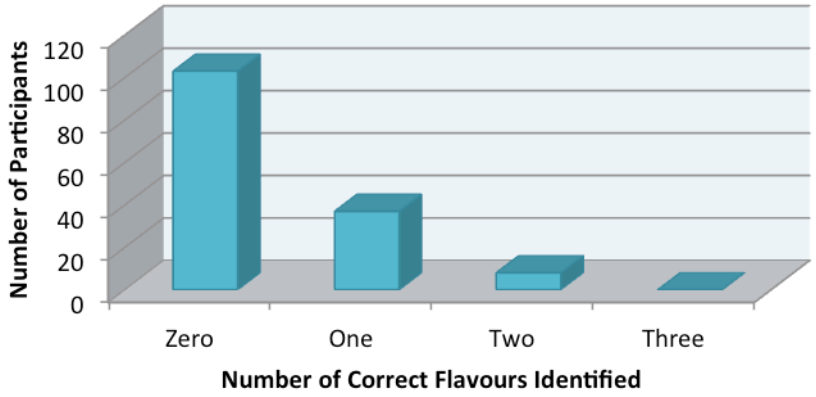



As visually communicated through the word cloud for *Twisted Spruce* craft beer, the most commonly selected of the three correct flavours was fruit with only a small percentage of participants (16.2%) identifying this flavour correctly. Honey was the

second most commonly identified correct flavour by 13.5% of all participants. Caramel was the least correctly identified flavour by 6.1% of participants. Apple wood was overwhelmingly the most commonly selected incorrect flavour, as it does not exist in *Twisted Spruce* craft beer. Ginger, nutmeg, smoke, and cinnamon were also commonly selected incorrect flavours.

**Figure 46: Frequency of Number of Correct Flavours Identified for Twisted Spruce Craft Beer**




Over two-thirds of participants in the study (69.6%) identified zero of the three correct flavours. One-quarter of participants (25.5%) identified one of the three correct flavours. The remaining participants (5.4%) identified two of the three correct flavours. None of the participants identified all three flavours correctly.

**Figure 47: The Most Important Visual Cue Used to Make Flavour Choices for Twisted Spruce Craft Beer**

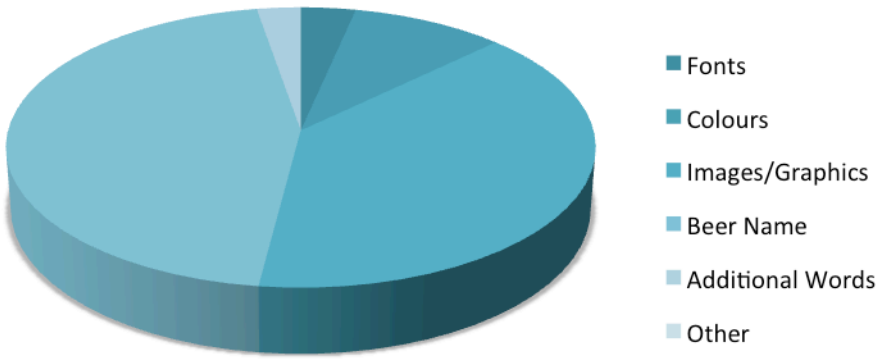
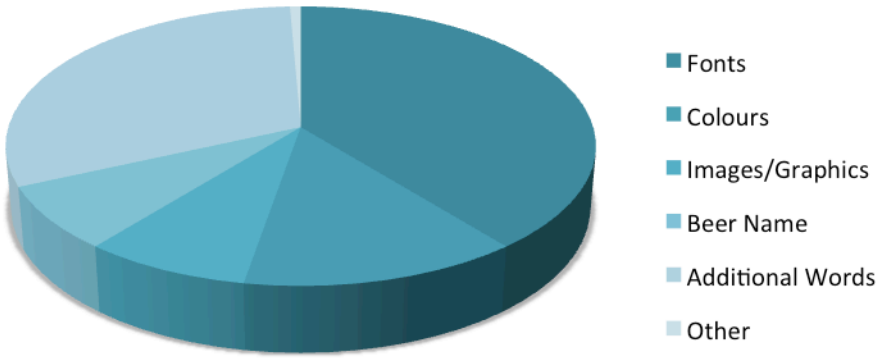



**Figure 48: The Least Important Visual Cue Used to Make Flavour Choices for Twisted Spruce Craft Beer**




The most important visual cue participants used to make flavour choices was the beer name (45.3%), followed by images/graphics (39.2%), colours (9.5%), fonts (3.4%), and additional words (2.7%). The least important visual cue that participants did not use to make flavour choices for this craft beer label was fonts (39.2%), followed by

additional words (31.1%) and colours (13.5%). Images/graphics (8.1%) and beer name (7.4%) were relatively equal.

Participants' qualitative observations concerning the flavours they associated with the visual cues for *Twisted Spruce* craft beer include the following comments:

> "Seems to appeal to a person rather than a taste."

> "The image of the Canadian Shield gives the impression that it will be strong, basic beer that represents the Canadian experience."

> "It seems like it would taste earthy and fresh."

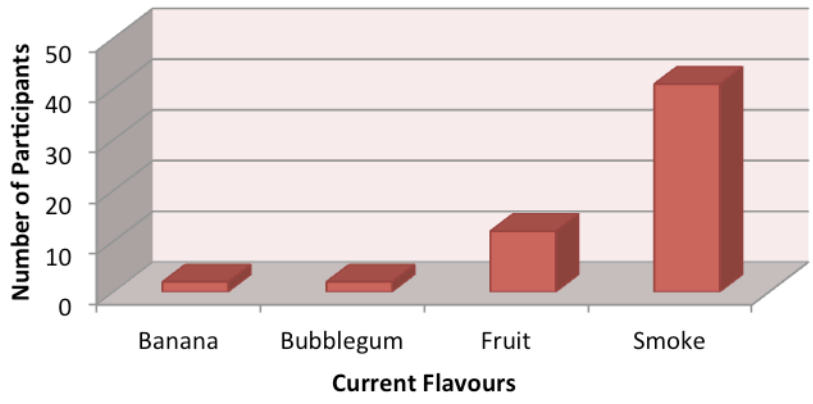
> "This one was impossible to tell the flavour of. No hints."

Figure 49: *Railway City Brewing Company's Iron Spike* Label


(Iron Spike, n.d.)

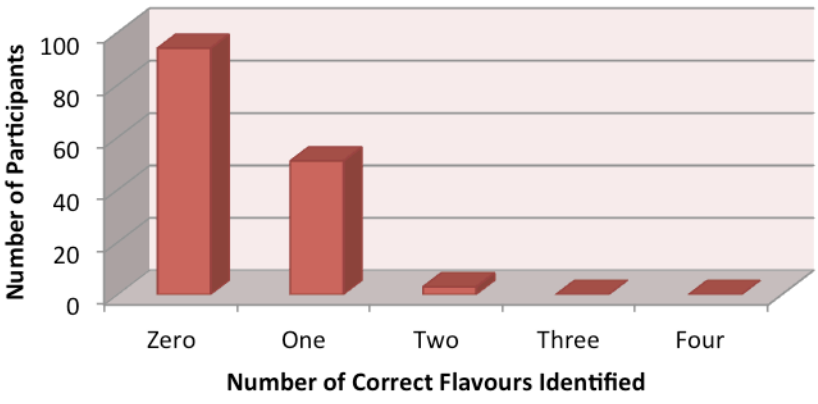
Figure 50: *Iron Spike* Word Cloud of Flavours Selected by Participants

**Figure 51: Frequency of Participants Who Selected Flavours Correctly for Iron Spike Craft Beer**




As visually communicated through the word cloud for *Iron Spike* craft beer, the most commonly selected of the four correct flavours was smoke with approximately one-quarter of participants (27.7%) identifying this flavour correctly. Fruit was the second most commonly identified correct flavour by 8.1% of all participants. Banana and bubblegum were the least correctly identified flavours (each identified by only 1.4% of participants). Cinnamon, caramel, apple wood, and coffee were the most commonly selected incorrect flavours, as they do not exist in *Iron Spike* craft beer.

**Figure 52: Frequency of Number of Correct Flavours Identified for Iron Spike Craft Beer**



Almost two-thirds of participants in the study (63.5%) identified zero of the four correct flavours. Just over one-third of participants (34.5%) identified one of the four correct flavours. All participants (100%) identified two or fewer of the four correct flavours.

**Figure 53: The Most Important Visual Cue Used to Make Flavour Choices for Iron Spike Craft Beer**

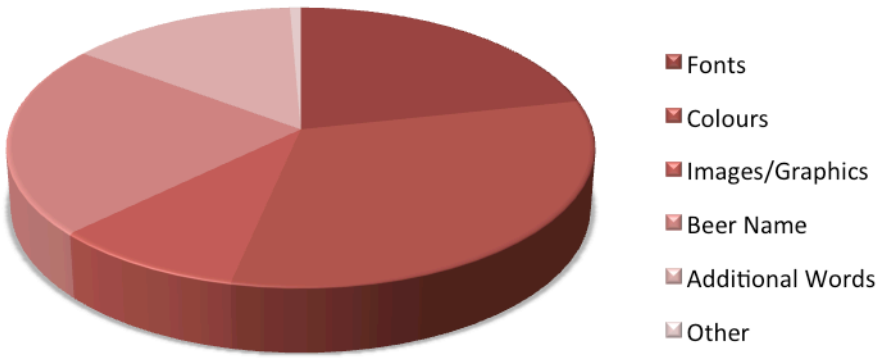
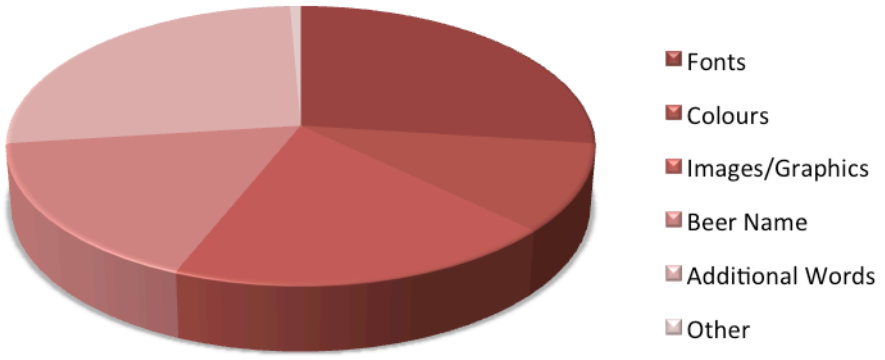



**Figure 54: The Least Important Visual Cue Used to Make Flavour Choices for Iron Spike Craft Beer**



The most important visual cue participants used to make flavour choices was colours (31.8%), followed by beer name (22.3%), fonts (21.6%), additional words (14.2%), images/graphics (9.5%), and other (0.7%). The one respondent who selected “other” did not enter free-form text. The least important visual cue that participants did not use to make flavour choices for this craft beer label was fonts (27.0%), followed by additional words (26.4%), images/graphics (18.9%), beer name (16.9%), colours (10.1%), and other (0.7%). The one respondent who selected “other” did not enter free-form text.

