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PERCEPTION OF CUTENESS IN ANIMAL  
MASCOTS/CHARACTERS

Master's Thesis

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Tartu  
2017

I have written the Master Thesis myself, independently. All the other authors' texts, main viewpoints and data from other resources have been referred to.

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## INTRODUCTION

The research aims to establish a foundational schema for the design of cute animal characters and mascots. Specifically, testing whether an anthropomorphic analogy, in that of the *Kindchenschema*, can be applied to the perception of cuteness in animal characters/mascots. Existing research, as to the perception of cuteness, focuses primarily on human infants and living animal species. Conclusions drawn from these former studies do not necessarily provide insight as to what factors determine cuteness in the design of animal characters/mascots. Additionally, these previous theories largely fail to consider the role of cultural and social processes. Thus, the application and testing of previous biological theories benefit from the framing of a semiotic methodology that takes socio-cultural aspects into consideration. Establishing an empirical model for the design schema of animal mascots and characters requires the testing and extension of both semiotic and biological models.

The current study utilizes a survey to analyze the relationship between perceived cuteness and expression of neotenic characteristics (criteria set out by *Kindchenschema*) in animal characters/mascots. In extending the analysis of this schema, this research will suggest whether the application of existing biological theories is possible or if the development of a new model is necessary.

Once a deeper understanding of the features that influence the perception of cuteness in animal characters has been made, this paper will then analyze the potential applications of such research in the realm of product and brand marketing. The given research seeks to establish a current, global brand awareness and identity for cuteness and character mascots.

It secondarily seeks to provide a bridge between marketing and biological theories of cuteness to give suggestions for the development of cute characters to capitalize upon potential market space.

The present study first develops a semiotic typology for animal mascots and characters that allows for the applications of existing biological and cuteness theories to be made. Then using a survey, this research tests the features that contribute to the perceived cuteness of an animal character mascots. These collected features will then be compared to existing biological theories (e.g. *Kindchenschema*). This comparison will provide insight as to the potential extension and relevance of these biological theories and if a new model should be introduced. Once a novel schema for cuteness in character mascots has been established, this research will be applied in the realm of marketing.

As a secondary component, potential demographic differences in the perception of cuteness and effects of neoteny will be looked at. Doing so tests the former biological theories in the context of culture, and provides additional insight as to whether existing theories are widely applicable or further support the development of a model that includes socio-cultural elements.

## 1. LITERATURE REVIEW

Cuteness as a general term refers to a type of attractiveness associated with the appearance of youth. Cuteness as a scientific concept was introduced by ethologist Konrad Lorenz (1943). This section seeks to provide a scientific background into the notion of cuteness, review the historic and modern usage of cute animal characters/mascots, and establish the positioning of this thesis within cuteness research.

### 1.1. Biological Theories of Cuteness

Research into the notion that physical traits influence the perception of cuteness and that cuteness can generate a caregiver response from adults has a well-established history. Noted naturalist, Charles Darwin (1872), explained that there is likely some adaptive force that elicits adults to take care of infants. Infantile characteristics promote nurturing and caregiving responses and suppress aggressive responses, which is important for the survival of infants. Konrad Lorenz (1943) proposed a series of characteristics that all human infants possess. These features evoke a particular set of behaviors from human adults. In discussing Lorenz' successor, Eibl-Eibesfeldt (1970), Cupchik and László (1992: 124) summarized the characteristics as: “(a) large head relative to body size, rounded head; (b) large, protruding forehead; (c) large eyes relative to face, eyes below midline of head; (d) rounded, protruding cheeks; (e) rounded body shape; (f) soft, elastic body surfaces; (g) elastic body movements”.

These features were first given the title *Kindchenschema* (Lorenz 1943).<sup>1</sup>

Philosopher, John Morreall (1991: 39) proposes a developmental theory of cuteness, elaborating that “cuteness was probably essential in human evolution [...]” because “[...] our emotional and behavioral response [...] to cute things [...] has had survival value for the human race”. Morreall (1991) goes on to explain that the features that constitute cuteness were developed among mammals as a means to get infants noticed and appreciated. He further claims that cuteness is still a driving force in natural selection.

John T. Sanders, philosopher at Rochester University, (1992) argues against Morreall (1991), claiming that cuteness is not a strong biological force, but rather an attribute of being an infant:

But for the same reason it would be impossible, as a general rule, for children to be uncute. Cuteness is just the attribute of looking like an infant [...] Anything that is typical of infants, within any species that requires extensive nurture of parents for young, is definitive of cuteness for that species. (Sanders 1992: 162-3)

Morreall (1993) refutes Sanders’ (1992) identification of cuteness, arguing that not all the features babies have would be classified as characteristically cute, for example: “a tendency to vomit without warning” (Morreall 1993: 284). Morreall (1993: 283) elaborates the importance of these “cute” features, and that in the evolutionary development of mammals, the expression of cute traits appeared as stimuli to garner affection from adults. “Earlier animals such as insects and reptiles, whose young needed no parental care, did not develop such features” (Morreall 1993: 283). These features of cuteness had value for the survival of mammals and were passed on to succeeding generations (Morreall 1993: 283).

This evolutionary selection of infantile traits is referred to as neoteny<sup>2</sup>. “From the perspective of evolutionary psychology, neoteny entails the specific appearance and traits of babies that tend to trigger protective behaviors by adults” (Cho 2012: xi). Research into the *Kindchenschema* often uses this term to refer to the physical traits and characteristics of

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<sup>1</sup> Today the theory is often referred to as ‘Kinderschema’ or ‘baby schema’

<sup>2</sup> In the perspective of developmental biology neoteny may also refer to the retention by adults of traits previously seen only in the young.



cuteness. The current study will use the term neoteny as expressed by Cho (2012), who uses “cuteness” to refer more largely to the concept at hand and “neoteny” when looking more directly at the physiology.

Cuteness, as a biological force, works to secure the safety and survivability of infants (Etcoff 1999). Neotenous features have been found to produce both physiological and behavioral reactions, particularly positive aesthetic judgments. Images of cute babies, those following the constructs of the *Kindchenschema*, were perceived more positively than less cute babies, those not following the *Kindchenschema* (Hildebrandt and Fitzgerald 1978; Sternglanz, Gray, and Murakami 1977; Gardner and Wallach 1965).

Research into neotenous features can be divided into a series of subsections: vocal/pitch (Kinsella 1995; Kristoff 1995); visual/appearance (Glocker et al. 2009; Berry and McArthur 1988; Borgi et al. 2014); clumsiness/movement (Lorenz 1943; Hongzhan 2015). The present research will focus primarily on visual neotenic features, as only still images of animal characters were chosen for the study. The following sections will examine current and previous research on cuteness with regards to visual neotenous forms.

## **1.2. Human Perception of Cuteness**

Research into the effect of human infants on adults has been quite extensive. Among human adults, infants with more characteristics set out in the *Kindchenschema* are rated as more attractive, healthier, and more adoptable (Casey and Ritter 1996; Karraker and Stern 1990; Stephan and Langlois 1984; Volk and Quinsey 2002). Infants with chubbier, more rounded faces facilitate stronger parental nurturing behaviors (caretaker response) than those with narrower faces (Bogin 1988; Glocker et al. 2009; McCabe 1988). Previous studies have shown that women may be more sensitive to neotenic traits. When shown images of infants, women generally experience a stronger caretaking motivation than men (Glocker et al. 2009). Eibl-Eibesfeldt (1989) suggested that the bias toward caregiving motivation in women could be evolutionarily advantageous. While research into why this dichotomy exists is largely conjecture, numerous studies have shown that women seem to have a preference for neotenic features as compared to men (Sternglanz, Gray, and Murakami 1977; Hildebrandt and

Fitzgerald 1979; Sprengelmeyer et al. 2009; Lobmaier et al. 2010).

Behavioral and physiological research also supports theories of innate responses driven by the *Kindchenschema*. Images of cute babies have been shown to produce feelings of protectiveness in adults (Alley 1983; McCabe 1988). Most research in the field of neoteny and cuteness emphasizes the role of genetic and biological determinants that trigger behavioral actions and the caretaker response (Lorenz 1943). Psychologists Berry and McArthur (1985) express the potential role of social learning in this process, especially at the higher end of the phylogenetic scale. In evaluating the cuteness of children other social factors such as familiarity with the child or the child's behavior have been seen to influence the perception of cuteness (Koyama et al. 2006).

It has also been demonstrated that adult humans with neotenic features are perceived to have more childlike emotional and behavioral characteristics. Males whose facial characteristics are considered "younger" were perceived to possess more childlike and immature psychological attributes than their peers (Berry and McArthur 1985). The higher the presence of neotenic features in the face of a young adult male, the more likely they were seen to possess traits such as honesty, kindness, and warmth. This finding also corresponds with previous research that showed children are generally viewed as more kind and affectionate than adults (e.g. Kessen 1965).

Looking further into the biological research of neotenic features, Morreall (1991), in discussing cognitive linguist Mark Johnson's (1987) account of metaphorical thinking, he argues that these neotenic features associated with youth have been absorbed into culture and are even applied by way of metaphor to inanimate objects. Cho (2012) expresses that preference for certain neotenic features may vary by culture. He compared the cuteness ratings between South Koreans and Americans when presented with a series of objects (cars and alarm clocks). The study found that females' ratings of cute objects were significantly different between the two countries. Females in the United States rated the neoteny of the stimuli significantly higher than their Korean counterparts, while for males, ratings were not significantly different between the two countries (Cho 2012). For a more detailed account as to the cultural differences of perceived cuteness see Chapter 3.3.2.

Adults are not the only ones to have a preference for cute stimuli, children are also affected by the features of the *Kindchenschema* (Borgi et al. 2014). Cuteness perception and gaze allocation in children to infantile stimuli and facial features is not only limited to human faces but also to the appearance of pets as well. Borgi et al. (2014) shows that the response to infantile facial characteristics is present in childhood. The features associated with the baby schema not only elicit a caregiver response in humans, but in animals as well. The following section will look at the existence of a cuteness response in humans towards non-human animals.

### **1.3. Cuteness in Animals**

Cuteness as a feature set is not solely limited to human infants but is found in a variety of non-human animal species. Lorenz ([1950]1971) noted that some breeds of dogs have retained infant-like features into adulthood, among several other authors who have noted the selection for neotenous features in many breeds of pet cats and dogs (Tuan 1984; Serpell 1986). Field observations of primates (Struhsaker 1971) suggest that the loss of infantile characteristics as offspring age is accompanied by a decline in protective responses and an increase in aggressive ones from other adults. This decrease also coincides with the offspring being able to defend themselves, however those possessing prolonged infantile characteristics retain the protective support longer.

Cuteness and neotenic features may play an important role in the domestication process. Sanders' (1992: 163) critique of Morrell (1991) argues against the evolutionary push behind cuteness, mockingly arguing that, "if baby spiders had happened to have the abstract general characteristic called "cuteness", while human children did not have it than human adults would have been more inclined to care for baby spiders than for baby humans" (Sanders 1992: 162).

The argumentation behind this statement is largely philosophical, as there are reasons to care for one's own kind besides cuteness. Morrell (1993: 285) responds to Sanders' (1992) interpretation explaining: "Cuteness is a powerful mechanism, to conclude, but it is neither a logical nor a biological necessity that babies are cute".

Other factors play a role in the desire to protect one's own species and may override and be more powerful than the *Kindchenschema*. Cognitive scientist, Daniel Kelley (2013) discusses the evolutionary basis behind feelings of disgust, which likely evolved as a means of keeping humans away from poisonous and contagious people and things. The desire for self-preservation could likely lead to a distaste of babies in humans prone to feelings of disgust. This may also explain how many people find cats, dogs, and other pets/animals “adorable” despite finding babies disgusting. Though excretions are not only limited to infants, but animals as well, which delimits the extension of D. Kelley's (2013) theory.

Many pet species exhibit neotenic features and characteristics (i.e. cats and dogs). Many infantile characteristics are now carried into adulthood in these species as a by-product of domestication (Belyaev 1979; Frank and Frank 1982). This instance of neoteny is thought to be due to selective breeding for non-aggressive characteristics and behaviors over time (Belyaev 1979). Archer (1997) hypothesizes that the presence of lifelong neotenic features may be behind our general attraction to pets and other species. Domesticated animals have also been seen to be especially attractive to humans (Borgi and Cirulli 2013). This preference may align with the presence of these neotenic traits, or cultural familiarity and selection for such animals.

The following section will move beyond biological cuteness, and explore cuteness as it presents itself in non-biological forms.

## **1.4. Cuteness in Cartoon Animals**

The preference for cute features is not only limited to the appearance of pets, but also in the appearance of stuffed animals or even cartoon characters. Lorenz ([1951]1970) proposes that an anthropomorphic analogy enables the automated positive reaction to be triggered not only by infants and young animals but also by inanimate objects such as dolls and stuffed animals.

Previous studies have examined the evolution of the teddy bear over time and claimed they began to incorporate more neotenic features by means of cultural selection because of customer preference (Hinde and Barden 1985). Similar studies have claimed that Mickey

Mouse has taken on more infantile features over time (Gould 1979). Cultural Anthropologist, Anne Allison (2003) claims that the Pokémon mascot, Pikachu, has experienced a similar transformation.