Participants’ qualitative observations concerning the flavours they associated with the visual cues for *Iron Spike* craft beer include the following comments:

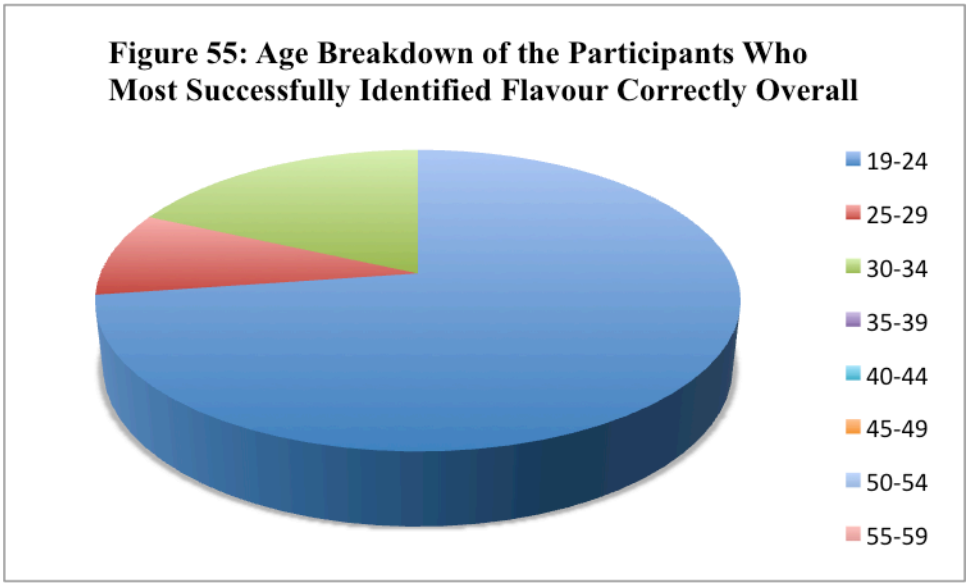
> “The name "Iron Spike" beer doesn't give me any clues to the flavour of the beer. The "Amber Ale" is the only indication what type of beer we're dealing with. I guess the Iron Spike is to show it's strong, aggressive, but my impression that an amber beer is more mellow.”

> “Amber ale always taste like pennies or what I think pennies would taste like - or iron.”

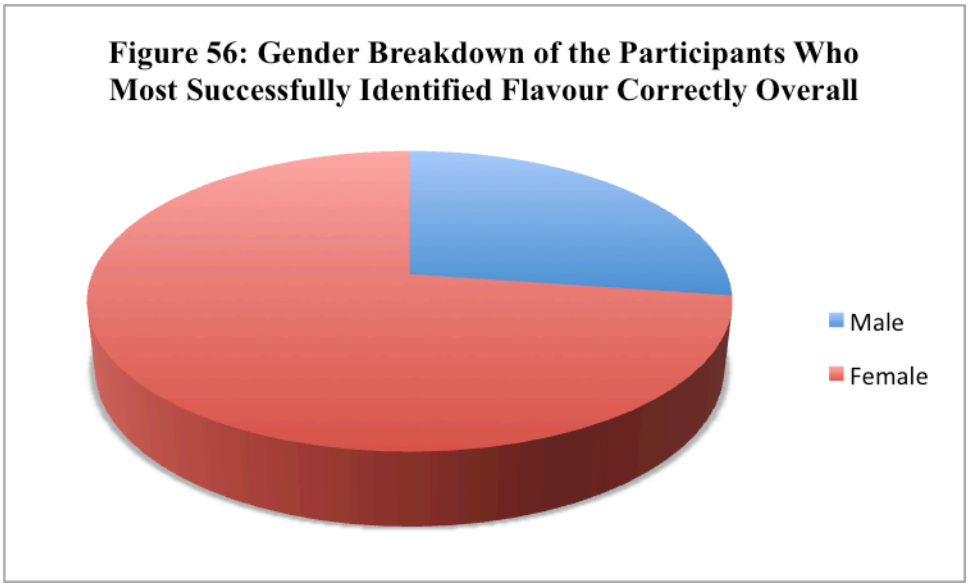
### *C. Profile of Top Participants Who Most Successfully Identified Flavour Correctly Overall (n=11)*

Table 1: Breakdown of Flavours Identified Correctly for Each of the Seven Craft Beer Examples by the Participants Who Most Successfully Identified Flavour Correctly Overall

| **Participants Who Most Successfully Identified Flavours** | **Most Successful Flavour Identifier #1** | **Most Successful Flavour Identifier #2** | **Most Successful Flavour Identifier #3** | **Most Successful Flavour Identifier #4** | **Most Successful Flavour Identifier #5** | **Most Successful Flavour Identifier #6** | **Most Successful Flavour Identifier #7** | **Most Successful Flavour Identifier #8** | **Most Successful Flavour Identifier #9** | **Most Successful Flavour Identifier #10** | **Most Successful Flavour Identifier #11** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Channel Ocho*** **(7 Flavours)** | 3 | 3 | 2 | 5 | 4 | 2 | 4 | 4 | 2 | 3 | 5 |
| ***Netherworld*** **(5 Flavours)** | 4 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| ***Winter Ale*** **(4 Flavours)** | 2 | 3 | 3 | 0 | 3 | 4 | 3 | 3 | 3 | 3 | 2 |
| ***Spring Maple*** **(5 Flavours)** | 1 | 1 | 0 | 2 | 0 | 2 | 2 | 1 | 2 | 1 | 3 |
| ***Harvest Ale*** **(3 Flavours)** | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 1 | 1 |
| ***Twisted Spruce*** **(3 Flavours)** | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 2 | 0 |
| ***Iron Spike*** **(4 Flavours)** | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| **Frequency** | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 13 | 14 |
| **Percentage Correct (31 Total)** | 35.5% | 35.5% | 38.7% | 38.7% | 38.7% | 38.7% | 38.7% | 38.7% | 38.7% | 41.9% | 45.2% |




The group of participants who most successfully identified flavours overall is made up of 11 individuals. The most successful participant identified 14 of 31 (45.2%) total correct flavours. One participant identified 13 of 31 (41.9%) total correct flavours, seven participants (63.6%) identified 12 of 31 (38.7%) total correct flavours, and two participants (18.2%) identified 11 of 31 (35.5%) total correct flavours.




The majority of the most successful participants were in the 19-24 age bracket (72.7%), followed by the 30-34 age bracket (18.2%), and 25-29 age bracket (9.1%).

The majority of participants who most correctly identified flavours overall are female (72.7%) and the remaining male (27.3%). These results are inline with the overall demographic composition of all study participants.

**Figure 57: Beer Buying Habits of the Participants Who Most Successfully Identified Flavour Correctly Overall**

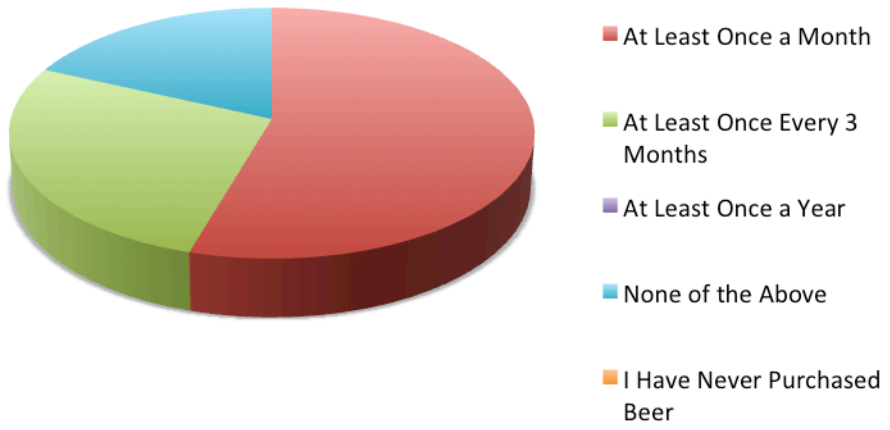
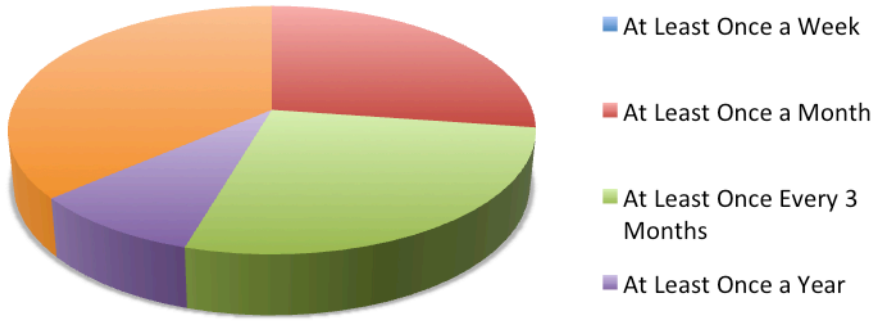


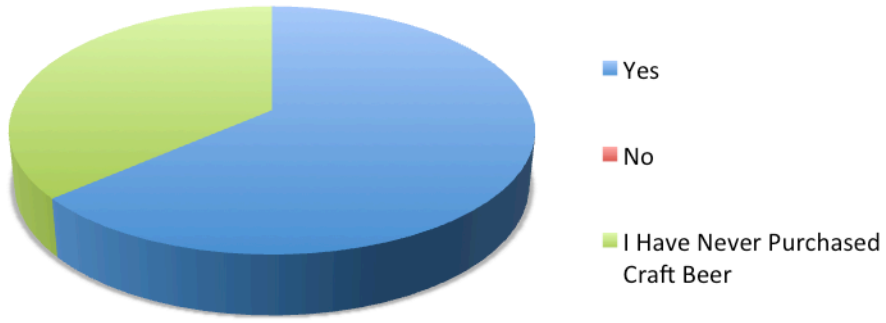

**Figure 58: Craft Beer Buying Habits of the Participants Who Most Successfully Identified Flavour Correctly Overall**




Furthermore, the majority of the participants who most successfully identified flavour correctly overall buy beer at least once a month (54.6%), however a significant portion

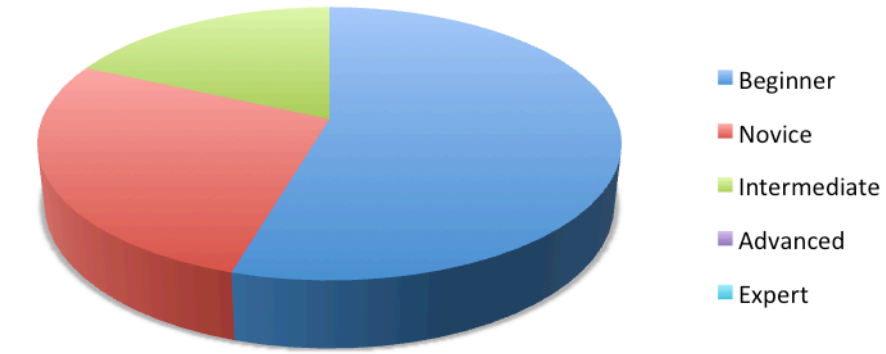
of these participants (36.4%) have never purchased bottled or canned craft beer from a retailer. The remaining participants buy craft beer at least once a month (27.3%), at least once every three months (27.3%), or at least once a year (9.1%).

**Figure 59: Craft Beer Purchases Made Soley on the Label of the Participants Who Most Successfully Identified Flavour Correct Overall**




The majority of these participants (63.6%) have purchased craft beer based only on the label and the remaining participants (36.4%) have never purchased craft beer.

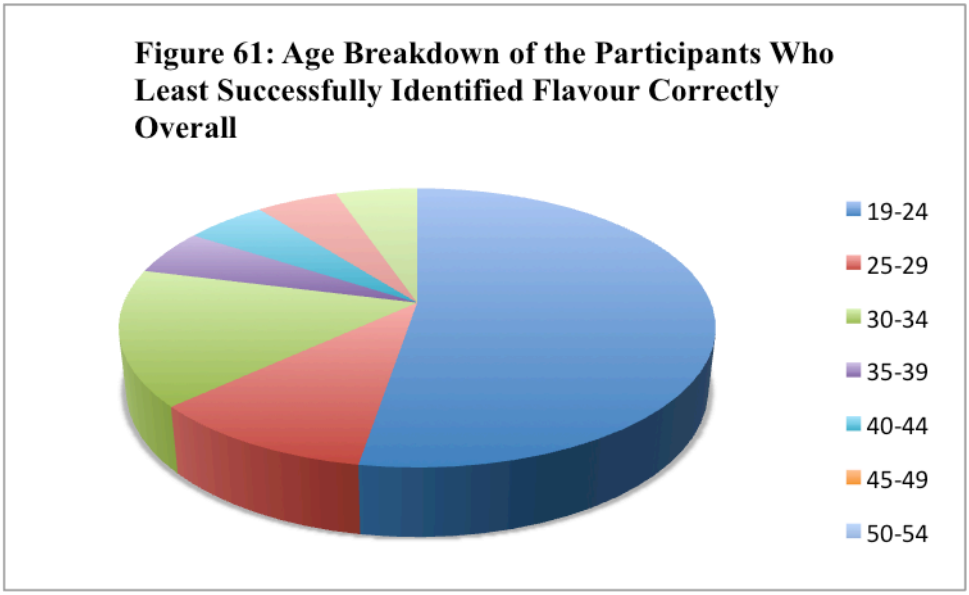
**Figure 60: Self-Assessed Level of Craft Beer Expertise of Participants Who Most Successfully Identified Flavour Correctly Overall**




Finally, the majority of the participants (54.5%) who were successful in identifying the most flavours correctly assessed themselves as beginners regarding how much they

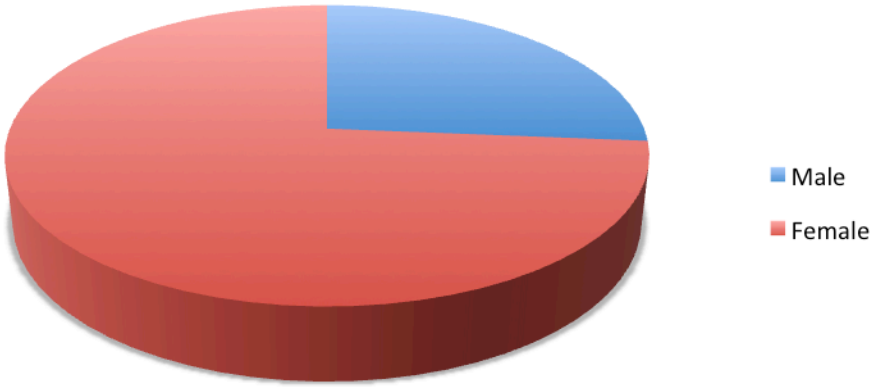
know about craft beer. This is followed by participants who assessed their level of craft beer knowledge as novice (27.3%), and then those who assessed themselves as intermediate (18.2%). None of the participants who identified the most flavours correctly identified themselves as either advanced or expert.

***D. Profile of Participants Who Identified Less Than 10% of the Flavours Correctly Overall (n=19)***




The group of participants who least successfully identified flavours overall is made up of 19 individuals. The least successful participant identified 1 of 31 (3.2%) total correct flavours. The majority of the least successful participants were in the 19-24 age bracket (52.6%), followed by the 30-34 age bracket (15.8%), and 25-29 age bracket (10.5%).

**Figure 62: Gender Breakdown of the Participants Who Least Successfully Identified Flavour Correctly Overall**




The majority of participants who least correctly identified flavours overall are female (73.7%) and the remaining male (26.3%). These results are inline with the overall demographic composition of all study participants.

**Figure 63: Beer Buying Habits of the Participants Who Least Successfully Identified Flavour Correctly Overall**

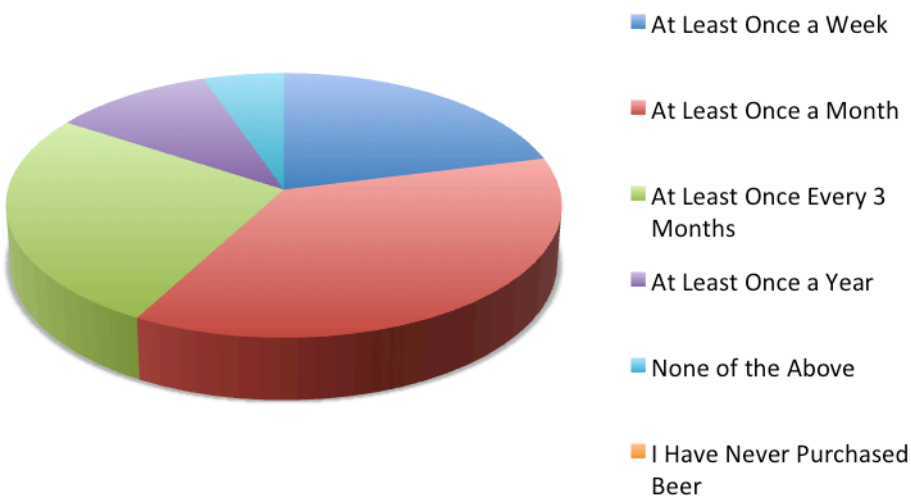
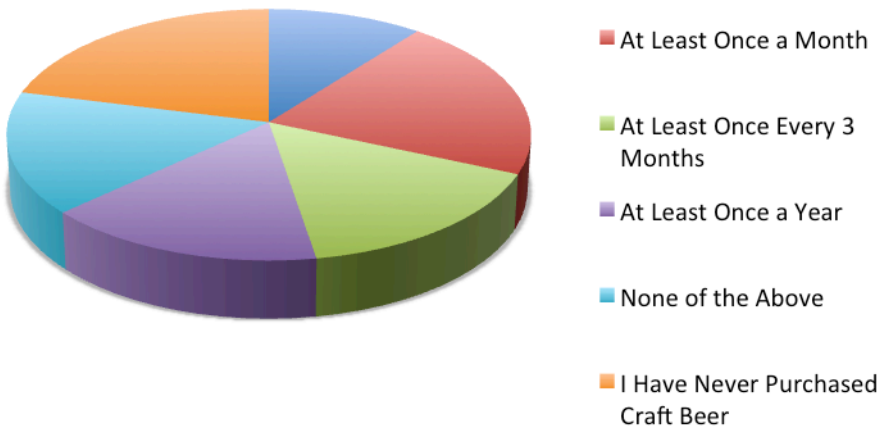
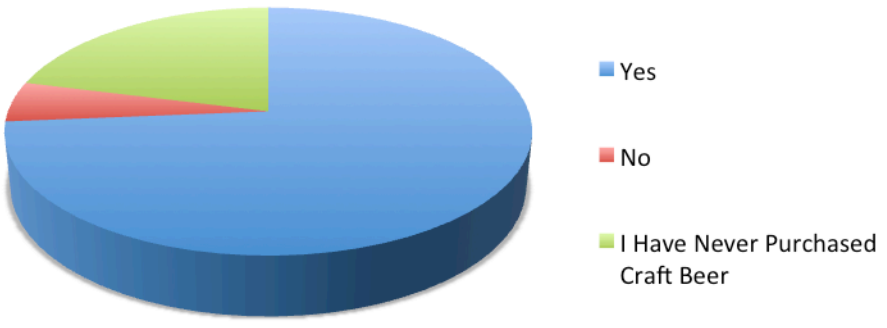


**Figure 64: Craft Beer Buying Habits of the Participants Who Least Successfully Identified Flavour Correctly Overall**



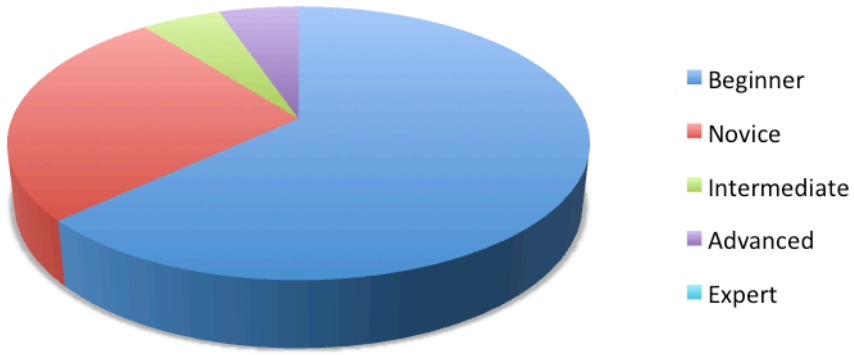

Furthermore, the largest percentage of these participants (36.8%) buy beer at least once a month, however a significant portion of these participants (21.1%) have never purchased bottled or canned craft beer from a retailer.

**Figure 65: Craft Beer Purchases Made Solely on the Label of the Participants Who Least Successfully Identified Flavour Correctly Overall**



The majority of these participants (73.7%) have purchased craft beer based only on the label, a smaller percentage (5.3%) have never purchased craft beer based only on the label, and the remaining participants (21.1%) have never purchased craft beer.

**Figure 66: Self-Assessed Level of Craft Beer Expertise of the Participants Who Least Successfully Identified Flavour Correctly Overall**




Finally, the majority of the participants (63.2%) who identified the least number of correct flavours assessed themselves as beginners regarding how much they know about craft beer. This is followed by participants who assessed their level of craft beer knowledge as novice (26.3%), and those who assessed themselves as intermediate (5.3%), as well as those who identified themselves as advanced (5.3%). None of the participants who identified the least flavours correctly identified themselves as experts.

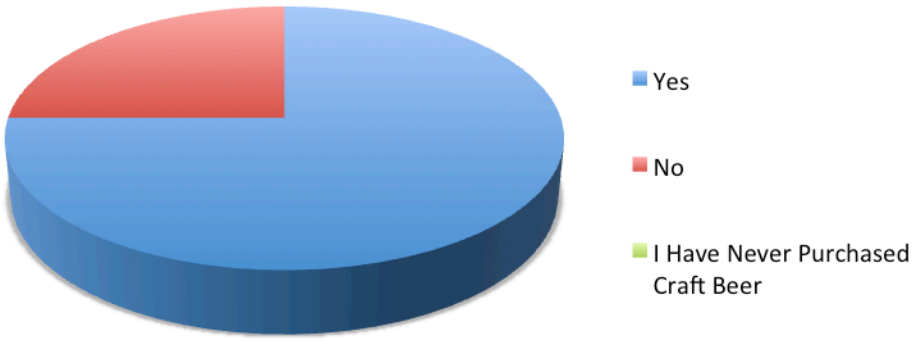
### *E. Supplementary Results Based on Craft Beer Buying Habits, Helpful Visual Cues, and Misleading Visual Cues*

Table 2: Identification of Correct Flavours by Participants Who Are Frequent Craft Beer Buyers (Buy Craft Beer at Least Once a Week) (n=8)

| **Participants Who Buy Craft Beer At Least Once a Week** | **Frequent Craft Beer Buyer #1** | **Frequent Craft Beer Buyer #2** | **Frequent Craft Beer Buyer #3** | **Frequent Craft Beer Buyer #4** | **Frequent Craft Beer Buyer #5** | **Frequent Craft Beer Buyer #6** | **Frequent Craft Beer Buyer #7** | **Frequent Craft Beer Buyer #8** |
|---|---|---|---|---|---|---|---|---|
| **Channel Ocho (7 Flavours)** | 3 | 2 | 3 | 1 | 2 | 4 | 2 | 0 |
| **Netherworld (5 Flavours)** | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 1 |
| **Winter Ale (4 Flavours)** | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 0 |
| **Spring Maple (5 Flavours)** | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 |
| **Harvest Ale (3 Flavours)** | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| **Twisted Spruce (3 Flavours)** | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| **Iron Spike (4 Flavours)** | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| **Frequency** | 7 | 5 | 7 | 3 | 9 | 10 | 4 | 2 |
| **Percentage Correct (31 Total)** | 22.6% | 16.1% | 22.6% | 9.7% | 29.0% | 32.3% | 12.9% | 6.5% |

Frequent craft beer buyers' (defined as participants who buy craft beer at least once a week) total percentage of correct flavours identified ranged from 2 of 31 total correct flavours (6.5%) to 10 of 31 total correct flavours (32.3%).