Research has shown that people prefer neotenous features, and designers have catered to the tastes of their customers. Japanese character Hello Kitty's success has been attributed to the "small" aspects of the character, which appeal to children, whereas the innocent appearance of Hello Kitty has been argued to appeal to women by triggering a nurturing response (Kovarovic 2011). Researchers have also examined a variety of characters from franchises such as Pokémon and Sailor Moon (Allison 2003). Studies have also looked at the designing of cute shapes and artifacts, the results of which point to a preference for forms that were "relatively small, round-cornered, slightly tilted, and light-colored" (Cho 2012: *xi*).

Recent studies have proposed a division in the classifications of cuteness when analyzing objects, in that of "whimsical cuteness" (Nenkov, Inman, and Hulland 2008). "Whimsical cuteness is not characterized by the vulnerable nature inherent in the cuteness of a helpless baby or child; it is instead associated with fun and playfulness" (Nenkov and Scott 2014: 327).

Marketing Researchers, Nenkov and Scott (2014) would claim that cuteness is rather a "multifaceted construct" that consists of the *Kindchenschema* and whimsical cuteness. Whimsical cuteness, thus refers to the social elements that comprise cuteness, and is more based in representations of fun as opposed to representations of innocence.

The previous sections have provided a firm theoretical background on cuteness, but cuteness has also been utilized and studied as it pertains to branding and marketing. The following section will provide a historic background into the notion of cuteness and brand mascots as tools for marketing and provide a market and basis for the application of the present research.

## **1.5. Cuteness as a Commodity**

The modern usage of cuteness and animal characters traces its origins to the 1970's and since then has exponentially grown as a market. Cuteness has now become a means of developing brand awareness and identity for marketers.

### ***1.5.1. The Spread of Cute Goods***

The usage of cuteness in consumer goods has its roots in the early 1970's in Japan and from there spread out as a global trend (Madge 1997). Japan saw the rise of cute goods with the establishment of the stationery and greeting card business by Gakken Publishers and Sanrio, which featured cute characters, such as Hello Kitty, on its materials (Madge 1997). By the 1990's Sanrio had grown to be one of the largest retailers of cute goods, which garnered about \$90 million in 1990 (Shimamura 1991: 60). Today Sanrio's success has grown exponentially with the company earnings at \$10.21 billion in 2016 from its operations, this can largely be attributed to the popularity of its cute characters such as Hello Kitty, Gudetama and My Melody (Financial Times 2017).

Following the success of Sanrio, companies began utilizing cute characters and designs for their products and from 1975 onwards animated characters and mascots began appearing on goods worldwide. It has since become a staple of global marketing (Shihamaru 1991: 58–61).

Although cuteness appears as a global marketing phenomena, it has seen its largest growth in the Japanese market. By 1985 cuteness had become the dominant aesthetic, with many electrical appliances such as telephones, computers, vacuums, etc. being designed with cute elements (e.g. pink, round, with cute characters). Eventually high end goods like cars and houses were being manufactured in a cute style. (Madge 1997)

Government institutions, such as the Public Employment Security Office with its “Hello Work” advertising campaign based on Sanrio's Hello Kitty mascot, began instituting cuteness based advertisements and marketing campaigns (Madge 1997). Even political

parties began to utilize mascots as their logos for elections, such as the Nagoya Communist Party in 1993, who used a cute giraffe character to represent the party (Madge 1997). The usage of cute concepts has continued to expand in prevalence and usage into the modern day. The next section will look at cute mascots more specifically and how they function to instill a deep brand memory.

### ***1.5.2. Mascots as a Marketing Tool***

Character branding is not only limited to Japan, but has become popular across the globe. Allison (2003), in summarizing a publication by Japanese advertising agency Dentsu (1999), explains the success of such characters by stating that:

Cute characters are appropriated as symbols for (personal, corporate, group, national) identity. The ‘essence’ of character merchandising is that it ‘glues society at its root. A character accompanies the development of a group and becomes part of, and a symbol for, that identity’. (Allison 2003: 387)

This attraction to animals can be exploited by marketing executives in order to garner consumer interest for the purchase of their products or services. Brand mascots or characters contribute to brand identity, making the brand more memorable. Brand identity and its overall effect on memorability make consumers more likely to purchase these products (Kanungo 1969; Brown 2010). Advertisements with animal characters have shown to lead to a more positive opinion of a brand, thus affecting purchasing behavior (Aaker and Day 1974). Advertisements using animals have shown to produce feelings of affection in viewers (Upshaw 1995). Such affections towards the mascot could translate to similar affections to the brand (Gundlach, Achrol and Mentzer 1995). This trend could be potentially linked to cute animal imagery triggering a caretaker response and feeling of affection in viewers that transfers onto the brand.

It is then the aim of marketers and advertisers to utilize these characters in order to extend and expand this emotional relationship with consumers. Character mascots have been found to generate more views and higher sharing rates on social media platforms. Studies have found that prominently featuring the image of a brand mascot significantly contributed to the shareability of internet posts when compared to non-character visual content. For example,

the Charmin Bear (featured in the present study as well) contributed to 585% more shares, Tony the Tiger led to 279% more shares, the Keebler Elves led to 203% more shares, and Mr. Clean led to 182% more shares as compared to characterless content. (M. Kelley 2016)

Another example of cute mascot success is that of Kumamon, a bear-like mascot used to represent the Kumamoto prefecture in southern Japan. The Bank of Japan announced that “Kumamon’s economic effect on the prefecture amounted to 124.4 billion yen (approximately 1.1 billion U.S. dollars) from 2011 to 2013 years” (Brasor 2013).

Now that a theoretical and historical background for cute animal characters has been established, the place of the given study will be established.

## **1.6. Place of the Given Study**

The previous sections have reviewed the current literature and prevalent theories about cuteness and the effects of neoteny. Up to the current day, research in the field has focused primarily on the evolutionary aspects of cuteness and cuteness as it exists in human infants and animals. While some preliminary research exists, research into what makes objects, designs, and characters look cute has had limited exploration.

The usage of solely biological theories by means of analogy as to the perception of cuteness possesses a series of issues when applied to characters, which exist in a largely social and cultural domain. The given study seeks to utilize both semiotic and biological theories in the study of cuteness as perceived in animal characters and mascots, and if necessary propose an alternative model that extends beyond biology into the socio-cultural realm.

It secondarily seeks to establish whether a relation between reported purchasing habits and cuteness perceptions/ratings exist and to connect the results of this research with marketing in order to give suggestions for the development of cute characters to capitalize upon potential market space.



## 1.7. Typology of Animal Mascots/Characters

In order to apply biological theories to non-living characters a methodological framework to justify the analogy must be established. In classifying animal mascots and characters this paper will employ a semiotic typology established by semiotician Dagmar Schmauks (2000). Schmauks (2000) proposes a semiotic typology for “artificial animals”, which posits three sign functions for artificial animals: “artificial animals may represent living animals, substitute them in specific contexts, or be intended as an improvement of nature” (Schmauks 2000: 309–310). This framework is particularly useful as it addresses both the analogous relationship between animal recreations and their biological counterparts as well as the manipulation of features of these animal recreations with regards to a broader social context.

Schmauks (2000) does not provide an extensive analysis of all potential instances of artificial animals, but rather focuses on artificial animal toys (e.g. stuffed animals), virtual artificial animals (i.e. Pokémon), and artificial animals in the medium of flesh (i.e. genetic modification). They also mention that in the creation of artificial animals, different features are manipulated, such as the animal’s shape and color are utilized for social purposes (i.e. making people more attracted to the animal).

This research then proposes character mascots as artificial animals that seek to represent biological animals and highlight key features or elements of that animal for use in a social context (i.e. making products/services more attractive to humans). Thus, the usage of cuteness as a design factor in animal mascots, would have a basis in biological animals, making the application of the *Kindchenschema* applicable. In animal characters, since they can be manipulated beyond the bounds of what is biologically possible, it is specifically important to look at what characteristics are unique to animal mascots/characters. This research then seeks to identify these characteristics by means of a survey for further analysis.

## 2. SURVEY METHODOLOGY

The following section will review the methods present for the current study. This study tests whether certain neotenic features play a greater role in the perceived cuteness of character designs (see Chapter 3), the secondary aspects tested for a potential relation between cuteness and brand awareness; self-reported purchasing habits (see Chapter 4).

The current study is a mixed method study, with the character rating section providing qualitative data; the free response, character rating, and brand awareness sections providing both qualitative and quantitative data. The use of a survey and rating task has been the most common method employed in modern cuteness research (Glocker et al. 2009; Borgi et al. 2014; Cho 2012; Little 2012; etc.). The other known method for assessing perceived cuteness is through eye stimulus tracking (Little 2012; Thompson-Booth et al. 2014). This method was not utilized as it limits the potential scope of the study, since testing in a laboratory environment would be necessary. This would decrease the potential sample size and demographic range, which would severely limit assessing the potential effect of cultural and demographic background on perceived cuteness (see Chapter 1.2).

To explore mental perceptions of cuteness, both a norming study and criterion-referenced study, in respect to the *Kindchenschema*, were utilized. The criterion-referenced portion of the study tested the hypothesis that participants would judge the perceived cuteness of each character with respect to the visual characteristics outlined in the *Kindchenschema* (see

Chapter 1.1). The study focuses solely on the perception of visual based neotenic features of static animal characters. The exclusion of auditory and movement based cuteness was done in order to control for extraneous variables and limit the scope of the data for a more concise analysis. The potential effects of this exclusion will be brought out further in the limitations section.

## 2.1. Hypotheses

Hypotheses (H1; H2; H3) were established based on the aims and results of previous *Kindchenschema* studies (e.g. Borgi et al. 2014; Cho 2012; Sprengelmeyer, Lewis and Perrett 2013). Hypothesis 4 (H4) addresses the potential social effect of familiarity in perceiving cuteness (Koyama et al. 2006). H1-4 will be analyzed in Chapter 3. The trends discovered in the perception of cuteness will then be analyzed and then their potential application tested in the realm of product marketing (Chapter 4). Since the correspondence between perceived cuteness of animal mascots/characters and self-reported purchasing habits is unknown, the results from Chapter 3 play a central role in the development of Hypothesis 5 (H5) and the analysis of Chapter 4. All of the hypotheses are listed below and will be expanded in the analysis of the results.

H1: Perceived cuteness will be determined by respondents with respect to the visual characteristics outlined in the *Kindchenschema*.

H2: Perceived cuteness will be greater when: eyes are larger than smaller (H2a), features are rounder than sharper (H2b), character design is more simple than complex (H2c).

H3: Perceived cuteness will correlate with the country/cultural background of respondents.

H4: Perceived cuteness will correlate with the overall familiarity of the respondents with the character.<sup>3</sup>

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<sup>3</sup> Hypothesis H4 will additionally be discussed in section 2.4 as it relates to potential limitations and sources of error.

H5: Perceived cuteness will correspond with consumer habits: (H5a) have a higher percentage of owning products with cute animal mascots; (H5b) look more actively for cute mascots; (H5c) be more attracted to products with cute mascots.

## **2.2. Survey Structure**

The following chapter will outline the survey and data collection process, timeframe, and structure. A total of 533 individuals participated in the study in an online survey consisting of four portions: a demographic section, a free response section, a cuteness rating task, and a brand awareness section (See Chapter 2.3). The full survey can be found in Appendix.

### ***2.2.1. Apparatus***

The survey was conducted on the online survey platform Typeform (<https://www.typeform.com/>). Data collection and respondent information on Typeform is secured and the sole responsibility of the surveyor as by the Typeform privacy policy.

### ***2.2.2. Time Frame***

The survey research was conducted over a two-month period. The initial pilot survey was conducted for one week and ran from 2/9/16 to 8/9/16. 4 days were taken to analyze the feedback from the pilot survey. The official thesis survey was conducted for an approximately one month. It was then launched on 12/9/2016 and went until 15/10/16.

### ***2.2.3. Participant Selection and Survey Disbursement***

Participation in the survey was completely voluntary and participants were not compensated in any way. Participants gave informed consent to participate in the study. Participants were provided with an introductory screen and made aware that the information collected from this survey would be used for the purposes of a Master's Thesis at the University of Tartu, and that the information gathered would not be shared with third parties, and that the respondent's anonymity would be insured. No names or contact information

were collected as a part of this survey.

The study present had no sole target demographic for the study, but rather sought to achieve a wide breadth of participants. In order to make global claims, a large respondent base would be needed in order to reduce the margin of error as much as possible.

Participants were primarily gathered through social media platforms (Twitter and Facebook) and university email lists. The survey was shared in survey sharing groups, student groups, student research groups, cultural groups, and through the researcher's own personal pages. The method of sharing largely played into the success of the large response rate, but also may have led to demographic pockets within the respondent group (e.g. people with a higher education, active social media users, and prominence of certain nationalities). This will be discussed further in Chapter 2.4.

## **2.3. Survey Construction**

The following section will review the construction of the survey. All survey questions excluding a final question asking for additional comments or feedback were mandatory for the completion of the survey.

### ***2.3.1. Pilot Survey***

For the pilot survey 10 characters, 2 from each region, were selected from the list of characters/mascots (see Chapter 2.3.4.1). Characters used in the pilot survey were not used for the final survey. For the pilot survey 15 individuals were surveyed. Individuals were selected from an open social media poll, asking for participants in a pilot study. Participants were then chosen based on order of interest. From there they were asked to complete an approximately 10-minute survey with a set of additional follow up question. The follow up questions were asked to target inconsistencies or points of confusion within the survey. The following sub-sections will now provide an overview as to the construction of the final survey.

### **2.3.2. Demographic Section**

Data collected in this section included: age, gender, country of origin, education level, etc. Questions were asked relating to the individual's country of origin, residence, and self-defined cultural background.