**Figure 67: Willingness of Frequent Craft Beer Buyers to Purchase a Craft Beer Product Based Only on the Label**




Three-quarters (75%) of frequent craft beer buyers have purchased craft beer based only on the label. The remaining one-quarter (25%) have not purchased crafter beer based only on the label.

Table 3: Most Important Visual Cue Respondents Selected For Each of the Seven Packaging Examples Even Though They Did Not Guess One Flavour in the Beer Correctly

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total Respondents Who Did Not Guess Any of the Correct Flavours |
|---|---|---|---|---|---|---|---|
| **Channel Ocho** | 0 | 4 | 4 | 1 | 0 | 0 | 9 |
| **Netherworld** | 4 | 8 | 28 | 4 | 4 | 1 | 49 |
| **Winter Ale** | 5 | 6 | 11 | 11 | 1 | 1 | 35 |
| **Spring Maple** | 2 | 3 | 14 | 22 | 10 | 0 | 51 |
| **Harvest Ale** | 4 | 10 | 56 | 24 | 3 | 1 | 98 |
| **Twisted Spruce** | 4 | 5 | 41 | 50 | 3 | 0 | 103 |
| **Iron Spike** | 16 | 34 | 10 | 19 | 14 | 1 | 94 |
| **Total** | 35 | 70 | 164 | 131 | 35 | 4 | 439 |
| **Percentage** | 8.0% | 16.0% | 37.4% | 29.8% | 8.0% | 0.9% | 100% |

For the participants who did not identify one flavour correctly in one or more of the seven beer samples, their identification of most important visual cue has been tabulated. Regarding the label for *Flying Monkey's Netherworld Cascadian Dark Ale*, 49 of 148 total participants (33.1%) identified zero flavours of craft beer correctly. Of those 49 participants, the majority (28 participants or 57.1%) relied on images/graphics as the most important visual cue used to identify flavour. Furthermore, 98 of 148 total participants (66.2%) identified zero flavours in *F&M Brewery's Harvest Ale* craft beer correctly. Of those 98 participants, the majority (56 participants or 57.1%) relied on images/graphics as the most important visual cue used to identify flavour. In fact, for

four of the seven label samples, "images/graphics" was most frequently identified as the most important visual cue or was tied for the most frequent choice. Furthermore, beer name had the highest frequency (19 participants or 20.2%) for most important visual cue for *Railway City's Iron Spike* craft beer among participants who identified zero correct flavours. Beer name also had the highest frequency for *Highlander Brew Co.'s Twisted Spruce* (50 participants or 48.5%) and *Lake of Bays Brewing Company's Spring Maple* (22 participants or 43.2%).

**Figure 68: Most Important Visual Cues Used by Participants Who Successfully Identified All Flavours in Great Lake Brewery's Winter Ale Correctly**

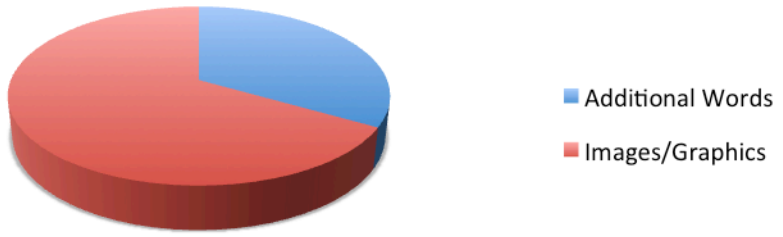
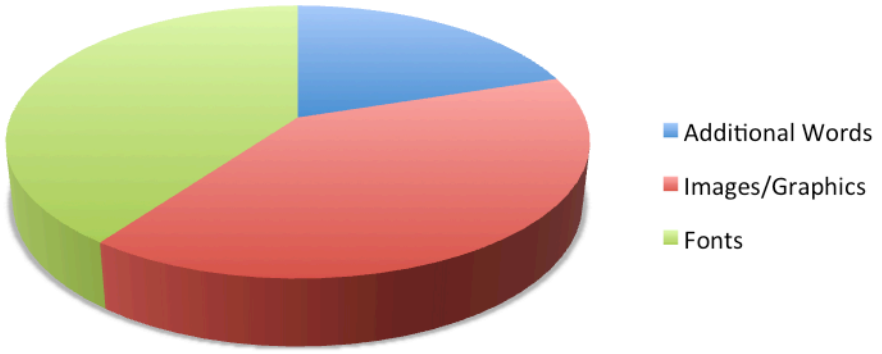



**Figure 69: Least Important Visual Cues Used by Participants Who Successfully Identified All Flavours in Great Lake Brewery's Winter Ale Correctly**



*Great Lake Brewery's Winter Ale* craft beer was the only label sample where any participants identified all flavours correctly. A total of five participants identified all flavours correctly. Of the five, four (80%) revealed that "additional words" was the most important visual cue used to identify flavours, while one of five (20%) revealed that "images/graphics" was the most important visual cue used to identify flavours. Conversely, two of the five participants (40%) identified "fonts" as the lease important visual cue, two of the five participants (40%) identified "images/graphics" as the least important visual cue, and one of the five participants (20%) identified "additional words" as the least important visual cue to identify flavours.

## *V. Discussion/Conclusion*

This research project examines whether or not the unique flavour profiles, that differentiate craft beers from their competitors, are communicated effectively to target consumers through the products' packaging. In analyzing the results, it is clear that identifying flavours correctly based on the visual cues presented on craft beer labels (even when provided with a list to choose from) is very difficult. Even the participants who proved to be the very best identifiers of flavour, selected the correct responses less than half of the time. It is not as easy at it looks to identify flavour based solely on the label and even the most accurate participant only identified 45.2% total flavours correctly, followed by a participant who identified 41.9% total flavours correctly, decreasing to participants who identified only 3.2% of flavours correctly (only identifying one out of 31 flavours in the entire study correctly).

Although most participants had difficulty identifying flavour correctly across the variety of craft beer labels presented in the questionnaire, it could be argued that craft beer brand owners do not care whether important flavour information is communicated to the public in general, but only that it is communicated to their target consumers. Frequent craft beer buyers (defined as buying craft beer at least once a week) describe the buying habits of eight of the study participants (n=8). Of the eight participants (who make up craft brewers' target consumers), the most successful identified 9 of 31 flavours correctly (29%) and the least successful identified only 2 of 31 flavours correctly (6.5%). Based on these figures, important flavour information that may help dedicated craft beer consumers choose one beer over another is not communicated clearly via the product's label.

### *A. Communicating Flavour Through Labels*

Based on the examples examined in this exploratory study, labels do not communicate unique flavour profiles very well. There were a couple of exceptions, whereby participants had greater success selecting correct flavours, as well as one label where very few participants identified any flavours correctly. Both highs and lows will be discussed to discover what about the successful labels was communicated to participants and what about the unsuccessful label was not communicated to participants, as well as the implications of these findings.

The label examples that were most successful from a flavour identification standpoint included *Beau's All Natural Brewing Company's Channel Ocho* craft beer, as well *Great Lake Brewery's Winter Ale* craft beer. In regards to *Channel Ocho*, this label had the highest percentage of correct responses for any one flavour. Over three-quarters of all participants (75.7%) identified "chilies" correctly. Interestingly, participants overall did not identify one dominant visual cue as the most important to make flavour choices. In fact, the distribution across the four most frequently selected visual cues was fairly even (colours - 23%, images/graphics - 23%, additional words - 25%, and beer name - 27.7%). Furthermore, some participants provided qualitative data to help explain their flavour choices, including one participant who stated: "After seeing the word "Mexican Spiced", I started associating Mexican flavours (like chilies, coffee) with the label."

Furthermore, *Great Lake Brewery's Winter Ale* was the only label of the seven label samples where any participants identified all flavours correctly. A total of five participants received perfect scores, with an additional 22 participants (14.9%) identifying

75% of the flavours correctly, demonstrating that the label communicated flavours fairly well, relative to the other samples. Almost half of all participants (48.6%) relied on additional words on the craft beer's label as their most important visual cue for identifying flavours. Participants relied on the beer name as the second most important visual indicator (20.3.%). Some of the comments made by participants reinforce these two visual cues that were most relied upon by the participants as a whole, including one participant who stated: "With a name like Winter Ale you think of more winter themes, but you also read the description and it tells you what the beer should taste like."

More specifically, four out of five (80%) of the participants who identified all flavours correctly on the *Winter Ale* label revealed that "additional words" was the most important visual cue they used to determine flavours. The other participant (20%) who identified all flavours correctly revealed that "images/graphics" was the most important visual cue for identifying flavours. Alternatively, there were contradictory results when these five participants revealed the least important visual cue they did not use to identify flavour. Two of the five participants (40%) identified "fonts" as the least important visual cue, two of the five participants (40%) identified "images/graphics" as the least important visual cue, and the final participant (20%) revealed that "additional words" was the least important visual cue used to determine flavour.

The quantitative and qualitative data for both *Channel* Ocho and *Winter Ale* craft beers suggest that it is not just one visual cue that works independently to help consumers identify flavours. The data also suggests that different visual cues work for different people to identify flavours. The different visual cues presented on the label may work together with one another to help the viewer determine what the label is trying to

communicate. Furthermore, the visual cues that proved to be the most important indicator of flavours for some participants were the least important indicator of flavours for others, even when they ended up with the same result of correctly identifying all flavours in the beer. It is therefore not easy to determine specifically how craft beer brand owners and designers could improve the communication of flavours through one visual cue or another. If they wish to communicate certain flavours, it is best to do so through a multi-visual approach, whereby they communicate the flavours through a variety of visual cues on the label.

Concerning the craft beer that was least successful in communicating specific flavours to consumers, almost two-thirds of all participants in the study (63.5%) identified zero of the four flavours in *Railway City's Iron Spike* craft beer correctly. All participants (100%) identified two or fewer of the four correct flavours. Some of the flavours in this craft beer were fairly unusual (banana and bubblegum) and a total of 2 participants (1.4%) identified either of these unusual flavours correctly. These results are logical because there are no visual cues (fonts, colours, images/graphics, beer name, or additional words) present on the label to suggest that these flavours would be in this beer. Furthermore, the most important visual cue participants used to make flavour choices was colour (31.8%), followed by beer name (22.3%). This supports the results that participants' selected incorrect flavours not present in the beer such as cinnamon, caramel, apple wood, and coffee, which could all be represented by the deep red colour on the label or even through the name "*Iron Spike*".

### *B. The Demographic Profiles of Most and Least Successful Flavour Identifiers*

The group of most successful identifiers of flavour across all seven label samples was made up of 11 participants (n=11). The most successful participant identified 14 of 31 (45.2%) total correct flavours decreasing to participants who identified 11 of 31 (35.5%) total correct flavours. The majority of the most successful participants were in the 19-24 age bracket (72.7%), followed by the 30-34 age bracket (18.2%), and 25-29 age bracket (9.1%). The majority of participants who most often identified flavours correctly overall were female (72.7%) and the remaining male (27.3%). None of the self-identified "craft beer experts" were part of the top scoring group.

The group of least successful identifiers of flavour across all seven label samples (defined as participants who identified less than 10% of the flavours correctly) was made up of 19 participants (n=19). The majority of the least successful participants were in the 19-24 age bracket (52.6%), followed by the 30-34 age bracket (15.8%), and 25-29 age bracket (10.5%). The majority of participants who least correctly identified flavours overall were female (73.7%) and the remaining male (26.3%). None of the self-identified "craft beer experts" were part of the bottom-scoring group.

The demographic profiles for both the top and the bottom identifiers of flavour were nearly identical. Also, these results were inline with the overall demographic composition of all study participants. Based on the convenience sample used in this study, this data suggests that age and gender cannot predict who will identify flavours successfully or unsuccessfully. This is important for craft beer brand owners to understand, as demographics are not a factor that affects communication of flavour as decoded by

consumers. Whether the craft beer consumer is 28 or 82, and whether they are male or female, these factors are not enough to predict whether or not the consumer will understand flavours that are communicated through the label.

### *C. Importance of Visual Cues in Identifying Flavours*

The results regarding which visual cue participants used most often to help them identify flavour indicated that there were a variety of different visual cues used and the visual cues changed depending on the labels presented to participants. For example, when the front label contained additional words, phrases, or descriptions that hinted at specific flavours (i.e. "Strong beer brewed with orange peel and spice" on *Great Lake Brewery's Winter Ale* label), it was the additional words that became the most important visual cue used to identify flavour. This was not the case, however, for labels that contained additional words, phrases, or descriptions that did not reference flavour directly (i.e. "All natural no preservatives" on *F&M Brewery's Harvest Ale* label). The results revealed that no one visual cue (fonts, colours, images/graphics, beer name, or additional words) was consistently chosen as the most important visual cue when making flavour choices. The results show that the most important visual cue consumers rely on to decode flavours changes depending on the label.

"Fonts" was consistently chosen as the least important visual cue used to make flavour choices for six of the seven labels in the study. Therefore, it may be stated that font choice does not matter very much when communicating flavour. It is very possible, however, that the typefaces presented on the labels offered subconscious information to steer

participants towards one flavour or another. This is a different question for a different study but fonts did not appear to help consumers identify flavour in this study.

The data for all seven label samples was compiled based on the participants who identified none of the flavours correctly for each of the seven craft beers. The most important visual cue that the participants identified as the one they relied on for each label was recorded and tabulated. Which visual cue was potentially misleading consumers to identify flavours incorrectly? Forty-nine of 148 total participants (33.1%) identified zero flavours of *Flying Monkey's Netherworld Cascadian Dark Ale* craft beer correctly. Of those 49 participants, the majority (28 participants or 57.1%) relied on images/graphics as the most important visual cue used to identify flavour. Furthermore, 98 of 148 total participants (66.2%) identified zero flavours in *F&M Brewery's Harvest Ale* craft beer correctly. Of those 98 participants, the majority (56 participants or 57.1%) relied on images/graphics as the most important visual cue used to identify flavour. In fact, for four of the seven label samples, "images/graphics" was most frequently identified as the most important visual cue or was tied for the most frequent choice. This relates back to semiotic theory. The graphics displayed on the *Netherworld* craft beer label include four green "gremlins" sitting around a table with a variety of items on the table (please refer to Figure 19 to see the label imagery). It is not surprising that these graphics did not provide participants with a clear sense of what was in the beer from a flavour perspective. From the point of view of *Flying Monkeys Craft Brewery*, it would be surprising if they designed the imagery on *Netherworld Cascadian Dark Ale* to communicate specific flavours. Instead, the graphics included on the front label were likely meant to surprise

consumers and provide them with imagery consistent with the brand's tagline "normal is weird".

### *D. The Future of Visual Systems in Flavour Communication of Craft Beer*

Based on the data collected and analyzed in this exploratory study, it is clear that beer labels do not communicate unique flavours very well. Flavour is craft beers' greatest strategic advantage over large, commercially brewed batches of beer and it is important that this competitive advantage is clearly communicated to consumers in order for them to make more informed purchasing decisions. Perhaps it is not through the visual cues on the labels that the unique flavours should be communicated. Instead, by leveraging standardized identification systems already in place (such as in-store shelf tag system used by the *LCBO* in Ontario), flavour can be categorized and communicated to consumers for increased understanding and awareness.

Currently, the *LCBO* uses "beer descriptors" on their in-store shelf tags and they have provided supplementary printed material to educate customers about their standardized flavour categories. The *LCBO* published a short printed document that included a "craft beer decision tree", encouraging customers to use a three-step system to choose the beer that is right for them. First, consumers are encouraged to select the body (mouthfeel, texture, weight). Second, they are encouraged to select the flavour/aroma (malty, roasted, fruity, floral, hoppy, spicy). Lastly, they are encouraged to find their favourite beer using the body and flavour/aroma descriptors visible on the in-store shelf tags (i.e. light and malty) (*Beer world: Tap into the adventure*, n.d.). (Please refer to Figure 1 to view the "beer descriptors" decision tree and in-store shelf tags.)

As shown by the “craft beer decision tree” in this free *LCBO* publication, the *LCBO* is already using colour as a visual cue to communicate both body and flavour/aroma. “Light” is yellow, “medium” is red, and “full” is black, which mimics the colours consumers would expect in each of these beers. The *LCBO* is also using colour as a visual cue to communicate flavour/aroma, whereby each of the flavour categories is represented by a different colour that resonates clearly with that specific flavour. A strong comparison can be made between the colours chosen by the *LCBO* for the six flavour/aroma categories and the “circle of scents” by Karl-Heinz Bork (shown in Figure 5). Below is a chart that describes how these two visual flavour/scent identification systems compare to one another.

Table 4: *LCBO* Flavour/Aroma Categories Relative to Bork's "Circle of Scents"

| ***LCBO* Flavour/Aroma Category** | **Description of *LCBO* Flavour/Aroma Category** | **Colour for *LCBO* Flavour/Aroma Category** | **Most Closely Corresponding Scent (and Colour) From Bork's Chart** |
|---|---|---|---|
| Malty | Bread crust, caramel, molasses, chocolate, cereal grains, brown sugar | Gold | Amber (Dark Brown) |
| Roasted | Coffee, dark chocolate, toasted dark bread, toasted nuts | Dark Brown | Nutty-Dark (Red) |
| Fruity | Strawberry, plum, pear, ripe banana, orange, lemon, lime | Orange | Fruity-Light (Orange) |
| Floral | Lavender, white flower, rose petal, spring meadow | Purple/Lilac | Sweet-Aromatic (Pink) |
| Hoppy | Citrus, grass, herbal, green tea, pine, grapefruit pith, overripe pineapple | Green | Green (Lime Green) |
| Spicy | Pepper, cinnamon, nutmeg, coriander, ginger, clove | Red | Aromatic-Spicy (Red) |

As outlined in the chart above, four of the six flavour/aroma categories used by the *LBCO* employ the same colours as those depicted in Bork's "circle of scents" chart when compared to the most closely corresponding category. The remaining two flavour/aroma categories were quite close in colour to those depicted within the "circle of scents". This consistency is very encouraging and it helps support the idea that colour can be used as a visual indicator to help standardize the communication of flavours and aromas. These colours act as learned sign systems that visually communicate complex beer flavours in an easily understandable format to consumers.

Furthermore, based on research conducted as part of the literature review, people are innately driven to create categories, as a way to make sense of the world around them (Weinschenk, 2011). It would be in the craft brewers' best interests to work with retailers (such as the *LCBO* and *The Beer Store* in Ontario) to emphasize, expand, and otherwise more broadly communicate the "beer descriptors" identification system currently used on store shelves by the *LCBO* (please refer to Figure 1 above). Currently, the *LCBO* uses colour to communicate the six flavour/aroma categories in their marketing materials, but they do not use colours on store shelf tags. They only provide the written words of the body and flavour/aroma on the shelf tags and do not include the associated colours. The use of colour as a visual cue on the in-store shelf tags may help communicate flavour more visually, and therefore more effectively, to consumers.

In a study about the visual influence of packaging on in-store buying decisions described in the literature review, Clement (2007) reemphasizes the notion that consumers find products attractive if the packaging is easy to understand. The *LCBO*'s system helps to organize complex information and communicate it in a consistent way to consumers, which helps them to more easily interpret and remember the information. It is clear that consumers have trouble identifying specific flavours present in craft beer based on the label alone, so this type of standardized system will help consumers better understand the flavours contained within craft beer products. The flavour/aroma categories presented in the *LCBO*'s system (malty, roasted, fruity, floral, hoppy, spicy) help consumers better understand their own flavour preferences and identify other craft beer products that have similar flavours. Ultimately, this system will aid in bringing common language and greater understanding of the flavours contained within each craft beer product. This will

enable Ontario craft beer brand owners to use the limited space on the product's label to focus on creating compelling graphics or other visual elements that are important for communicating the brand overall.

Finally, almost one-third of all participants (64.9%) and three-quarters of frequent craft beer buyers (75%) have purchased a craft beer solely based on the label. This is an encouraging figure that reinforces the importance of spending adequate time and money to showcase strong visuals on craft beer packaging and labels. As Silayoi and Speece observe, the influence of the visual aspects of a package design (including semiotics) play a greater role with products that have a low level of involvement, such as beer (2004). Dollar-for-dollar it could be in craft breweries' best interests to invest heavily in the focus testing, design, and manufacturing of their packaging because the majority of low-involvement product purchase decisions are made in-store. The visual aspects of a package are the last chance for a company to sell their product to consumers, which may include marketing specific flavours or simply compelling graphics. Whether craft brewers intentionally try to communicate specific unique flavours through their packaging and labeling, or whether they use this space to showcase imagery that is consistent with the overall brand image, packaging should not be an afterthought for Ontario craft brewers.

### *E. Limitations of the Research*

The limitations of this study include the convenience sample, scoring system, incomplete nature of the packaging analyzed, singular visual cue selection, and the unreadable small text on some of the labels presented in the questionnaire.

A non-representative convenience sample was a limitation of this study. Almost two thirds of study participants (60.8%) fell into the 19-24 age bracket. Many of these participants were Canadian university students enrolled in a graphic communications post-secondary program. These students often work with colour, design, and type and are more fine-tuned to subtleties in visual communication because they are formally trained. In the future, this study could be repeated to a broader representative sample to increase the validity of the results.

Furthermore, the scoring system (i.e. a score out of seven correct flavours for *Channel Ocho* craft beer) did not take into account how many flavours the participants identified incorrectly, only the correctly identified flavours. Although no respondent selected all 20 flavours for any of the seven labels they were shown in the questionnaire, if any participant chose to do this, they would be guaranteed to have received 100% accuracy in the scoring system. Therefore, in future studies it would be beneficial to analyze the results of both the correct and incorrect responses, establishing a more accurate and representative scoring system.

In reference to the visual label samples shown to participants in the questionnaire, only the front labels were provided, not the back labels or the secondary packages (boxes, cartons, or carry cases). These additional components that make up the overall package typically feature the same imagery presented on the primary label, however they often contain more information, including a short paragraph about the flavours contained inside. By presenting participants with this additional packaging that they would find on store shelves, the task of identifying flavours might have been more realistic than simply asking the participant to rely on the front label.