Questions related to cultural background were included to address the potential cultural differences in perception of cuteness, as seen in Cho (2012). Questions regarding marital status and number of children were added to look at variation between the cuteness rating between those without children and parents, who have been found to elicit stronger neurological responses to images of infants (Thompson-Booth et al. 2014). Questions regarding gender were asked in order to look at potential gender differences in the perception of cuteness (Cho 2012; Borgi et al. 2014)

As no research, has previously been conducted with similar aims in regard to character mascots, it was difficult to assess, which factors would influence the results. Additional questions were asked with regards to age, education level, employment, and ethnic identity to cast a wider net of potential factors.

### **2.3.3. Free Response**

The second portion asked free response questions enquiring as to how the individual defines cuteness and what features they typically associate with cuteness. This was used to collect a general definition and awareness of cuteness by the respondents, and to also collect linguistic data as to characteristics associated with cuteness, in comparison to those outlined in the *Kindchenschema*.

The use of linguistic data in this study gives credit to potential claims and points of analysis by offering a direct test of the *Kindchenschema*: to see if general respondents bring up said features without having been introduced to it. Previous studies have deduced preference to given characteristics or specifically tested the manipulation of features outlined in the *Kindchenschema* (Borgi et al. 2014; Miesler, Leder, and Herrmann 2011). Based on knowledge of studies focused on the *Kindchenschema* and cuteness that were accessible in

peer reviewed journals no previous employment of linguistic analysis had been employed. This novel approach to the methodology gives more scientific clout to the features discussed in this study as they were inductively selected based on respondent feedback. This methodology does also provide some limitations that will be discussed in Chapter 2.4.5.

### **2.3.4. Rating Task**

For the next section participants were presented with images of animal characters in a randomized order. Participants were then asked to make judgement calls on the animal characters individually, based on a 5-point Likert scale, with 5 being extremely cute and 1 being not very cute. The Likert scale for rating cuteness has been adopted as the conventional method in cuteness studies (Miesler, Leder, and Herrmann 2011; Cho 2012; Sprengelmeyer, Lewis, and Perrett 2013; Nenkov and Scott 2014).

#### **2.3.4.1. Character Selection**

For the research 12 animal mascots/characters were selected to be part of the survey. Mascot pictures along with their names can be viewed in Table 1 and Table 2 in Chapter 3.3.1 (full-sized pictures as seen in the survey can be seen in Appendix). Existing mascots were selected as the objects of research to better align with the goals of the study:

*1. Creating a foundational schema for the design cute character mascots.* The use of existing mascots allows for respondents to select traits that they perceive as cute, which may or may not align with the *Kindchenschema*. Had mascots been created they would test for the manipulation/selection of specific features. Which would be presumptuous, as how cuteness as it is represented in the features of animal characters is lacking a representative study.

*2. Highlight potential demographic differences in the perception of cuteness and effects of neoteny.* The mascots were selected from a list generated by an open poll on social media, in which participants were asked to “Provide cute animal mascots/characters from your respective country”. A totally of 57 unique mascots were provided by respondents. Mascots were divided by region and assigned a number. For the usage of mascots within the survey and pilot survey a random number generator was used for selection. Had mascots been

designed for the purpose of this study their creation may not have brought out features of importance for certain demographics. Additionally, mascots from varied regions were selected in order to generate a more representative sample for Hypothesis H3 (see Chapter 2.1).

Once a list of mascots had been compiled, Google search was used to access images of these characters. The images of the given characters that were selected were based on the most neutral facial and body expression for the character available. Many of the character's base designs are presented smiling, with an object, or in an active body composition, so entirely neutral facial expressions were unavoidable. Only images with empty, white backgrounds were selected, this to prevent potential context of the characters a potential generation of associations that could influence the rating scale. Image scale was also adjusted to make the pictures similar sizes.

Once character images had been selected a list of all the poll's characters was compiled and divided by regions. The regions of choice were based on continents. The regions are as follow: North America, South America, Asia, Africa, and Europe. A separate region was not designated for Australia due to a lack of "uniquely Australian"<sup>4</sup> responses. Characters for the pilot study were then selected from each region, with two characters being drawn from the entire list. Initially 10 unique characters were drawn for the official survey and pilot survey respectively, this was changed in the main survey due to 10 characters forming an incomplete grid.

#### **2.3.4.2. Task construction**

For this task participants were presented with each character, one at a time, in a randomized order and asked to rate the cuteness of each mascot. Participants were then presented with a randomized grid image of all 12 characters and asked to select the single cutest mascot from the selection. After the selection, participants were asked to explain what features influenced them in making their decision.

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<sup>4</sup> Australians who had responded to the initial poll selected characters whose design had not originated from Australia (e.g. Tony the Tiger – The United States).



Participants were then asked to choose the least cute mascot from the selection, and provide an answer as to why they had made their decision. The questions prompting individuals to explain their choice were added to provide additional linguistic data to compare against the *Kindchenschema*. Participants were also asked to select characters which they had seen before. This was asked as familiarity with the given mascots could potentially influence the rating of each mascot (H4).

### **2.3.5. Brand Awareness Questions**

The final section asked marketing oriented questions to test for brand awareness and image. Brand awareness looks at whether consumers can identify the brand or product in a series of situations. It largely tests the degree of recall a brand or product has in the memories of consumers (Keller 1993). Brand awareness is a major brand asset central to predicting consumer purchasing trends. It is continuously measured by marketers and if awareness drops to a certain degree often campaigns will be implemented to restore or improve brand awareness. Marketers often set brand awareness objectives as part of their marketing strategy (Ya-Hsin et al. 2014).

One of the most called upon recall test used to measure brand awareness is unaided brand recognition (Hsia 1988). In these tests respondents are presented with a general question or category. From there respondents were asked to list as many brands as they can think of (Hsia 1988). Unaided product recognition was tested for with the following questions:

- “What products, brands, services, and media would you expect to see cute mascots/characters on?”
- “Do you own/consume any products, foods, services, or media that use cute animal mascots/characters? If yes, please list some of the products/services/foods/media below:” (Q2)

Product/brand image is how the brand is perceived by consumers (Neumeier 2004). A customer’s mental picture of a brand can be tested through both qualitative and quantitative

means, and often the format of a survey is employed (Neumeier 2004). The product image of cute characters was tested with the following questions:

- “Do you actively look for certain brands or brands in general with cute animal mascots/characters? If so why?” (Q3)
- “Do you find yourself more drawn to products/services with more cute animal mascots/characters? If so why?” (Q4)

Both qualitative and quantitative methods of analysis are employed in examining the brand awareness and product image of cuteness. Responses were read and analyzed to provide a meta-analysis and qualitative study of the data. Responses were run through a word frequency program in order to provide quantitative data for each question.

## **2.4. Limitations and Sources of Error**

This section considers the potential sources of error and limitations presented by the methodology of the current study.

### ***2.4.1. Respondents and Sharing***

From survey respondent demographics, it is shown that 80% of survey respondents fall between ages 18–34 and 66% of respondents have a degree from a higher institution beyond high school education. Additionally, no respondents were under 12 years of age, so the study lacks data on cuteness as perceived by young children. A further breakdown of the demographics will be presented in Chapter 3. The demographic breakdown shows that the majority of respondents were young adults from educated backgrounds. This yields overall data from the survey that has a more limited scope and has a larger reflection of this specific demographic group. While a wide representation of countries was present in the survey, with 61 countries being represented, respondents were largely from the U.S.A. (34%) and Estonia (17%) with 33% of respondents residing in the U.S.A. and 32% of respondents residing in Estonia. This means that the survey itself is not directly reflective of the global population, which should be taken into consideration.

### ***2.4.2. Localization***

The survey itself was presented in English, with no localized versions created for differing groups. This means that individuals taking the survey would have had an understanding of English, which presupposes a higher level of education for participants taking the survey outside of English native speaking countries.

This also poses a potential socio-linguistic source of error as well, in which languages or countries may not have a separate concept or distinct concept for the word cute, as understood in English. This may have been a source of confusion for some survey respondents, though having a separate conception of cuteness also aligns with Hypothesis H3: Perceived cuteness of will correlate with the country/cultural background of individuals (see Chapter 3.3.2).

### ***2.4.3. Character Positioning***

While an effort was made in the character selection to choose images of front facing positions with neutral expressions to isolate target variables (see Chapter 2.3.4.1), some characters' primary design is in an action pose, with an object, or at a side profile (e.g. Moomin see Appendix). While this could lead to some favorability in certain circumstances, it does not act as a source of error, but rather can add additional variables in the realm of the *Kindchenschema*, such that body movements or positioning could impact perceived cuteness. Dynamic positions were avoided in an attempt to focus solely on the visual neotenic features of animal characters and mascots, but in some cases, were unavoidable.

### ***2.4.4. Familiarity of Characters***

A respondent's knowledge of a given character may have influenced their rating of said character. Since already existing mascots were chosen, as opposed to unique characters being created for this study, this was a potential variable that needed to be addressed. The *mere-exposure effect* posits that individuals will often rate stimuli they are familiar with more positively compared to others (Zajonc 2001). Cuteness studies have additionally found familiarity to be a potential factor in rating cuteness (Koyama et al. 2006). This may be due to a knowledge of the characters' voices and movements, which could contribute to the

perceived cuteness of the characters (H4) as mentioned under the survey introduction visual data was the primary variable tested in this research. This issue is addressed in the creation of the survey itself (see Chapter 2.3.4). Data analysis of perceived cuteness of both those familiar and unfamiliar with a mascot showed no clear trends to disqualify the data. This is discussed further in Chapter 3.3.2.

#### ***2.4.5. Linguistic Methodology***

While the use of a linguistic methodology offers a unique approach to the study of the features of cuteness, it also has methodological limitations that should be considered. From both a semiotic and linguistic viewpoint language is never a neutral medium. Features mentioned by individuals may be more reflective of everyday discourse, and may not directly reflect the processes of perception (Duranti 2011). In recalling features participants, may recall characteristics used more frequently in everyday language such “large eyes” (254,000,000 Google search results) as opposed to the lesser used “protruding forehead” (547,000 Google search results). The following chapter will provide an in-depth analysis of the respondent demographics, data trends, and methods used within the study.

### 3. RESULTS AND ANALYSIS

The following chapter will review the results generated from the cuteness rating survey portion of the study and provide an overview and analysis of the trends within the data. The results of this section will then be used to further analyze the correspondence between perceived cuteness of animal mascots/characters and self-reported purchasing (discussed in Chapter 4).

This section will first provide a more in-depth demographic breakdown, before moving on to analyze the free response and character rating sections based on both overall results and specific demographic groups. Data will be analyzed based on the research aims and hypothesis outlined in the methodology section.

#### 3.1. Demographics

The following section provides a brief breakdown of the demographic to be further analyzed (Tables 1–5).

Table 1: Age		
Age Range	Respondents	% of Total
12–17	8	1.5%
18–24	252	47.3%
25–34	178	33.4%
35–44	27	5.1%

45–54	26	4.9%
55–64	37	6.9%
65–74	4	0.8%
75+	1	0.2%

Table 2: Gender		
Gender	Respondents	% of Total
Female	352	66%
Male	175	32.8%
Other	6	1.1%

Table 3: Marital Status		
Marital Status	Respondents	% of Total
Never Married	386	72.4%
Married	125	23.5%
Separated	6	1.1%
Widowed	3	0.6%
Divorced	13	2.4%

Table 4: Parental Status		
Children	Respondents	% of Total
Yes	93	17.4%
No	440	82.6%

Table 5: Country of Identification (> 10 Respondents)		
Country	Respondents	% of Total
Argentina	10	1.9%

Australia	13	2.4%
Estonia	77	14.4%
Finland	23	4.3%
France	11	2.1%
Germany	18	3.4%
South Korea	12	2.3%
Turkey	11	2.1%
Ukraine	10	1.9%
United Kingdom	18	3.4%
United States	181	34%

### 3.2. Free Response

The free response section functions as a criterion-referenced study in respect to the *Kindchenschema*. The criterion-reference portion of the study tested the hypothesis (H1): *Perceived cuteness will be determined by respondents with respect to the visual characteristics outlined in the Kindchenschema.*

Participants were asked a pair of questions asking for them to provide a selection of characteristics they associate with cuteness; to provide a definition for cuteness. These questions were asked in order collect a general definition and awareness of cuteness by the respondents, and to also collect linguistic metadata as to characteristics associated with cuteness, in comparison to those outlined in the *Kindchenschema*. The use of a linguistic data in this study gives credit to potential claims and points of analysis and also offers a direct test of the *Kindchenschema* to see if general respondents bring up said features without having been introduced to it.

Once the free responses had been collected the total 533 responses were run through a word frequency program (<https://www.online-utility.org/text/analyzer.jsp>), the number of words, characters, phrases, sentences, syllables, and lexical density were calculated. These words

were ranked by number of unique appearances. These appearances were then manually filtered in order to exclude function words: articles, pronouns, conjunctions, etc. References to words such as cute, cuteness, and mascot were also excluded as they were issued in the prompt. The remaining words were then grouped by common spellings, derivations, misspellings, and synonyms (i.e. small: smaller, smallness, tiny, smal, etc.).

### ***3.2.1. Characteristics of Cuteness***

The first question of the free response section (see Appendix for the full survey) asked respondents “What features do you associate with cuteness?”. For this question respondents were not specifically requested to list characteristics of cuteness associated with animals or animal characters, but simply cute/cuteness in general. A brief overview of the responses can be seen in Table 6 below.