It is apparent that visual cues (fonts, colours, images/graphics, beer name, additional words) work together with one another and are not assessed individually, as participants were asked to do in this study. For future studies similar to this one, it would be helpful to ask participants to select all of the visual cues that they used to assess a specific label in order to capture further data about which visual elements work together and which combinations of visual cues participants rely on most.

The final limitation of this study was that not all of the text on the label (representing the "additional words" visual cue in the questionnaire) was readable on screen at a small size. However when the additional words were readable and they described flavour, they were used by participants, which could indicate a limitation of the study for those labels where readability of additional words was an issue.

### *F. Areas for Further Study*

Areas for further study related to the visual communication strategies of craft beer producers include a variety of consumer behaviour-related research projects. This may include examining what drives craft beer sales (whether that is label design, perceived flavours, the novelty of the product, or a combination of all three, for example), how the tactile elements of a packages' design affect perceived quality, and how different types of marketing campaigns (in-store, promotional, event marketing, digital, multi-channel campaigns) affect the perception and sales of craft beer. Furthermore, experimentation and examination of the visual elements that can help packages stand out from the competition on store shelves (which colours and shapes to use, for example) could help

graphic designers make more informed decisions about what to include on their labels in the future.

### *G. Conclusion*

The key communication problem identified in this study was whether or not the visual elements on craft beer packaging effectively communicate important flavour information to consumers. The craft beer marketplace is booming, however brand owners have very little research available to them about how to communicate key messages through packaging design. Unique flavours are craft brewers' competitive advantage but that does not mean that specific flavour nuances are effectively communicated to, or decoded by, consumers. It is important to address this topic because the *Ontario Craft Brewers Association* (representing over 35 craft breweries across the province of Ontario) states that: "...it's taste that we're obsessed with, and taste that distinguishes us from other beers, so naturally our slogan is *Taste. The difference*" (Ontario Craft Brewers Association, 2013a). The aim of this exploratory study was to address the aspects of visual communication in packaging (typography, colour, and imagery) and their effectiveness in visually communicating the flavours of Ontario craft beers.

The results of this study showed that it is very difficult to identify specific flavours by examining only the front label of the craft beer product, even when the participant is provided with a list of flavours. The very best identifiers of flavour selected the correct flavours less than 50% of the time when assessed across all seven label samples.

Furthermore, using the data in this study, demographic information (age and gender) is not a suitable predictor for who will identify flavours correctly and who will not, as the demographic profiles of the top identifiers and bottom identifiers of flavour were almost identical. Finally, it is clear that the identification of flavour based solely in the label is difficult, however there are standardized flavour communication systems already in place in Ontario beer retailers. The *LCBO* uses their "beer descriptors" system to categorize and simplify the flavour choices for consumers. It is strongly recommended that the *LCBO* continue to expand this system and create greater awareness of its existence. In addition to increased awareness, incorporating the chosen flavour/aroma colours onto the in-store shelf tags may assist consumers with clearer visual communication of flavours through colour. As the number of craft breweries in Ontario, Canada, and the world increase, these types of standardized flavour identification systems will become more important for both brewers and consumers to aid in a common level of understanding.

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*Appendices*

### *A. Letter of Initial Contact*

Dear [*insert name*],

My name is Diana brown and I am a graduate student from the Master of Arts in Communications and Technology program at the University of Alberta. I am writing to invite you to participate in my research study entitled *A case of beer: A study to determine if the visual design elements of Ontario craft beer packaging communicates their unique flavour profiles.* You're eligible to be in this study because you are a resident of Ontario who is of legal drinking age (19+).

If you decide to participate in this study, you will answer a short, confidential online questionnaire (approximately 10 minutes). If you choose to include your email address at the end of the survey to be entered into the draw to win one of two $50 Chapters/Indigo gift cards, your answers will still be kept confidential and any links between your answers and your contact information will be severed.

Remember, this is completely voluntary. You can choose to be in the study or not. If you would like to participate, please follow this link to the questionnaire *[insert link here]* or if have any questions about the study, please contact me at dmbrown@ualberta.ca

Thank you very much.

Sincerely,

Diana Brown
MACT Graduate Student
University of Alberta
dmbrown@ualberta.ca

*[Information Letter and Consent Form attached to email.]*

### *B. Information Letter and Consent Form*

## INFORMATION LETTER and CONSENT FORM

**Study Title:** A Case of Beer: A Study to Determine if the Visual Design Elements of Ontario Craft Beer Packaging Communicates Their Unique Flavour Profiles


**Research Investigator:**
Diana Brown
University of Alberta
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Markam, ON L3P 4A9
dmbrown@ualberta.ca
416.986.2551

**Supervisor:**
Susan Colberg
University of Alberta
Department of Art & Design, 3-77B FAB
116 St. and 85 Ave.
Edmonton, AB T6G 2R3
scolberg@ualberta.ca
780.492.7859


**BACKGROUND**
You are being asked to be in this study because you are a target consumer of Ontario craft beer brands. The results of this study will be used in support of my final masters project in the University of Alberta's Master of Arts in Communication & Technology program. Once the study is complete, there is a possibility of commercialization of research findings.

**PURPOSE**
The purpose of this research is to investigate packaging design and communication for Ontario craft beer brands. This research attempts to uncover whether or not unique tasting notes of craft beers are communicated through the beers' packaging (typography, colour and imagery). The aim of this research is to inform designers and craft beer brand owners about how consumers understand flavour through packaging design.

**STUDY PROCEDURES**
The research will be conducted in the form of a questionnaire that will take approximately 10 minutes to complete. Participants will have an opportunity to answer a series of questions regarding craft beer label design. The study will begin in January 2015 and will end in March 2015. Participation in this study is voluntary and the participant may withdraw from the study at any time for any reason without penalty.

**BENEFITS**
You will benefit from this study by helping to improve the understanding of flavour profiles on craft beer packaging, ultimately making it easier to select beer containing the flavours you want. The hope is that the information learned from conducting this study will help designers better understand the connection between the description of the product on the package and consumers' opinions regarding the product inside.
There are no costs involved in being in the research and you will not be financially compensated to participate. If you wish to enter your email address at the end of the survey (your responses will be kept confidential), you will be entered into a draw to win one of two $50 Chapters/Indigo gift cards. (The odds of winning are roughly 1 in 50.)

**RISK**
Your answers will be kept confidential, including if you choose to include your email address at the end of the survey to be entered into the draw. The risk is no greater risk than responding to any consumer-oriented product questionnaire.

**VOLUNTARY PARTICIPATION**
You are under no obligation to participate in this study. Participation is completely voluntary. Even if you agree to be in the study you can change your mind and withdraw at any time before February 6th, 2015 by contacting me at dmbrown@ualberta.ca. If you choose to withdraw before clicking 'submit' in the questionnaire, your responses will not be used.

**CONFIDENTIALITY & ANONYMITY**
This research may be used for the purposes of a thesis project, research articles, presentations, teaching, and commercial use. You will not be personally identified in any of these uses. Your responses will be kept confidential, including if you choose to include your email address at the end of the survey to be entered into the draw. The data will be kept in a secure place for a minimum of five years following completion of research project, on a password-protected computer and then appropriately destroyed in a way that ensures privacy and confidentiality.

Participants will not receive a copy of the research findings unless requested to Diana Brown directly at dmbrown@ualberta.ca.

**FURTHER INFORMATION**
If you have any further questions regarding this study, please do not hesitate to contact Diana Brown directly at dmbrown@ualberta.ca. A Research Ethics Board at the University of Alberta has reviewed the plan for this study for its adherence to ethical guidelines. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

### *C. Data Gathering Instrument (Google Form)*

Thank you for participating in this research.

Please note that your information will be kept confidential.

If you choose to include your email address at the end of the survey (to be entered into the draw to win one of two $50 Chapters/Indigo gift cards), your answers will still be kept confidential and any links between your answers and your contact information will be severed.

If the questionnaire is completed, it will be assumed that consent has been given. If you would like to remove yourself from this research, you may withdraw from the study at any time. You can do so by simply not clicking 'submit' or closing the browser window at any time and the survey will cease.

This questionnaire should take approximately 10 minutes to complete but you can withdraw anytime if you wish to cease participating.

*Required Question

Are you of legal drinking age in your state or province?*

- Yes
- No [if "No", survey will end]

To which age group do you belong?*

- 19-24
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60-64
- 65-69
- 70+
- Prefer not to answer

Are you:*

- Male
- Female
- Prefer not to answer

On average, how often do you buy beer (cans, bottles or cases) from the LCBO, Beer Store, or other retailer (if not in the province of Ontario)?*

I have never bought beer from a retailer
At least once a week
At least once a month
At least once every three months
At least once a year
None of the above

On average, how often do you buy CRAFT BEER (cans, bottles or cases) from the LCBO, Beer Store, or other retailer (if not in the province of Ontario)?*

I have never bought beer from a retailer
At least once a week
At least once a month
At least once every three months
At least once a year
None of the above

Have you ever purchased craft beer based only on the label?*

Yes
No
I have never bought craft beer

How much do you know about craft beer?*

Beginner
Novice
Intermediate
Advanced
Expert

Generally speaking, what does beer taste like to you (choose all that apply)?*

Apple Wood
Banana
Bubblegum
Caramel
Chipotle
Chilies
Cinnamon
Citrus
Cocoa
Coffee

Fig
Fruit
Honey
Ginger
Nut
Orange Peel
Raisin
Smoke
Toffee
Vanilla
Other:


Have you ever tasted the craft beer pictured in the label above?*
Yes
No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*
Apple Wood
Banana
Bubblegum
Caramel
Chipotle
Chilies
Cinnamon

Citrus
Cocoa
Coffee
Fig
Fruit
Honey
Ginger
Nutmeg
Orange Peel
Smoke
Toffee
Vanilla
Other:

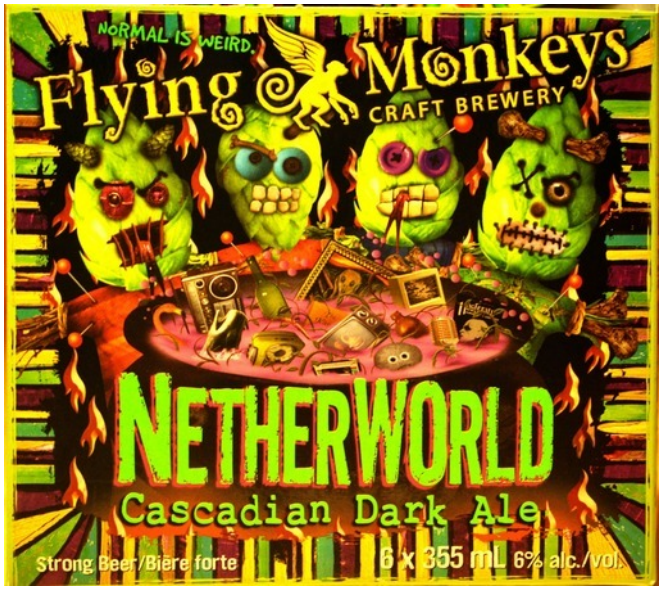
What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

Additional comments:




Have you ever tasted the craft beer pictured in the label above?*

- Yes
- No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*

- Apple Wood
- Banana
- Bubblegum
- Caramel
- Chipotle
- Chilies
- Cinnamon
- Citrus
- Cocoa
- Coffee
- Fig
- Fruit
- Honey
- Ginger
- Nutmeg
- Orange Peel
- Smoke
- Toffee
- Vanilla
- Other:

What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

- Fonts
- Colours
- Images/Graphics
- Beer name
- Additional words
- Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

- Fonts
- Colours
- Images/Graphics
- Beer name
- Additional words
- Other:

Additional comments:


Have you ever tasted the craft beer pictured in the label above?*

- Yes
- No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*

- Apple Wood
- Banana
- Bubblegum
- Caramel
- Chipotle
- Chilies
- Cinnamon
- Citrus
- Cocoa
- Coffee
- Fig
- Fruit
- Honey
- Ginger

Nutmeg
Orange Peel
Smoke
Toffee
Vanilla
Other:

What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

Additional comments:


SPRING MAPLE
BELGIAN BLONDE ALE
Brewed & Bottled in Baysville, Ontario
Handcrafted in Small Batches
LB
LAKE OF BAYS
Brewing Company
750mL Strong Beer/Bière forte
7% alc./vol.