<b>Table 6: Frequent Words in Responses</b>	
<b>Word(s)</b>	<b>Frequency</b>
Eyes	252
Big/Large	191
Small	151
Smile/Happy	134
Fluffy/Furry	128
Soft	69
Baby/Youth	95
Round	59
Color	51
Animal	33



Additionally, when looking at phrases and word pairings consisting of two or more words, the pairing big/large eyes had 144 unique appearances. Using the word frequency data, a cross comparison could now be made between the respondent data and the *Kindchenschema* (as seen in the Table 7).

<b>Table 7: <i>Kindchenschema</i> Features in Responses</b>	
<b>Features of the <i>Kindchenschema</i></b>	<b>Frequency in Responses (Word/Phrase Uses)</b>
(a) large head relative to body size, rounded head	“Head” (9)
(b) large, protruding forehead	No mentions
(c) large eyes relative to face, eyes below midline of head	“Eyes” (252) “Large/big eyes” (144)
(d) rounded, protruding cheeks	“Cheeks” (29)
(e) rounded body shape	“Round” (59) “Round shapes” (8)
(f) soft, elastic body surfaces	“Soft” (69)
(g) elastic [clumsy] body movements	“Clumsy” (3)

As hypothesized the survey respondents brought up many features outlined in the *Kindchenschema* with particular focus on (c) large eyes relative to face, with 252 individual instances of eyes being brought up. Other features mentioned include: (e) round body shape (59 mentions), (d) rounded, protruding cheeks (29 mentions), and (f) soft body surface (69 mentions). There had been sparse references to (g) elastic body movements (3 mentions) and (a) large head relative to body size (9 mentions) but no references to (b) large, protruding forehead.

This spread in the data allows one to posit a potential order for the prominence of the features that compose the *Kindchenschema*, especially for that of (c) large eyes relative to the face, appearing in approximately 47% of the responses. Previous research also suggests a potential hierarchy. Borgi et al. (2014) found that participants, when viewing cute stimuli of dogs, cats, and babies, fixated primarily on the eyes with the highest proportion of fixations (46%) and the longest viewing time (47% of total viewing time).

While (c) large eyes relative to face seem to play a critical role in the perception of cuteness, (b) large, protruding forehead seems to not play as large of a role in this perception, though it may hold a proportional or even a subconscious importance. As mentioned in Chapter 2.4.5, this difference may be affected by the linguistic prevalence of these words in everyday language, and claiming a direct causation between cuteness perception and the mentions of these features would be ill-advised. Further studies isolating the influence of the individual *Kindchenschema* features would need to be conducted in order to assert the role of this feature in neoteny.

While there were no instances of foreheads within the given respondent data set, there were mentions of other characteristics not considered in the *Kindchenschema* or *Kindchenschema* related studies and literature: smile/happy (132 mentions), fuzzy/furry (128 mentions), and color (51 mentions). Borgi et al. (2014) also found that beyond the eyes, the nose (fixation and viewing time 13%) and the mouth (fixation 6%, viewing time 7%) were viewed the 2<sup>nd</sup> and 3<sup>rd</sup> most (Borgi et al. 2014: 8), with neither being mentioned in the original outline of the *Kindchenschema*.

The mentioning of these features coupled with the less frequent mentioning of some of the *Kindchenschema* characteristics is a particularly pertinent finding. This challenges the direct application of the *Kindchenschema* as it relates animal characters and mascots. Nenkov, Inman and Hulland's (2008) model of whimsical cuteness does account for the mentions of smile/happy, as these would be features associated with whimsical cuteness.

Existing research shows how emotional expressions of happiness influence the judgment of attractiveness (Golle, Mast, and Lobmaier 2013). The researchers manipulated faces with computer graphics software to systematically change shape-related attractiveness and

happiness, while they kept other facial attributes constant. One could then expect this to influence the ratings of perceived cuteness, with smiling mascots appearing as more attractive and smiling being an influencing characteristic in choosing a given mascot as most cute.

Another feature present within the data was that of color (51 mentions). The most mentioned color being pink (19 mentions). Color has been the subject of previous studies which found that light colors are perceived as cuter, biological theorists posit that this is due to babies and infants having a paler complexion (Etcoff 1999; Frost 1989). Though attributing this phenomenon solely to factors of infant cuteness would be unadvisable as color plays important social and cultural roles. Darker colors were also perceived as less cute (Wright and Rainwater 1962). Cho (2012) also found that when rating the cuteness of geometric shapes, individuals found light colored shapes cuter than darker ones (this will be discussed more in Chapter 3.3.2).

The appearance of fuzzy/furry (128 mentions) provides another feature outside of the *Kindchenschema* and related studies. This may be due to Lorenz' (1943) theories being primarily based on the experience of cuteness as something derived from human babies, which are not characteristically hairy or fuzzy. Fuzziness and furriness is rather a trait more specifically associated with non-human animals. With regards to whimsical cuteness this haptic element is also not mentioned in relevant literature (see e.g. Nenkov, Inman, and Hulland 2008). Within the respondent data animals, as being something characteristically cute were mentioned 33 times with some respondents listing species as examples: cats/kittens (13 mentions) dogs/puppies (6 mentions). While fuzziness could potentially correlate with the roundness and softness of infants, it is more likely a feature that factors into animal cuteness. Borgi et al. (2014) also found that kittens and puppies were ranked as significantly cuter than human infants. Domestic animals tending to have a higher cuteness rating than human infants across studies is a significant finding that challenges aspects of the *Kindchenschema* in that a potentially separate list of characteristics may be needed for examining species specific cuteness. Such that proportions and their features of a cat or dog that contribute to perceived cuteness may vary from the features of a human.

This research would then like to posit a reworking of cuteness as a scientific model is necessary, as both the *Kindchenschema* and whimsical cuteness theories limit the potential feature sets comprising cuteness. Animal characters and mascots already provide elements not accounted for in prevailing theories. This idea will be expanded upon in the remaining analysis and returned to in Chapter 3.5.

### **3.2.2. Defining Cuteness**

The next question respondents were asked was: *What would be your definition for the term cute/cuteness with regards to animal mascots/characters?* This was done in order to create a working definition of cuteness in comparison to the general scientific definition of cuteness established in Chapter 1 as a general term to refer to type of attractiveness associated with the appearance of youth and its association with the *Kindchenschema*.

When asked to define cuteness many of the respondents once again provided a similar list of characteristics as done in the previous sections: eyes (117 mentions) and fluffy (103 mentions). Moving beyond the re-mentioning of features respondents also defined cuteness as it relates to the youth/babies (61 mentions) and a desire to protect or help (13 mentions). This is outlined in the following survey response:

I'd say an animal mascot is cute if I'd want to hug it. There's a term in Japanese, moe, to describe the feeling a cute character gives you when you want to protect him/her. That's the closest I can think of to defining cuteness here - is it something smaller than me that might need me to protect it? If so, I'd probably think it's cute.

The idea that cute and infantile characteristics promote a response for protection, nurturing, and caregiving align with Lorenz (1943). Though while some features of the *Kindchenschema* participants once again brought up features not exclusive to infants (Fluffy 103 mentions) and the perception of texture an aspect of cuteness. The example above also brings up the notion of wanting to hug the mascot, which also appeared within the data with 44 mentions of wanting to hug, touch, or cuddle something as a defining factor of cuteness. Previous research suggests that people find soft fabrics relaxing (Major 1895) and have preference for soft fabrics and furs over rough ones (Ripin and Lazarsfelds 1937).

Additionally, touch may play more than a sensory role, but sensory responses may be accompanied by psychological motivations (Olausson et al. 2010). In drawing a relationship between the importance of perceived texture and cuteness, cuteness has been shown to create a positive feeling associated with a strong approach motivation, which contributes to a desire to touch or hold a cute animal (Elliot and Covington 2001).

The mentioning of these features suggest that the visual and tactile experience are closely tied. While this study primarily focuses on the visual aspects of these characters, the mentioning of such features requires discussion as the process of translation of stimuli from the tactile to visual.

Texture as a design factor refers more specifically to the characteristics of the given material (Yanagisawa and Takatsuji 2015). When viewing objects, people develop a variety of assumptions and perceptions as to the tactile characteristics of the object that correspond with physical ones (perceived features). Yanagisawa and Takatsuji 2015 suggest that these features are combined to form tactile judgments such as such as “nice to touch” and that these judgements are heavily influenced by our expectation of the object (i.e. the expectation effect). In terms of animal characters this model become highly abstracted, as tactile expectations are not based on a direct referent, but rather a complex model based in both culture and biology, in which expectations of a given biological species are inherently tied to representations of that given species. This further suggest the potential misstep of a purely *Kindchenschema* based model of cuteness.

Previous cuteness research also largely lacks discussion as to the visual-tactile representation of features, typically only mentioning that softness as a feature of cuteness as it relates the feeling of a baby’s epidermis (Lorenz [1951]/1970). The appearance of “furry” in both free response questions further suggests the usage of a more species specific schema of cuteness.

### **3.3. Cuteness Ratings**

The next section will review the results from the cuteness rating portion of the survey. The average ratings for all were analyzed by mascot according to demographic group. The results in this section will be presented based on their relevance to the aforementioned hypotheses (see Chapter 3.3.2).

#### ***3.3.1. General Overview***













The data in this section is composed of both cuteness rating scores gathered for each of the 12 mascots as the number of selections for the given mascots as “most cute” and “least cute” (See Tables 1 and 2 below for images of characters with their corresponding names). The numerical data in this section is supported by linguistic data, from the free response questions: “What features make this mascot/character cute?” and “What features take away from the mascot’s/character’s cuteness?”. Data was both broken down into specific sets by demographic groups and individual character and aggregated for the combined group of respondents and mascots.

The average cuteness rating (ACR) of all mascots combined came in at 2.8 (out of the 1–5 Likert scale) which shows that on average the mascots were rated as “somewhat cute”. The range is 1.8. Based on a population of 533 and a 95% confidence interval, a significant difference as established in previous studies (e.g. Cho 2012; Nenkov and Scott 2014) can be established at around .5. In any case, as not all demographic groups within the study are equally represented, the focus will be on potential trends rather than on claiming statistical significance. Figures 1–2 show the average cuteness rating of each individual mascot. An online general report of the general survey and demographic data can be accessed at: (<https://jasonmariodydynski.typeform.com/report/wMr6nP/R7nE>).

**Figure 1: Cutest Mascot Ranking**

Which of these mascots/ characters is the cutest?

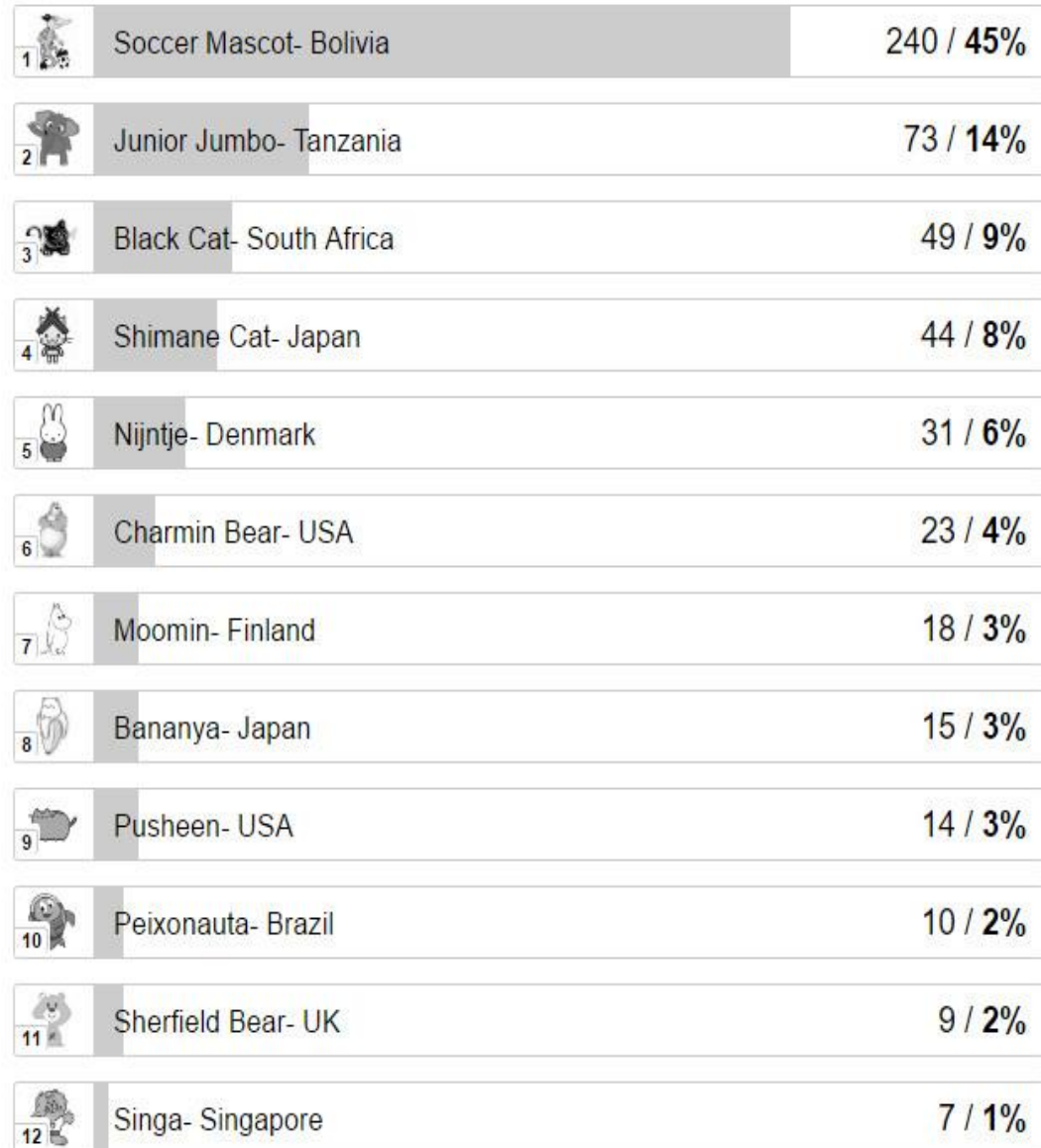
533 out of 533 people answered this question

1		Pusheen- USA	115 / 22%
2		Bananya- Japan	113 / 21%
3		Moomin- Finland	83 / 16%
4		Singa- Singapore	41 / 8%
5		Black Cat- South Africa	33 / 6%
6		Charmin Bear- USA	33 / 6%
7		Peixonauta- Brazil	31 / 6%
8		Sherfield Bear- UK	29 / 5%
9		Junior Jumbo- Tanzania	21 / 4%
10		Nijntje- Denmark	15 / 3%
11		Shimane Cat- Japan	10 / 2%
12		Soccer Mascot- Bolivia	9 / 2%

**Figure 2: Least Mascot Ranking**

Which of these mascots/ characters is the least cute?