Have you ever tasted the craft beer pictured in the label above?*

- Yes
- No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*

- Apple Wood
- Banana
- Bubblegum
- Caramel
- Chipotle
- Chilies
- Cinnamon
- Citrus
- Cocoa
- Coffee
- Fig
- Fruit
- Honey
- Ginger
- Nutmeg
- Orange Peel
- Smoke
- Toffee
- Vanilla
- Other:

What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

- Fonts
- Colours
- Images/Graphics
- Beer name
- Additional words
- Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

- Fonts
- Colours
- Images/Graphics
- Beer name

Additional words
Other:

Additional comments:


Have you ever tasted the craft beer pictured in the label above?*
Yes
No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*
Apple Wood
Banana
Bubblegum
Caramel
Chipotle
Chilies
Cinnamon
Citrus
Cocoa

Coffee
Fig
Fruit
Honey
Ginger
Nutmeg
Orange Peel
Smoke
Toffee
Vanilla
Other:

What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

Additional comments:


Have you ever tasted the craft beer pictured in the label above?*

- Yes
- No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*

- Apple Wood
- Banana
- Bubblegum
- Caramel

Chipotle
Chilies
Cinnamon
Citrus
Cocoa
Coffee
Fig
Fruit
Honey
Ginger
Nutmeg
Orange Peel
Smoke
Toffee
Vanilla
Other:

What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

Fonts
Colours
Images/Graphics
Beer name
Additional words
Other:

Additional comments:


Have you ever tasted the craft beer pictured in the label above?*

- Yes
- No

Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply).*

- Apple Wood
- Banana
- Bubblegum
- Caramel
- Chipotle
- Chilies
- Cinnamon
- Citrus
- Cocoa
- Coffee
- Fig
- Fruit
- Honey
- Ginger
- Nutmeg
- Orange Peel
- Smoke
- Toffee
- Vanilla
- Other:

What was the MOST IMPORTANT visual cue you used to make your flavour choices for the label above?*

- Fonts
- Colours
- Images/Graphics
- Beer name
- Additional words
- Other:

What was the LEAST IMPORTANT visual cue you used to make your flavour choices for the label above?*

- Fonts
- Colours
- Images/Graphics
- Beer name
- Additional words
- Other:

Additional comments:

Please provide your email address to be entered into the draw to win one of two $50 Chapters gift cards. (This question is optional).


Your response has been recorded. Thank you for participating in this research. If you have any questions, please do not hesitate to contact Diana Brown at dmbrown@ualberta.ca.

If you wish to modify your participation in the research, please contact Diana Brown at dmbrown@ualberta.ca by February 6th, 2015.

*D. Screen Shot of Data Gathering Instrument (Google Form)*

## A case of beer: A study to determine if the visual design elements of Ontario craft beer packaging communicates their unique flavour profiles

* Required


**Have you ever tasted the craft beer pictured in the label above? ***

- ○ Yes
- ○ No

**Please select the tasting notes (flavours) that you believe are best represented in the label above (choose all that apply). ***

- ☐ Apple Wood
- ☐ Banana
- ☐ Bubblegum
- ☐ Caramel
- ☐ Chipotle
- ☐ Chilies
- ☐ Cinnamon

### *E. Tables That Correspond to Figures in Findings Section*

Table 5: Age Breakdown of All Study Participants (Refers to Figure 7)

| Age | 19-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency** | 90 | 14 | 22 | 10 | 4 | 2 | 1 | 3 | 2 | 148 |
| **Percentage** | 60.8% | 9.5% | 14.9% | 6.8% | 2.7% | 1.4% | 0.7% | 2.0% | 1.4% | 100% |

Table 6: Gender Breakdown of All Study Participants (Refers to Figure 8)

| Gender | Male | Female | Total |
|---|---|---|---|
| **Frequency** | 38 | 110 | 148 |
| **Percentage** | 25.7% | 74.3% | 100% |

Table 7: Beer Buying Habits of All Study Participants (Refers to Figure 9)

| Beer Buying Habits | At Least Once a Week | At Least Once a Month | At Least Once Every 3 Months | At Least Once a Year | None of the Above | I Have Never Purchased Beer | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 17 | 67 | 37 | 19 | 8 | 0 | 148 |
| **Percentage** | 11.5% | 45.3% | 25.0% | 12.8% | 5.4% | 0% | 100% |

Table 8: Craft Beer Buying Habits of All Study Participants (Refers to Figure 10)

| Craft Beer Buying Habits | At Least Once a Week | At Least Once a Month | At Least Once Every 3 Months | At Least Once a Year | None of the Above | I Have Never Purchased Craft Beer | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 8 | 22 | 48 | 34 | 5 | 31 | 148 |
| **Percentage** | 5.4% | 14.9% | 32.4% | 23.0% | 8.1% | 16.2% | 100% |

Table 9: Craft Beer Purchases Made Solely on the Label of All Study Participants (Refers to Figure 11)

| Purchased Craft Beer Based Only on Label? | Yes | No | I Have Never Purchased Craft Beer | Total |
|---|---|---|---|---|
| **Frequency** | 96 | 21 | 31 | 148 |
| **Percentage** | 64.9% | 14.2% | 21% | 100% |

Table 10: Self-Assessed Level of Craft Beer Expertise of All Study Participants (Refers to Figure 12)

| Self-Assessed Level of Craft Beer Expertise | Beginner | Novice | Intermediate | Advanced | Expert | Total |
|---|---|---|---|---|---|---|
| **Frequency** | 91 | 34 | 19 | 3 | 1 | 148 |
| **Percentage** | 61.5% | 23.0% | 12.8% | 2.0% | 0.7% | 100% |

Table 11: Frequency of Participants Who Selected Flavours Correctly for Channel Ocho Craft Beer (Refers to Figure 15)

| Flavours | Banana | Chilies | Chipotle | Cinnamon | Cocoa | Fig | Fruit |
|---|---|---|---|---|---|---|---|
| **Frequency** | 11 | 112 | 94 | 44 | 8 | 10 | 14 |
| **Percentage** | 7.4% | 75.7% | 63.5% | 29.7% | 5.4% | 6.8% | 9.5% |

Table 12: Frequency of Number of Correct Flavours Identified for Channel Ocho Craft Beer (Refers to Figure 16)

| Number of Correct Responses | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Frequency** | 9 | 33 | 72 | 23 | 8 | 3 | 0 | 0 | 148 |
| **Percentage** | 6.1% | 22.3% | 48.7% | 15.5% | 5.4% | 2.0% | 0% | 0% | 100% |

Table 13: The Most Important Visual Cue Used to Make Flavour Choices for Channel Ocho Craft Beer (Refers to Figure 17)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 2 | 34 | 34 | 41 | 37 | 0 | 148 |
| **Percentage** | 1.4% | 23.0% | 23.0% | 27.7% | 25.0% | 0% | 100% |

Table 14: The Least Important Visual Cue Used to Make Flavour Choices for Channel Ocho Craft Beer (Refers to Figure 18)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 59 | 9 | 29 | 26 | 25 | 0 | 148 |
| **Percentage** | 39.9% | 6.1% | 19.6% | 17.6% | 16.9% | 0% | 100% |

Table 15: Frequency of Participants Who Selected Flavours Correctly for Netherworld Craft Beer (Refers to Figure 21)

| Flavours | Apple Wood | Citrus | Cocoa | Coffee | Fruit |
|---|---|---|---|---|---|
| **Frequency** | 39 | 34 | 22 | 46 | 21 |
| **Percentage** | 26.4% | 23.0% | 14.9% | 31.1% | 14.2% |

Table 16: Frequency of Number of Correct Flavours Identified for Netherworld Craft Beer (Refers to Figure 22)

| Number of Correct Responses | 0 | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 49 | 48 | 40 | 10 | 1 | 0 | 148 |
| **Percentage** | 33.1% | 32.4% | 27.0% | 6.8% | 0.7% | 0% | 100% |

Table 17: The Most Important Visual Cue Used to Make Flavour Choices for Netherworld Craft Beer (Refers to Figure 23)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 5 | 33 | 68 | 20 | 21 | 1 | 148 |
| **Percentage** | 3.4% | 22.3% | 45.9% | 13.5% | 14.2% | 0.7% | 100% |

Table 18: The Least Important Visual Cue Used to Make Flavour Choices for Netherworld Craft Beer (Refers to Figure 24)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 41 | 12 | 28 | 41 | 25 | 1 | 148 |
| **Percentage** | 27.7% | 8.1% | 18.9% | 27.7% | 16.9% | 0.7% | 100% |

Table 19: Frequency of Participants Who Selected Flavours Correctly for Winter Ale Craft Beer (Refers to Figure 27)

| Flavours | Cinnamon | Ginger | Honey | Orange Peel |
|---|---|---|---|---|
| **Frequency** | 61 | 48 | 23 | 86 |
| **Percentage** | 41.2% | 32.4% | 15.5% | 58.1% |

Table 20: Frequency of Number of Correct Flavours Identified for Winter Ale Craft Beer (Refers to Figure 28)

| Number of Correct Responses | 0 | 1 | 2 | 3 | 4 | Total |
|---|---|---|---|---|---|---|
| Frequency | 35 | 40 | 46 | 22 | 5 | 148 |
| Percentage | 23.7% | 27.0% | 31.1% | 14.9% | 3.4% | 100% |

Table 21: The Most Important Visual Cue Used to Make Flavour Choices for Winter Ale Craft Beer (Refers to Figure 29)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| Frequency | 10 | 12 | 23 | 30 | 72 | 1 | 148 |
| Percentage | 6.8% | 8.1% | 15.5% | 20.3% | 48.6% | 0.7% | 100% |

Table 22: The Least Important Visual Cue Used to Make Flavour Choices for Winter Ale Craft Beer (Refers to Figure 30)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| Frequency | 32 | 40 | 28 | 19 | 29 | 0 | 148 |
| Percentage | 21.6% | 27.0% | 18.9% | 12.8% | 19.6% | 0% | 100% |

Table 23: Frequency of Participants Who Selected Flavours Correctly for Spring Maple Craft Beer (Refers to Figure 33)

| Flavours | Maple | Caramel | Fruit | Nutmeg | Vanilla |
|---|---|---|---|---|---|
| Frequency | 21 | 61 | 14 | 23 | 30 |
| Percentage | 14.2% | 41.2% | 9.5% | 15.5% | 20.3% |

Table 24: Frequency of Number of Correct Flavours Identified for Spring Maple Craft Beer (Refers to Figure 34)

| Number of Correct Responses | 0 | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 39 | 73 | 31 | 5 | 0 | 0 | 148 |
| **Percentage** | 26.4% | 49.3% | 21% | 3.4% | 0% | 0% | 100% |