533 out of 533 people answered this question





The second portion of this section had respondents select the most cute and least cute mascots from the selections the results are outlined in the following table and trends will be discussed in Chapter 3.4.

The general data presented in this section will now be broken down and analyzed according the hypothesis set out in Chapter 2.1.

### **3.3.2. Data Breakdown by Hypothesis**

*H2: Perceived cuteness will be greater when: eyes are larger than smaller (H2a), features are rounder than sharper (H2b), character design is more simple than complex (H2c).*

H2a: based on previous studies and the free response data, eyes were expected to play a role in the ratings and selections of given mascots. The results of the cuteness rating section in explaining why a given mascot was chosen as the cutest eyes (115 mentions) and big eyes (39 mentions) were the most mentioned one and two word combinations. When selecting a mascot as least cute eyes were mentioned 44 times, typically in the context of small eyes. For example: “Lack of chubbiness and small eyes.” (said about Bolivian Soccer Mascot).<sup>5</sup>

The high appearance of eyes as a critical feature aligns with previous studies as well (Borgi et al. 2014). Previous research suggests eyes provide important informational cues (Emery, 2000), and eye size may affect both aesthetic ratings of and visual preference for human faces (Geldart et al. 1999). Eyes are the frequent center of most studies so current findings are in agreement with results of previous studies.

H2b: roundness was a characteristic both outlined in the *Kindchenschema* and brought up in the free response portion of this study. Mentions to a round shape/roundness appeared in 54 instances. For example: “Its roundness makes it cuter. Mascots who seem to have more pounds on their hips are cuter. Also, its minimal approach is appealing.” (said about Pusheen).

A lack of roundness or presence of sharp edges appeared as a reason for selecting a mascot as least cute (38 mentions). For example: “I don’t like all the sharp lines” (said about

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<sup>5</sup> For mascots’ names please see Tables 1 and 2 in section 3.3.1.

Shimane) or “Too many sharp lines, equipments, and the clothes somehow break the appearance of animal and make it more a crude mix of skinny child and shell of an animal.” (said about Bolivian Soccer Mascot).

This data corresponds with previous studies in which objects with rounded corners are evaluated as cuter than objects with sharp edges (Cho 2012) and round-edged or curved visual objects are preferred to sharp-edged objects (Bar and Neta 2006).

H2c: while the simplicity of a design did not appear in large numbers in the free response section. Previous studies suggest that simple objects will be evaluated as cuter than complex objects (Cho 2012). As seen in the previous example from Pusheen. From the free response data, we can see a preference for more simple designs as compared to more complex designs. When responding to why the respondents chose a mascot as the most cute, simple was mentioned 41 times. When looking at why a mascot was selected as the least cute detail (38 mentions) and realistic (24 mentions) were frequently mentioned.

*H3: Perceived cuteness will correlate with the country/cultural background of individuals.*

When cross comparing the result ethnic/racial background had no clear trends, and notable points and discrepancies could be explained by the results pertaining to the individual’s country of origin. This section will look at the results pertaining to respondent country of origin. Table 8 summarizes the ACR for countries who had 10 or more respondents<sup>6</sup>.

Table 8: ACR by Country	
Country (% of Total Respondents)	ACR
Argentina (1.9%)	2.51
Australia (2.4%)	2.47
Estonia (14.4%)	2.87
Finland (4.3%)	2.75

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<sup>6</sup> The respondent distribution between the different countries is varied and the respondent pools for some countries are limited, this leads to a higher margin of error for some countries.

France (2.1%)	2.67
Germany (3.4%)	2.62
South Korea (2.3%)	3.01
Turkey (2.1%)	2.93
Ukraine (1.9%)	2.96
United Kingdom (3.4%)	2.63
United States (34%)	2.82

South Korea and Ukraine ranked the mascots overall as cuter (3.01 and 2.96 respectively) compared to the total ACR of 2.8. Cho (2012) expresses that preference for certain neotenic features may vary by culture. Cho (2012) compared the ratings of cuteness ratings between South Koreans and Americans when presented with a series of objects (cars and alarm clocks). In the study, Americans were found to have rated the objects as generally cuter overall. This would contrast with current data in which, Koreans had rated mascots higher than their American counterparts. This may be accounted for by the limited respondent demographic populations. A larger respondent population would allow for stronger claims to be made.

Australia had the lowest ACR for all characters at 2.47. The United States was around the total group ACR at 2.82, though with participants from this country consisting of 34% of total respondents, their input is largely reflected in the total ACR. Data pertaining to the selections for the most and least cute mascots of each country can be seen in Table 9.

Table 9: Selections for Most/ Least Cute by Country				
Country (% of Total Respondents)	Favorite Mascot	Cute Features	Least Cute Mascot	Not Cute Features
Argentina (1.9%)	Pusheen (3)	Eyes (2)	Soccer Mascot (8)	X
Australia (2.4%)	Bananya (5)	Eyes (4)	Soccer Mascot (6)	Sharp Edges (2) Color (2)
Estonia (14.4%)	Pusheen (27)	Eyes (17)	Soccer Mascot (42)	Color (15)
Finland (4.3%)	Bananya (10)	Happy (6)	Soccer Mascot (13)	Sharp Edges (2)
France (2.1%)	Moomin/Bananya (3)	Simple (2)	Soccer Mascot (6)	X
Germany (3.4%)	Moomin (6)	Eyes (6)	Soccer Mascot (10)	Creepy (3)
South Korea (2.3%)	Pusheen (4)	Simple (2)	Soccer Mascot (8)	Realistic (2)
Turkey (2.1%)	Moomin (3)	Eyes (3) Simple (3)	Soccer Mascot (5)	X
Ukraine (1.9%)	Moomin (3) Bananya (3)	Eyes (3)	Soccer Mascot (3) Shimane (3)	Color (2)
United Kingdom (3.4%)	X	Eyes (6)	Soccer Mascot (8)	Not Cuddly (3)
United States (34%)	Bananya/Pusheen (36)	Eyes (33)	Soccer Mascot (77)	Color (27)
Nigeria (1.7%)	Soccer Mascot (3)	Football (2)	Moomin (3)	No Color (2)

While the most cute mascot among each country varied, the selection of the Bolivian Soccer mascot was largely selected as the least cute among the majority of countries. While a low ACR and high selection as least cute of the Bolivian Soccer Mascot was present across most countries, one country in particular had results that did not reflect this trend.

Nigeria, which had 9 participants, ranked the Bolivian Soccer Mascot as the cutest mascot with an ACR of 3 compared to the total average of 1.72 and was selected as most cute 33% of the time. Additionally, among Nigerians, Moomin was selected as the least cute 33% of the time, with the primary reasoning being a lack of color. This is particularly interesting as cute color preference of this group seem to vary from the other demographics. As mentioned in the free response section, color has been the subject of previous studies. With light colors being perceived as cuter than darker colors (Wright and Rainwater 1962). Looking more closely at these studies we can note that Wright and Rainwater (1962) population for the study consisted specifically of 3,660 West German adults and neither study included data from African respondents. Research into color preference seems to have apparent lack of cross-cultural analysis, due to the general lack of African, Asian, and South American respondent data. Future studies into both, how color affects cuteness and general preferences for neotenous forms could stand to benefit from further cross-cultural studies.

The demographic results, would then suggest that cultural background seems to play a role in the perception of cuteness. Had cuteness been determined by purely biological elements no major significant differences would have occurred between cultures. This further suggest that prevailing models of cuteness lack the apparatus to account for such variability.

*H4: Perceived cuteness will correlate with the overall familiarity of the respondents with the character (i.e. species; character itself).*

With regards to the influence of familiarity with the mascots themselves the data was rather scattered and inconclusive. In some instances, being familiar with a mascot did not rank it as highly. The two instances in which there was a significant range between those familiar and not familiar was with the Black Cat with a familiar ACR of 3.4 and an unfamiliar ACR of 2.56 for a range of .84 The ratings based on familiarity can be seen in Table 10 a–b.

Table 10a: Mascot Familiarity						
	Bananya	Black Cat	Charmin	Junior Jumbo	Moomin	Njynte
Familiar with Mascot	65 (13%)	5 (1%)	211 (42%)	16 (3%)	248 (50%)	259 (52%)
Familiarity Average	3.74	3.4	2.82	2.94	3.34	2.7
Unfamiliar Average	3.41	2.56	2.79	2.8	3.41	2.75

Table 10b: Mascot Familiarity						
	Peixonauta	Pusheen	Sherfield	Shimane	Singa	Soccer Mascot
Familiar with Mascot	37 (7%)	423 (85%)	19 (4%)	18 (4%)	45 (9%)	6 (1%)
Familiarity Average	2.49	3.56	3	2.5	2.6	2
Unfamiliar Average	2.6	3.4	2.96	2.43	2.49	1.71

A stronger correlation between familiarity and the average cuteness rating of the given mascots was predicted as based on (H4). If particularly strong associations with mascots were not formed previously, familiarity may not have been as vital as the novelty of the mascots which does not align with the results of Koyama et al. (2006). While originally familiarity of the given mascot was sought for within the data trends relating to familiarity of the given species were found. Species familiarity was not asked for within the survey, but mentions to it were brought up. Mascot familiarity was not seen to greatly influence the ratings (except for Black Cat), but the same is not true for the species familiarity.

Based on the linguistic data there was clear favorability towards domestic animals such as cats, whose cat-ness was a sole factor in which they were chosen as most cute with cat (98 mentions) and the phrase “It’s a cat” (17 mentions). Those who were unable to discern what an animal was or were unfamiliar with the animal ranked it as less cute. Previous studies have also posited that when viewing cute animals pet ownership and familiarity with animals may influence preferences (Borgi and Cirulli 2013). Some examples of responses include: “I

like cats” (said about Pusheen) and “It’s tiny, it has blush on its cheeks and it’s a kitten and I like cats a lot” (said about Bananya).

While in general being a cat seemed to be an advantage for many of the mascots, being a cat, was also mentioned as a reason for the animal not being cute with 22 mentions to cats/kittens when describing why a mascot was the least cute. Mentions to this include: “It looks like a cartoon....and I don’t like cats...soooo....” (said about Black Cat) and “I don’t like cats” (said about Black Cat).

Mentions to preconceived notions about animals as justification for ranking a mascot as least cute was not limited to cats, but also fish were mentioned. In the case of Pexionauta out of the 10 respondents who ranked it the least cute 4 mentioned the fact it was a fish or associations with fish for their reasoning: “I am just not a fan of fish!” and “My dislike for the smell of fish, it’s trying too hard with those big emotionless eyes, and it looks unnatural.”

Cultural associations individuals have with given animals was also mentioned as a reason an animal was selected as least cute: “Fish cannot be associated with an object possessing soul.” and “Black cats are associated with witches”.

When individuals were unfamiliar with the species of a mascot, it was mentioned as a reason for the mascot being ranked as not cute. Out of the mascots individuals seemed to have difficulty identifying the species of the Bolivian Soccer Mascot, for example: “First of all, I don’t even know what the Friekendel this is. Is it an ant eater? A turtle? Armadillo [...]”, “Unfamiliar animal, looks a bit like a human” and “Weird, different animal species being used I.e. human hands and legs but turtle shells and crocodile tail??”. People were also confused about the species of Peixonauta, for example: “It looks weird, it’s hard to say exactly what creature it is. If it’s a fish, then why is it wearing an aqualung?”.

These cultural associations with the given animals and mascots, further push the need for reworking existing models of cuteness. As both *Kindchenschema* and whimsical cuteness lack a way to address the issue of individual and cultural opinion towards or against a stimulus.

### 3.3.3. Additional Demographic Trends

*Parental Status.* Individuals with children ranked all mascots with an ACR at 2.86 higher than those without children at 2.79. While the general trend may show those with children as rating mascots with a higher cuteness ranking, it is to be noted that for some mascots those without children rated them significantly higher than those with such as Pusheen 3.62 compared to 3.04; Bananya 3.53 compared to 3.07; Moomin 3.48 to 2.87. Despite these gaps the range of ACR among all mascots was much smaller in those with children .96 compared to 2.03 of those without children. The results are summarized in Table 11(a–c).