Table 25: The Most Important Visual Cue Used to Make Flavour Choices for Spring Maple Craft Beer (Refers to Figure 35)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 4 | 24 | 46 | 56 | 18 | 0 | 148 |
| **Percentage** | 2.7% | 16.2% | 31.1% | 37.8% | 12.2% | 0% | 100% |

Table 26: The Least Important Visual Cue Used to Make Flavour Choices for Spring Maple Craft Beer (Refers to Figure 36)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 59 | 13 | 15 | 18 | 42 | 1 | 148 |
| **Percentage** | 39.9% | 8.8% | 10.1% | 12.2% | 28.4% | 0.7% | 100% |

Table 27: Frequency of Participants Who Selected Flavours Correctly for Harvest Ale Craft Beer (Refers to Figure 39)

| Flavours | Caramel | Fruit | Toffee |
|---|---|---|---|
| **Frequency** | 18 | 24 | 14 |
| **Percentage** | 12.2% | 16.2% | 9.5% |

Table 28: Frequency of Number of Correct Flavours Identified for Harvest Ale Craft Beer (Refers to Figure 40)

| Number of Correct Responses | 0 | 1 | 2 | 3 | Total |
|---|---|---|---|---|---|
| **Frequency** | 98 | 44 | 6 | 0 | 148 |
| **Percentage** | 66.2% | 29.7% | 4.1% | 0% | 100% |

Table 29: The Most Important Visual Cue Used to Make Flavour Choices for Harvest Ale Craft Beer (Refers to Figure 41)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 9 | 19 | 81 | 35 | 3 | 1 | 148 |
| **Percentage** | 6.1% | 12.8% | 54.7% | 23.6% | 2.0% | 0.7% | 100% |

Table 30: The Least Important Visual Cue Used to Make Flavour Choices for Harvest Ale Craft Beer (Refers to Figure 42)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 70 | 12 | 12 | 17 | 37 | 0 | 148 |
| **Percentage** | 47.3% | 8.1% | 8.1% | 11.5% | 25.0% | 0% | 100% |

Table 31: Frequency of Participants Who Selected Flavours Correctly for Twisted Spruce Craft Beer (Refers to Figure 45)

| Flavours | Caramel | Fruit | Honey |
|---|---|---|---|
| **Frequency** | 9 | 24 | 20 |
| **Percentage** | 6.1% | 16.2% | 13.5% |

Table 32: Frequency of Number of Correct Flavours Identified for Twisted Spruce Craft Beer (Refers to Figure 46)

| Number of Correct Responses | 0 | 1 | 2 | 3 | Total |
|---|---|---|---|---|---|
| **Frequency** | 103 | 37 | 8 | 0 | 148 |
| **Percentage** | 69.6% | 25.0% | 5.4% | 0% | 100% |

Table 33: The Most Important Visual Cue Used to Make Flavour Choices for Twisted Spruce Craft Beer (Refers to Figure 47)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 5 | 14 | 58 | 67 | 4 | 0 | 148 |
| **Percentage** | 3.4% | 9.5% | 39.2% | 45.3% | 2.7% | 0% | 100% |

Table 34: The Least Important Visual Cue Used to Make Flavour Choices for Twisted Spruce Craft Beer (Refers to Figure 48)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 58 | 20 | 12 | 11 | 46 | 1 | 148 |
| **Percentage** | 39.2% | 13.5% | 8.1% | 7.4% | 31.1% | 0.7% | 100% |

Table 35: Frequency of Participants Who Selected Flavours Correctly for Iron Spike Craft Beer (Refers to Figure 51)

| Flavours | Banana | Bubblegum | Fruit | Smoke |
|---|---|---|---|---|
| **Frequency** | 2 | 2 | 12 | 41 |
| **Percentage** | 1.4% | 1.4% | 8.1% | 27.7% |

Table 36: Frequency of Number of Correct Flavours Identified for Iron Spike Craft Beer (Refers to Figure 52)

| Number of Correct Responses | 0 | 1 | 2 | 3 | 4 | Total |
|---|---|---|---|---|---|---|
| **Frequency** | 94 | 51 | 3 | 0 | 0 | 148 |
| **Percentage** | 63.5% | 34.5% | 2.0% | 0% | 0% | 100% |

Table 37: The Most Important Visual Cue Used to Make Flavour Choices for Iron Spike Craft Beer (Refers to Figure 53)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 32 | 47 | 14 | 33 | 21 | 1 | 148 |
| **Percentage** | 21.6% | 31.8% | 9.5% | 22.3% | 14.2% | 0.7% | 100% |

Table 38: The Least Important Visual Cue Used to Make Flavour Choices for Iron Spike Craft Beer (Refers to Figure 54)

| Visual Cue | Fonts | Colours | Images/ Graphics | Beer Name | Additional Words | Other | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 40 | 15 | 28 | 25 | 39 | 1 | 148 |
| **Percentage** | 27.0% | 10.1% | 18.9% | 16.9% | 26.4% | 0.7% | 100% |

Table 39: Age Breakdown of the Participants Who Most Successfully Identified Flavour Correctly Overall (Refers to Figure 55)

| Age | 19-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency** | 8 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| **Percentage** | 72.7% | 9.1% | 18.2% | 0% | 0% | 0% | 0% | 0% | 0% | 100% |

Table 40: Gender Breakdown of the Participants Who Most Successfully Identified Flavour Correctly Overall (Refers to Figure 56)

| Gender | Male | Female | Total |
|---|---|---|---|
| **Frequency** | 3 | 8 | 11 |
| **Percentage** | 27.3% | 72.7% | 100% |

Table 41: Beer Buying Habits of the Participants Who Most Successfully Identified Flavour Correctly Overall (Refers to Figure 57)

| Beer Buying Habits | At Least Once a Week | At Least Once a Month | At Least Once Every 3 Months | At Least Once a Year | None of the Above | I Have Never Purchased Beer | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 0 | 6 | 3 | 0 | 2 | 0 | 11 |
| **Percentage** | 0% | 54.6% | 27.3% | 0% | 18.2% | 0% | 100% |

Table 42: Craft Beer Buying Habits of the Participants Who Most Successfully Identified Flavour Correctly Overall (Refers to Figure 58)

| Craft Beer Buying Habits | At Least Once a Week | At Least Once a Month | At Least Once Every 3 Months | At Least Once a Year | None of the Above | I Have Never Purchased Craft Beer | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 0 | 3 | 3 | 1 | 0 | 4 | 11 |
| **Percentage** | 0% | 27.3% | 27.3% | 9.1% | 0% | 36.4% | 100% |

Table 43: Craft Beer Purchases Made Solely on the Label of the Participants Who Most Successfully Identified Flavour Correctly Overall (Refers to Figure 59)

| Purchased Craft Beer Based Only on Label? | Yes | No | I Have Never Purchased Craft Beer | Total |
|---|---|---|---|---|
| **Frequency** | 7 | 0 | 4 | 11 |
| **Percentage** | 63.6% | 0% | 36.4% | 100% |

Table 44: Self-Assessed Level of Craft Beer Expertise of the Participants Who Most Successfully Identified Flavour Correctly Overall (Refers to Figure 60)

| Self-Assessed Level of Craft Beer Expertise | Beginner | Novice | Intermediate | Advanced | Expert | Total |
|---|---|---|---|---|---|---|
| **Frequency** | 6 | 3 | 2 | 0 | 0 | 11 |
| **Percentage** | 54.5% | 27.3% | 18.2% | 0% | 0% | 100% |

Table 45: Age Breakdown of the Participants Who Least Successfully Identified Flavour Correctly Overall (Refers to Figure 61)

| Age | 19-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency** | 10 | 2 | 3 | 1 | 1 | 0 | 0 | 1 | 1 | 19 |
| **Percentage** | 52.6% | 10.5% | 15.8% | 5.3% | 5.3% | 0% | 0% | 5.3% | 5.3% | 100% |

Table 46: Gender Breakdown of the Participants Who Least Successfully Identified Flavour Correctly Overall (Refers to Figure 62)

| Gender | Male | Female | Total |
|---|---|---|---|
| **Frequency** | 5 | 14 | 19 |
| **Percentage** | 26.3% | 73.7% | 100% |

Table 47: Beer Buying Habits of the Participants Who Least Successfully Identified Flavour Correctly Overall (Refers to Figure 63)

| Beer Buying Habits | At Least Once a Week | At Least Once a Month | At Least Once Every 3 Months | At Least Once a Year | None of the Above | I Have Never Purchased Beer | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 4 | 7 | 5 | 2 | 1 | 0 | 19 |
| **Percentage** | 21.1% | 36.8% | 26.3% | 10.5% | 5.3% | 0% | 100% |

Table 48: Craft Beer Buying Habits of the Participants Who Least Successfully Identified Flavour Correctly Overall (Refers to Figure 64)

| Craft Beer Buying Habits | At Least Once a Week | At Least Once a Month | At Least Once Every 3 Months | At Least Once a Year | None of the Above | I Have Never Purchased Craft Beer | Total |
|---|---|---|---|---|---|---|---|
| **Frequency** | 2 | 4 | 3 | 3 | 3 | 4 | 19 |
| **Percentage** | 10.5% | 21.1% | 15.8% | 15.8% | 15.8% | 21.1% | 100% |

Table 49: Craft Beer Purchases Made Solely on the Label of the Participants Who Least Successfully Identified Flavour Correctly Overall (Refers to Figure 65)

| Purchased Craft Beer Based Only on Label? | Yes | No | I Have Never Purchased Craft Beer | Total |
|---|---|---|---|---|
| **Frequency** | 14 | 1 | 4 | 19 |
| **Percentage** | 73.7% | 5.3% | 21.1% | 100% |

Table 50: Self-Assessed Level of Craft Beer Expertise of the Participants Who Least Successfully Identified Flavour Correctly Overall (Refers to Figure 66)

| Self-Assessed Level of Craft Beer Expertise | Beginner | Novice | Intermediate | Advanced | Expert | Total |
|---|---|---|---|---|---|---|
| **Frequency** | 12 | 5 | 1 | 1 | 0 | 19 |
| **Percentage** | 63.2% | 26.3% | 5.3% | 5.3% | 0% | 100% |

Table 51: Willingness of Frequent Craft Beer Buyers to Purchase a Craft Beer Product Based Only on the Label (Refers to Figure 67)

| **Purchased Craft Beer Based Only on Label?** | **Yes** | **No** | **I Have Never Purchased Craft Beer** | **Total** |
|---|---|---|---|---|
| **Frequency** | 6 | 2 | 0 | 8 |
| **Percentage** | 75% | 25% | 0% | 100% |

Table 52: Most Important and Least Important Visual Cues Used by Participants Who Successfully Identified All Flavours in Great Lake Brewery's Winter Ale Correctly (Refers to Figures 68 and 69)

| **Identified All Flavours in Winter Ale Correctly** | **Identifier of All Winter Ale Flavours #1** | **Identifier of All Winter Ale Flavours #2** | **Identifier of All Winter Ale Flavours #3** | **Identifier of All Winter Ale Flavours #4** | **Identifier of All Winter Ale Flavours #5** |
|---|---|---|---|---|---|
| **Most Important Visual Cue** | Additional Words | Images/ Graphics | Additional Words | Additional Words | Additional Words |
| **Least Important Visual Cue** | Fonts | Additional Words | Fonts | Images/ Graphics | Images/ Graphics |