Table 11a: ACR by Parental Status	
Children	All
Yes (17%)	2.86
No (83%)	2.79

Table 11b: ACR by Parental Status						
Parental Status	Mascot					
	Bananya	Black Cat	Charmin	Junior Jumbo	Moomin	Njynte
Children (17%)	3.07	2.79	3.12	2.84	2.87	2.95
No Children (83%)	3.53	2.53	2.74	2.43	3.48	2.67

Table 11c: ACR by Parental Status						
Parental Status	Mascot					
	Peixonauta	Pusheen	Sherfield	Shimane	Singa	Soccer Mascot
Children (17%)	2.88	3.05	3	2.32	3.3	2.16
No Children (83%)	2.53	3.62	2.96	2.46	2.9	1.63



The preferences for cutest mascot also varied between the groups with those having children preferring Singa with an ACR of 3.3 and being selected as most cute (14%). The most frequently mentioned characteristic in selecting a mascot as cutest was smile/happy at 26. Those without children preferring Pusheen ACR 3.62 and 24%. Reasons for selecting a given mascot as the cutest was most associated with big eyes 35 mentions and eyes 94. Both groups rated the Bolivian soccer mascot as the least cute: those without children 205 (47%) and those with children 35 (38%). Both groups mentioned color 67 times as a reason for the mascot being the least cute. Individuals without children mentioned color 55 times, with those with children had 12 mentions.

In analyzing the variation between responses of the two group, previous research has discovered that the experience of parenthood prompts a variety of hormonal and neural changes, in that there were neurochemical differences existed between parents and those without children (Abraham et al. 2014). Cultural expectations for parents to actively search for products that are fluffy and cute for their children, may also have primed them to pay more attention to cute stimuli. How these differences present themselves in their relationship to the perception of cuteness is still undetermined, but it could hint at a possible explanation for this phenomenon to be further studied.

*Gender.* Within the data there were apparent gender differences between the genders. The disparity between the ACR of the total mascots for each gender can be seen in the Table 12.

Table 12: ACR by Gender	
Gender	ACR
Female (66%)	2.83
Male (33%)	2.76
Other (1%)	2.39

From the data, we can see a slightly higher ACR among women as compared to men. This would align with previous research that has suggested that claim women are more sensitive

to neotenic traits. Though the range of the average ACR between those identifying as male and female may be at .07, there is a larger overall disparity between each individual mascot. Pusheen and Moomin had the largest range between the two genders with females rating Pusheen at 3.58 to males rating of 3.37 and Moomin 3.46 to 3.18. Males had assigned a higher rating to Shimane and Sherfield Bear mascot. These differences could be proposed to be that certain features of neoteny affect the genders differently.

The second portion of the rating section provides some insight into this. Females had ranked Pusheen overall as the cutest mascot with an ACR of 3.58 and selected as most cute with the largest percentage at 21%. Females mentioned eyes (87 mentions) and smile (40 mentions) as their most common reason for selecting a given mascot. This differed from males who ranked Bananya as the cutest with 27% and the highest ACR at 3.43. In analyzing the characteristics of why they choose a mascot as the cutest with eyes (26 mentions) and banana (30 mentions), the usage of banana was often matched with Bananya in the context of the mascot being humorous (7 mentions). For example:

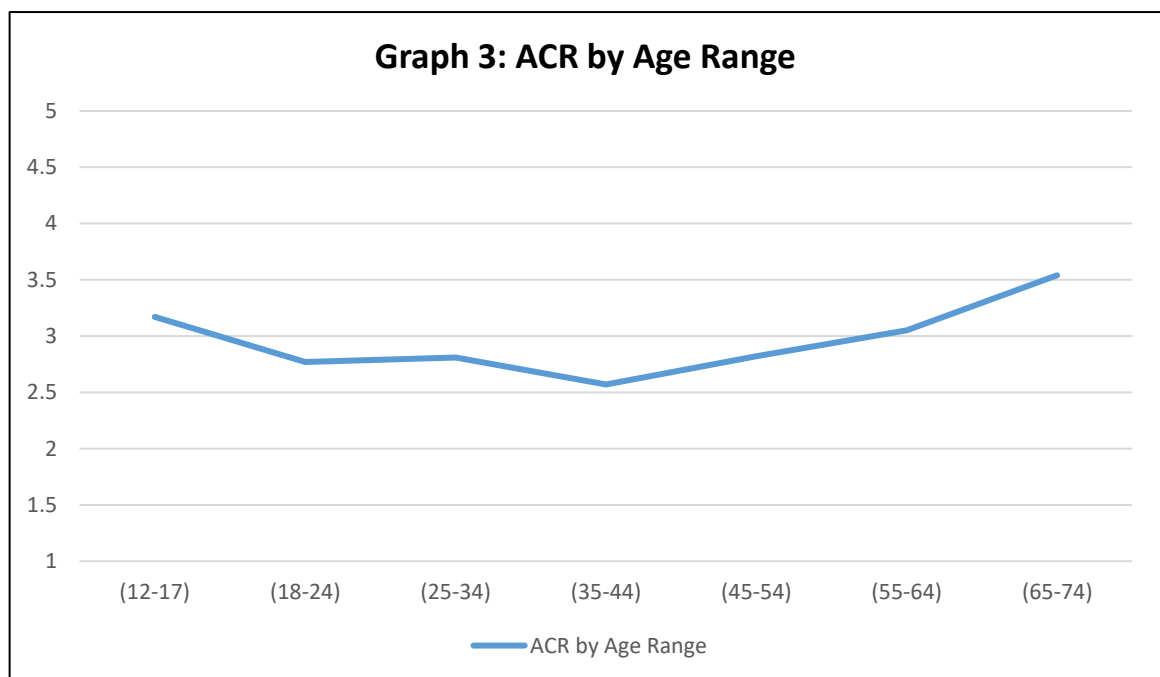
It's innocently funny because the cat is unaware of it being in a banana and cats loves being in ridiculous places and the character doesn't give off any kind of gruesome feelings about its position (though thinking about it, it seems like the banana could be slowly devouring the cat?).

The use of humor and its association with cuteness, especially in males may point towards factors related to whimsical cuteness.

Both groups had ranked the Soccer Mascot as the least cute, but the linguistic data shows some differences in explanations between the genders such that females mentioned color (67 mentions) and eyes (28 mentions) as their primary reason while men had mentioned human/anthropomorphic features (10 mentions) and eyes (13 mentions) as their largest reason taking away cuteness.

Table 13: The Most and Least Cute by Gender				
Gender				
Female (66%)	Pusheen 21%	Eyes (87) Big eyes (35) Smile (40)	Soccer Mascot 46%	Color (67) Eyes (28)
Male (33%)	Bananya 27%	Banana (30) Eyes (26)	Soccer Mascot 44%	Human (10) Creepy (13) Eyes (13)
Other (1%)	Pusheen 50%	Cat (3) Tiny (2) Fluffy (2)	Junior Jumbo 50%	Color (3)

*Age.* While not accounted for in the initial hypothesis. A data trend was found within the data expressing a reverse bell curve shape with regards to age and the perception of cuteness (see Graph 3 and Table 14).



<b>Table 14: ACR by Age Range</b>	
<b>Age Range</b>	<b>ACR</b>
Overall	2.8
12-17 (2%)	3.17
18-24 (47%)	2.77
25-34 (33%)	2.81
35-44 (5%)	2.57
45-54 (5%)	2.82
55-64 (7%)	3.05
65-74 (1%)	3.54

The potential relation between cuteness may represent itself in an inverse bell curve with the youngest and oldest populations within a community ranking things as generally cuter than the middle-aged individuals. Some previous studies have looked at the correspondence between cuteness response and age. Borgi et al. (2014) shows that the response to infantile facial characteristics emerges early during human development. Borgi et al. (2014) found that children and youth spent a longer time looking at neotenic images than adults. The current survey lacks data for those under 12 years of age, but does differentiate between adult age groups. Additional cultural factors such as children and youth being the primary audience for cute products should also be considered. A longitudinal study to investigate how the perception of cuteness changes over the life course of humans would need to be conducted to investigate this relationship further.

### **3.4. Critical Features in Determining Cuteness**

Respondent choice for the most cute mascot aligned with the ACR for each respective mascot. Pusheen ranks as both the highest in average cuteness rating (3.52) and was most selected as the cutest mascot (115/22%). Though Bananya came in a close second at 3.45 and

(113/21%), though as discussed in the gender section, had there been a more equal balance of males to females Bananya may have rated higher overall. With a significant difference the soccer mascot was rated the least cute amount the mascots with an ACR of 1.72 and ranked as least cute 259 or 52% of the times.

Based on the data and trends analyzed and elaborated upon in the previous sections, general claims can be made as to what qualities and characteristics can factor into the overall perception of cuteness in animal mascot, and whether existing models of cuteness or a new model is needed for the analysis of cuteness in animal mascots and characters.

Some features as outlined in *Kindchenschema* were mentioned in selecting a mascot as cutest: eyes (115 mentions), big eyes (39 mentions), big head (9 mentions), and round (54 mentions). These features as explained in Chapter 3.2. Features that were on the opposite end of the spectrum were used in explaining why a given mascot was the least cute such as: small eyes (44 mentions), body (17 mentions), sharp/pointed (38 mentions). While overall these features seemed to play some role, or were noticed, claiming that mascots with features closest to that of the *Kindchenschema* would create a false positive. Both Pusheen and Banayana who rated the highest do not adhere to the *Kindchenschema* (e.g. smaller eyes, eyes above the midline of head, and lack of protruding forehead). Other mascots such as Moomin and even the lower ranking Junior Jumbo seemed to follow the schema more directly (large eyes, large cheeks, protruding forehead). Many of their features also do not pass as traditionally neotenic characteristics. Other features such as perceived texture and the elements of whimsical cuteness and cultural factors then need to be considered to offer a full explanation.

*Happiness and Fluffiness.* These two features, brought out in the free response section (Chapter 3.2.1), were also prevalent in the mascot selection portion with smile/smiling being mentioned 119 times as to why a mascot was the most cute, and fluffy being mentioned 58 times. The relationship between texture and cuteness as it is visually perceived in graphic images is brought up in Cho 2012, who found more rounded smooth objects as cuter. Study at hand did not find smoothness to be a primary characteristic, but rather fuzziness/furriness (58 mentions) as to why a mascot was selected as most cute. Previous research as to the characteristics largely uses human infants as a basis, so the variability of furriness was not

tested for in the existing research. Beyond human's tactile preferences for certain texture, more research is needed overall in order to examine the relationship between visual texture and cuteness in both living species, objects, and animated characters.

In this portion of the study smile was brought up approximately the same number of times as eyes (118 mentions). While Pusheen was presented as smiling, Bananya was not and was still selected as cutest by 21% of respondents, additionally many of the mascots with lower ACRs (Shimane, Soccer Mascot, etc.) possessed smiles. The appeal of melancholy stands in contrast with whimsical cuteness, and would then be more related more to the *Kindchenschema* and desire for protection. Modes of expression needing to be mediated between the two form of cuteness presents a methodological issue within Nenkov, Inman and Hulland's (2008) model. This furthers the need for a separate model for the analysis of cuteness.

Though as a point of interest, it would be of interest to see if an image of Bananya smiling, or with another positive expression, would be ranked as cuter. Further research into the expression of emotions such as smiling, crying, etc. and their effect on perceived cuteness would provide additional information as to role of perceived emotion in neotenous forms.

*Familiarity and preference for a given species.* As elaborated in section 3.3.2 "cat" (98 mentions) and "It's a cat" (17 mentions) appeared as common reasons why a selection was the cutest and the reason why a mascot was the least cute with 22 mentions. No other clearly domestic animals appeared in the mascot representation, so it is difficult to confirm solid findings with regards to domestic animals and cuteness as a whole.

Those who were unable to discern what an animal was or were unfamiliar with the animal ranked it as less cute, such as in the case of the Soccer Mascot. When individuals were unfamiliar with the species of a mascot, it was mentioned as a reason for the mascot being ranked as not cute. Out of the mascots individuals seemed to have difficulty identifying the species of the Bolivian Soccer Mascot and Peixonauta. This further assert for the need consideration of cultural elements in analyzing the perception of cuteness.

Being human-like was also considered as a reason for something being ranked as least cute (25 mentions). This also aligns with the results in the free response portion (Chapter 3.2) in which respondents listed animals (33 mentions) as something characteristically cute. These results further question the role anthropomorphism plays in determining cuteness and the use of a human infant as the base of such a model.

*Color matters.* In reference to the cutest mascot respondents had mention color 46 times, while for the least cute color was mentioned 88 times. The role of color has been discussed in Chapter 3.2.1. Color appears to play a role in perceived cuteness, especially in the selection of a mascot as least cute. Further testing the color palettes of characters would need to be conducted to see which ones are perceived as cuter among different demographic groups. The aforementioned features likely work in conjunction and play into the overall design of the characters.

Utilization of the preferred characteristics in character design would likely yield to a mascot as being perceived as cuter overall. Though as the features and factors mentioned differ from that of the *Kindchenschema* and that of whimsical cuteness a separate schema for the analysis of cartoon animals is then necessary. Additionally, based on the disparity between the trends of both this and other research into the perception of cuteness, a model for cuteness that can accommodate both biological and inanimate objects should then be proposed.

### **3.5. Proposition of a Semiotic Model of Cuteness**

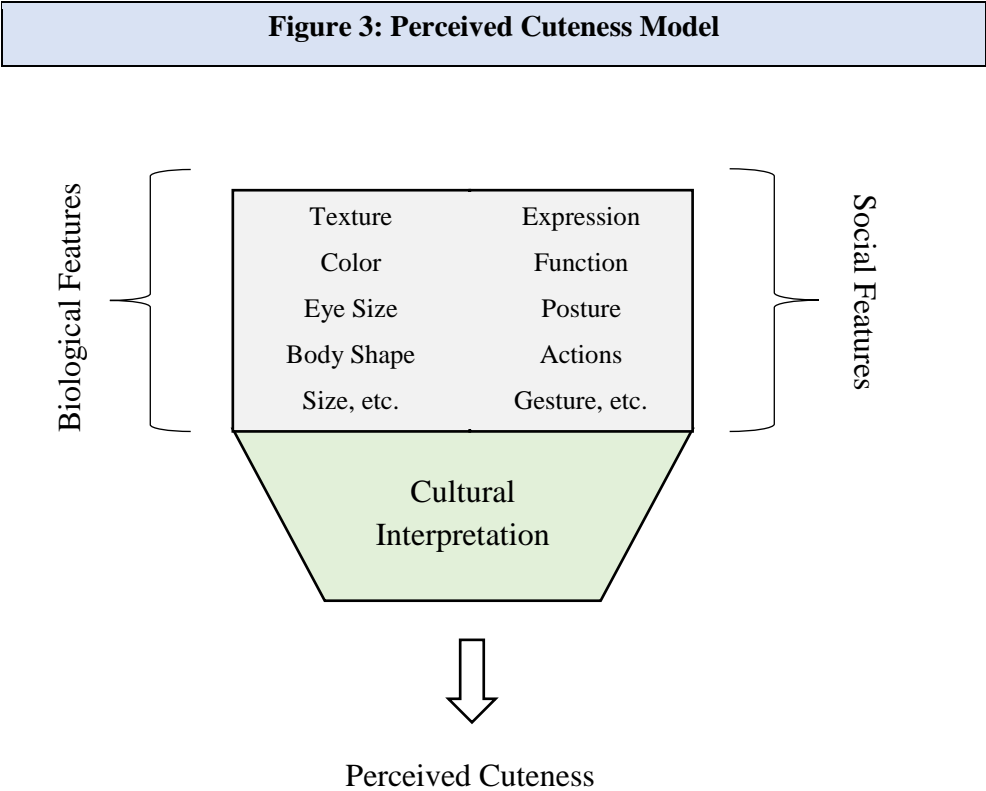
The foundational basis of the *Kindchenschema* severely limits the potential extension of cuteness theories beyond human infants, and shirks the potential relevance of socio-cultural factors. This research would then like to propose an alternative model as to the constructions of cuteness consisting of two categories: Biological Cuteness and Social Cuteness.

Biological Cuteness encompasses the perception of physical features that comprise cuteness: these features include but are not limited to that of the *Kindchenschema*, but also include elements such as perceived texture (furriness/softness) and color. Social Cuteness would then incorporate the elements laid out in whimsical cuteness such as expression of fun/happiness,

social functions, and overall expression.

The interplay of the features then comprises a base cuteness, which is then interpreted by the perceiver and undergoes a process of cultural interpretation, expectation, and application of schemas leading to the final perception of cuteness, as expressed in Figure 3. This point is important as it allows us to utilize distinct referents as points of expectation.

While for analytical purposes certain features are distinctly separated between biological and social features, it is important to note that when examining overall context of mascot evaluation some of these features play have both biological and social constructs such as the interplay between eye size and expression. Some features may belong to more than one category, but it should nevertheless be noted that a continuum exists between social and biological elements.





In the application of this model the cross-comparison of stimuli is then possible. In examining the cuteness of a cute animal character, such as Pusheen, biological characteristics would be chubbiness, rounded shape, simplicity in design, furry (perceived texture). Characteristics of social cuteness would be its positive/happy expression, representation of a domestic animal, and function/uses of the character (i.e. where the character could be found within media). These features would then undergo cultural interpretation: analysis and expectations of a cat and other features within a given culture to determine the overall impression of cuteness.

This model can also account for the ACR results of Pexionauta and Black Cat who largely followed the elements of the *Kindchenschema* (e.g. large eyes; rounded shapes; large heads) and whimsical cuteness (both smiling, and Pexionauta in the aquatic costume). As outlined in Chapter 3.3.2 some participants expressed cultural biases towards certain species: “Fish cannot be associated with an object possessing soul.” and “Black cats are associated with witches”. These examples further stress the importance of including cultural considerations in evaluating cuteness.

Utilizing this methodology allows for the creation and application of schemas to account for a variety of categories and be used as more archetypes when analyzing cuteness at the cultural level. In application of this chapter’s analysis a schema for animal characters can then be posited: simplicity of design, color, roundness of shape, perceived texture of furriness, and basis from familiar animal. This model also aligns with the general typology established by Schmauks (2000), which highlights the combined function of social practices with biological forms.

This model itself needs to be further expanded and developed as a theoretical framework, but it offers a starting point into the exploration of cuteness as both a socio-cultural and biological phenomenon. The next section will look at the marketing portion of the survey, and delve into the application of the given research.

## 4. MARKETING SURVEY RESULTS AND ANALYSIS

The following chapter will review the results generated from the marketing portion of the study and provide an overview and analysis of the trends within the data. This section will first provide an analysis of the unaided product recognition portion and provide a list of products and services based on respondent feedback as to where they expect to see cute mascots.

The data will be analyzed based on its correspondence with the cuteness rating section (Chapter 3). Based on data from Chapter 3 this hypothesis will be posited:

H5: Perceived cuteness will correspond with consumer habits: (H5a) have a higher percentage of owning products with cute animal mascots; (H5b) look more actively for cute mascots; (H5c) be more attracted to products with cute mascots.

### ***4.1. Unaided Product Recognition in Cute Animal Characters/Mascots***

This section uses free response questions to address un-aided product recognition to create a comprehensive list of what products respondents associate with cuteness, as well as to collect a census of which groups own products with cute mascots, and what products if any that they own. In order to gain an understanding as to what products and services respondents associated with cuteness the following question was asked:

- “What products, brands, services, and media would you expect to see cute mascots/characters on?”

Once the free responses had been collected the total 533 responses were run through a word frequency program. Within the linguistic data, some major trends appeared within the products mentioned. The most mentioned word was children with 283 mentions, other groups of people associated with cute products were women/girls (30 mentions), babies (31 mentions) and pets (30 mentions). This association of cute products with children may be directly associated with the *Kindchenschema* itself, since it is based on the ideas that cuteness is derived from features we associate with babies and children (Lorenz 1943).

Participants mentioned both general categories of products, as well as mentions to specific products that fall under these categories. The categories of products mentioned (excluding the # of mentions of products under each category) can be broken down into the following categories: Food (77 mentions); Sports (43 mentions); Services/Businesses (34 mentions); Media/Entertainment (41 mentions); Clothes/Fashion (56 mentions); School/Office Supplies (30 mentions). It is important to note that the answers to the questions could have been influenced by the question itself (i.e. the mention of products, brands, services, and media). Individuals may also have been previously influenced by the mascots themselves (e.g. football mascot, and clearly Japanese mascots; and, if recognizable for the respondent, also the media aspect, e.g. Moomin as a cartoon character). Table 15 will provide a breakdown of the aforementioned sections and the frequently mentioned products and services that fall under each category.

Table 15: Frequently Mentioned Products	
Frequency in Products/Services	Frequency in Subcategories
Food: 77 mentions	Cereal 31 Candy 13 Sweets 10 Snacks 10
Sports: 43 mentions	Mascot 21 Football 8

	Olympics 10
Services: 34	Brands 33 Events 13 Merchandise 7 Companies 13 Advertisements 9
Media/Entertainment 41	Toys 88 Social media - 25 Emoji: 12 Facebook 16 Cartoons 31 TV 31 Books 23 Shows 12 Commercials 14 Movies/video 11 Games: 32
Clothes: 56	Bags 9 Shirts 9 Accessories 8
School/Office Supplies: 30	Stationery 11 Notebooks 8 Pencil cases 7 Pencils 8
Others:	Toilet paper 18 Condoms 4 Anything: 52

The wide breadth of categories of goods and services mentioned, show that though children's goods may be associated heavily with cute mascots, they which can be associated with a wide variety of goods. Cute characters as being on "Anything/everything" was mentioned 52

times. Even more, adult themes such as condoms (4 mentions) were brought up. Japan (25 mentions) and Asia (9 mentions) were also brought up in their association with cute products. As discussed in the previous section the rise of the use of cute mascots originated in Japan (Madge 1997). Thus, it is expected cute goods also share associations with Japanese goods in general.

A demographic breakdown was also conducted. Despite the wide breadth of goods mentioned there were no clear trends to be seen between the different demographics. The one trend that was seen was that those identifying themselves as female associated cute mascots with products for women/girls at a higher rate than males: 24 mentions, male 4 mentions. The cuteness ratings section showed females rated mascots as cuter than males overall, this correlation may yield a higher rate identification with cute products among females than males.

#### **4.2. Product Identity in Cute Animal Characters/Mascots**

Following the previous question that tested unaided recall through finding out respondents' expectations for products/services with cute animal mascots, the next question addresses what cute products/services the respondents themselves use:

- “Do you own/consume any products, foods, services, or media that use cute animal mascots/characters? If yes, please list some of the products/services/foods/media below:” (Q2)

The responses in this section were free response, so answers were tallied into yes and no categories. A word frequency analysis was conducted to see which products respondents recalled owning. Out of the 533 respondents 311 (58%) said yes to owning some sort of product with a cute mascot and 222 (42%) mentioned not owning any. The most frequently mentioned products in the list were: cereal (22 mentions), Hello Kitty (21 mentions), toilet paper (19 mentions), and Facebook stickers (19 mentions).

Product image was also tested for in this section with the following questions:

- “Do you actively look for certain brands or brands in general with cute animal mascots/characters? If so why?” (Q3)

- “Do you find yourself more drawn to products/services with more cute animal mascots/characters? If so why?” (Q4)

These questions were used to assess to see if respondents are consciously aware of a personal attraction to cute animal mascots, and if they intentionally look for such products. Responses to the above questions were expected to correspond with ACR ratings (H5). The general responses to these questions can be seen in the Table 16.

<b>Table 16: General Response for Q3 and Q4</b>		
	<b>Actively Look (Q3)</b>	<b>More Drawn To (Q4)</b>
Yes	71 (13%)	159 (30%)
No	432 (81%)	310 (58%)
O?	30 (6%)	64 (12%)

The data shows that in general less people say that they actively search for cute mascots with only 13% reporting to look actively for products with cute mascots. When asked the question about if they are more drawn to products with cute mascots than those without 30% said yes. A meta- analysis of responses was conducted, and some general conclusions can be drawn among the respondent pool. It is also important to note that reported activity does not necessarily imply actual behavior. So, the present research can only make claims for reported consumer habits and not actual consumer habits.

Among those who both actively looked and were more drawn to cute animal mascots mentioned a feeling of happiness/protectiveness that they experience when viewing cute animal mascots. This is illustrated in the selected quotes below:

Yes, absolutely. The way they look makes me happy and I want that happiness to continue and buying the product somewhat allows for that. Also, I love having products with cute mascots and being able to talk to other people about them/show the products off. American culture is experiencing a renaissance of cute/soft stuff and I am here for it. (Q3)

Yes, it's emotionally targeted and makes me say 'awe' so I buy it. It makes me happy looking at cute things. (Q4)

Sometimes, if it is something really cute - I think it's just physiological, because we want to take care of "cute" creatures like babies, puppies and kittens.

These responses align with the cuteness response theories presented by Darwin (1872) and elaborated on by Lorenz (1943). Both, those who were attracted to cute mascots and those who weren't mentioned these products in relationship to children, for example:

Yes. There is an implied idea that children are cute so they can have cute things. The mascots then are not to intimidate but to invite. Sometimes cuteness helps bring us back to younger times in our lives. I see that with cereal boxes, as an example. Some cereals are marketed for younger audiences but bring adults 'back to when we were kids'. Rice crispies does that. Or Captain Crunch plays on the idea that it's ok to bring out your inner child. (Q3)

No, I tend to put a lot of research into my purchasing decisions and a mascot won't influence these decisions. Often a cute mascot may make a product seem immature or marketed toward young rather than me. (Q4)

The responses show that the association of these items with children and youth may be viewed both negatively and positively by different groups.

#### ***4.2.1. Marketing Data Breakdown by Demographic***

The responses to all three questions were then broken down by demographic group, in accordance with the cuteness rating section: age, gender, country of origin, and child status were expected to correlate with owning products with cute characters/mascots in accordance with the average cuteness rating of each group.

*Age.* The results from Chapter 3.3.3 showed perception of cuteness may represent itself in an inverse bell curve with the youngest and oldest populations within a community ranking things as generally cuter. From these results, it is expected to see a similar trend among the data of this section. The response data for this section can be seen compared with the ACR in the Table 17.

Table 17: Age						
Age Range	ACR	Product List		Ownership (Q2)	Actively Look (Q3)	More Drawn To (Q4)
12-17 (2%)	3.17	Facebook (2)	Yes	6 (75%)	1 (13%)	2 (25%)
			No	2 (25%)	6 (74%)	5 (62%)
			O		1 (13%)	1 (13%)
18-24 (47%)	2.77	Toilet paper (14) Hello kitty (13) Facebook Stickers (13)	Yes	165 (65%)	39 (15%)	91 (36%)
			No	87 (35%)	200 (80%)	130 (52%)
			O		13 (5%)	31(12%)
25-34 (33%)	2.81	Toys (8) Moomin (7) Clothes (6) Pusheen (6) Cereal (6)	Yes	93 (52%)	21 (12%)	46 (26%)
			No	85 (48%)	148 (83%)	108 (61%)
			O		9 (5%)	24 (13%)
35-27 (5%)	2.57	Clothing (4)	Yes	15 (55%)	4 (15%)	9 (33%)
			No	12 (45%)	19 (70%)	16 (60%)
			O		4 (15%)	2 (7%)
45-54 (5%)	2.82	Cereals (3)	Yes	13 (50%)	3 (12%)	3 (12%)
			No	13 (50%)	23 (88%)	22 (85%)
			O			1 (3%)
55-64 (7%)	3.05	Food (7)	Yes	17 (46%)	3 (8%)	7 (19%)
			No	20 (54%)	31 (84%)	26 (70%)
			O		3 (8%)	4 (11%)
65-74 (1%)	3.54	X	Yes	2 (50%)		1 (25%)
			No	2 (50%)	4 (100%)	2 (50%)
			O			1 (25%)
75+ (0%)	1.17	X	Yes			
			No	1 (100%)	1 (100%)	1 (100%)
			O			



Table 17: Age						
Age Range	ACR	Product List		Ownership (Q2)	Actively Look (Q3)	More Drawn To (Q4)
12-17 (2%)	3.17	Facebook (2)	Yes	6 (75%)	1 (13%)	2 (25%)
			No	2 (25%)	6 (74%)	5 (62%)
			O		1 (13%)	1 (13%)
18-24 (47%)	2.77	Toilet paper (14) Hello kitty (13) Facebook Stickers (13)	Yes	165 (65%)	39 (15%)	91 (36%)
			No	87 (35%)	200 (80%)	130 (52%)
			O		13 (5%)	31(12%)
25-34 (33%)	2.81	Toys (8) Moomin (7) Clothes (6) Pusheen (6) Cereal (6)	Yes	93 (52%)	21 (12%)	46 (26%)
			No	85 (48%)	148 (83%)	108 (61%)
			O		9 (5%)	24 (13%)
35-27 (5%)	2.57	Clothing (4)	Yes	15 (55%)	4 (15%)	9 (33%)
			No	12 (45%)	19 (70%)	16 (60%)
			O		4 (15%)	2 (7%)
45-54 (5%)	2.82	Cereals (3)	Yes	13 (50%)	3 (12%)	3 (12%)
			No	13 (50%)	23 (88%)	22 (85%)
			O			1 (3%)
55-64 (7%)	3.05	Food (7)	Yes	17 (46%)	3 (8%)	7 (19%)
			No	20 (54%)	31 (84%)	26 (70%)
			O		3 (8%)	4 (11%)
65-74 (1%)	3.54	X	Yes	2 (50%)		1 (25%)
			No	2 (50%)	4 (100%)	2 (50%)
			O			1 (25%)
75+ (0%)	1.17	X	Yes			
			No	1 (100%)	1 (100%)	1 (100%)
			O			

The respondent data for Q1 shows a clear trend in younger individuals owning products and services with cute animal products on them: 12–17 (75%); 18–24 (65%). There was then a drop in ages 25–34 (55%), that did not rise as expected in the later ages: (45–54), (55–64) and (65–74) all of which had higher ACRs among the mascots. While more data among older individuals would be needed to establish a clear trend.

With regards to Q3 and Q4 response data for both questions neither followed a similar trend as expressed in the ACR ratings nor the ownership rates Q1, which both found increased rates towards cute mascots among younger individuals. Both Q3 and Q4’s results seemed to fluctuate by age group. A more thorough breakdown of data based on age would need to be conducted in accordance with other demographic variables would need to be conducted to see if underlying trends are expressed within the data. From the data, itself it appears age may not influence whether people actively search for (Q3) or are more attracted to (Q4) cute goods.

*Gender.* From the cuteness ratings section, it was shown that women ranked mascots as generally cuter than males. It is predicted that responses to Q2, Q3, and Q4 then would align with previous trends and that females will have a higher response rate than males. The response data for this section can be seen compared with the ACR in the Table 18.

Table 18: Gender (Excluding Other)						
Gender	ACR	Product List		Ownership (Q2)	Actively Look (Q3)	More Drawn To (Q4)
Female	2.83	Hello Kitty (16)	Yes	221 (63%)	54 (16%)	120 (34%)
		Cereal (16)	No	131 (171%)	272 (77%)	189 (54%)
		Food (15) Toilet Paper (11)	O		26 (7%)	43 (12%)
Male	2.76	Toilet Paper (8)	Yes	85 (49%)	16 (9%)	35 (20%)
		Facebook Stickers (6)	No	90 (51%)	156 (89%)	120 (69%)
		Hello Kitty (5)	O		3 (2%)	20 (11%)

63% percent of females reported owning cute products compared to males at (49%) Q1. These results align with the trends in the cuteness rating portion of the study. The types of products mentioned were not drastically different both groups mentioning Hello Kitty and toilet paper, with men mentioning Facebook stickers (6 mentions) and females mentioning owning food with cute mascots on the container or wrapping (15 mentions) and providing the specific example of cereal with 16 mentions.

Females had a higher positive response rate to both questions Q3: 16% and Q4: 34% than their male counterparts Q3: 9% and Q4: 20%. This aligns with previous trends, and supports theories and research that females are more strongly affected by neotenic traits (Lobmaier et al. 2010).

*Children.* From the cuteness ratings section, it was shown that individuals with children ranked mascots as generally cuter than those without. It is predicted that responses to Q2, Q3, and Q4 then would align with previous trends and that females will have a higher response rate than males. The response data for this section can be seen compared with the ACR in Table 19.

Table 19: Parental Status						
Parental Status	ACR	Product List		Ownership (Q2)	Actively Look (Q3)	Respond Positively To (Q4)
Children	2.86	Food (7)	<b>Yes</b>	52 (56%)	13 (14%)	25 (27%)
		Baby Products (6)	<b>No</b>	40 (44%)	74 (80%)	56 (60%)
		Cereal (6)	<b>O</b>		6 (6%)	12 (13%)
No Children	2.79	Hello Kitty (20)	<b>Yes</b>	259 (59%)	58 (13%)	135 (31%)
		Facebook Stickers (17)	<b>No</b>	182 (41%)	358 (81%)	253 (58%)
		Toilet Paper (16)	<b>O</b>		24 (6%)	52 (11%)
		Cereal (16)				

The data showed that those without children had a higher percentage (59%) of ownership of products with cute animal mascots than those with children (56%). This would contrast with the trends expressed in the cuteness rating section and in this sections hypothesis (H9). The statistics of those who actively looked for cute products (Q3) corresponded with the cuteness rating Responses to Q4 also failed to show the expected trend, though responses among both groups were close with those with children. The shift in trends may in fact be due to age having a larger correspondence with ownership. The mode age among those without children is 18–24 while for those with children the mode was 55–64, with regards to age and ownership the reverse bell curve was not expressed in the data as it was in the average cuteness rating.

If age was the variable that affected the response trends among this group, collecting additional responses from younger parents would provide more clarity, as an increased positive response rate to Q2, Q3, Q4 would be predicted. This would then allow for the claim that childlessness and cute product ownership and acquisition corresponds with ACR.

*Country of Origin.* Based on the cuteness rating section previous section in addition to the rates of product ownership it is expected that countries with higher average cuteness rating to be more likely to search for and be more drawn towards products with cute animal mascots (H3). The response data for this section can be seen compared with the ACR in the Table 20.<sup>7</sup>

Table 20: Country of Identification (> 10 Respondents)						
Country	ACR	Product List		Ownership (Q2)	Actively Look (Q3)	Respond Positively To (Q4)
Argentina (1.9%)	2.51	x	<b>Yes</b>	4 (40%)	1 (10%)	2 (20%)
			<b>No</b>	6 (60%)	9 (90%)	8 (80%)

<sup>7</sup> The respondent distribution between the different countries is varied and the respondent pools for some countries in limited, this leads to a lack of statistical validity for comparative results.

Australia (2.4%)	2.47	Hello Kitty (2) Toilet Paper (2)	<b>Yes</b>	5 (38%)	1 (8%)	2 (15%)
			<b>No</b>	8 (62%)	11 (84%)	10 (77%)
			<b>O</b>		1 (8%)	1 (8%)
Estonia (14.4%)	2.87	Hello Kitty (6) Moomin (5)	<b>Yes</b>	51 (66%)	8 (10%)	25 (33%)
			<b>No</b>	26 (34%)	68 (88%)	41/53%
			<b>O</b>		1 (2%)	11/14%
Finland (4.3%)	2.75	Emoji (2) Coffee (2) Moomin (2)	<b>Yes</b>	16 (70%)	3 (13%)	7 (30%)
			<b>No</b>	7 (30%)	19 (83%)	12 (52%)
			<b>O</b>		1 (4%)	4 (18%)
France (2.1%)	2.67	X	<b>Yes</b>	7 (64%)	2 (18%)	3 (27%)
			<b>No</b>	4 (36%)	9 (72%)	8 (73%)
Germany (3.4%)	2.62	Moomin (6)	<b>Yes</b>	7 (39%)	1 (6%)	3 (17%)
			<b>No</b>	11 (61%)	16 (88%)	11 (61%)
			<b>O</b>		1 (6%)	4 (22%)
South Korea (2.3%)	3.01	Facebook (2) Kakao Talk (2)	<b>Yes</b>	11 (92%)	7 (58%)	8 (66%)
			<b>No</b>	1 (8%)	5 (42%)	4 (44%)
Turkey (2.1%)	2.93	x	<b>Yes</b>	5 (46%)	3 (27%)	4 (36%)
			<b>No</b>	6 (54%)	8 (73%)	6 (55%)
			<b>O</b>			1 (9%)
Ukraine (1.9%)	2.96	x	<b>Yes</b>	7 (70%)	2 (20%)	3 (30%)
			<b>No</b>	3 (30%)	6 (60%)	
			<b>O</b>		2 (20%)	7 (70%)
United Kingdom (3.4%)	2.63	Food (2) Mickey (2) Facebook (2)	<b>Yes</b>	10 (56%)		4 (22%)
			<b>No</b>	8 (44%)	16 (89%)	13 (72%)
			<b>O</b>		2 (11%)	1 (6%)
United States (34%)	2.82	Toilet paper (15) Cereal (14) Hello Kitty (9)	<b>Yes</b>	108 (60%)	21 (12%)	56 (31%)
			<b>No</b>	73 (40%)	149 (82%)	100 (55%)
			<b>O</b>		11 (6%)	25 (14%)

The expected correlation between ACR and cute product ownership (Q1) was present. A higher ownership rate is present among countries with a higher ACR Korea (3.01: 92%); Ukraine (2.96: 70%). The particularly high ownership rate likely corresponds with its higher ACR in addition to its geographic placement and larger influence from Japan. The inverse was also shown in countries with low ACR in having lower ownership rates as well: Argentina (2.51: 40%); Australia (2.47: 38%).

The expected correlation between ACR and Q3/Q4 was present. A higher ownership rate is present among countries with a higher ACR. This was particularly present in Korea (3.01: 58% (Q3) 66% (Q4). With Korean being significantly higher than the average positive response rate of 13% to Q3 and 30% to Q4.

The inverse was also shown in countries with low ACR in having lower ownership rates as well, though Great Britain reported a 0% positive response rate with regards to actively searching for cute goods, though lower than average response was expected due to their ACR of 2.63. A larger poll of respondents from each respective country would provide stronger support to the trends shown in this data.

Also despite a higher ACR respondents from Turkey reported a lower ownership rate of 46% despite a higher ACR of 2.93. Due to the relatively limited representation (11 respondents) from Turkey, more data would be needed to come to provide a strong enough claim to motivate a deeper analysis.

### **4.3. Marketing Review**

When viewing the market perception of goods with cute animal mascots, there seems to be a strong correlation between ACR and Gender/Country of Origin. Demographic groups that rate cute characters on average cuter are more expected to engage in the purchasing of cute products (Q2, Q3) and are more likely to be influenced and attracted to them (Q4). An ideal market to introduce a cute mascot would have a high ACR, but as seen a high ACR does not always correlate with a higher chance to own or look for products branded with cute mascots as seen in the data relating to Age/Parental Status. Purchasing habits of these groups may be more reflective of cultural and social habits or customs of the market place. Targeting

products with cute animal mascots designed for specific groups may be able to overcome these social variables, as ACR seems to play a role in the uptake of these goods for the most part.

## 5. POTENTIAL APPLICATIONS OF THE RESEARCH

The data and trends analyzed from this research offer potential applications for the fields of design, marketing, and advertising. The findings suggest that utilizing cute animal mascots can be advantageous for a variety of brands and products. Additionally, utilizing the features outlined in this thesis can provide suggestions as to the design of a given mascot and suggestions for targeting specific demographic grounds. This section will provide applications for this thesis in the following ways: general usage and introduction of character mascots, improving the design of existing mascots and characters, and the tailoring of mascots/character for specific demographic groups.

### 5.1. Semiotics in Marketing

The application of semiotics in the marketing sector is not a new phenomenon. Barthes (1967) has largely been credited with the application of semiotics to non-linguistic phenomena (e.g. clothing, cars, and food). Semiotic researchers have sought to further extend the discussion and application of semiotic theories and models in marketing and communication research (Solomon 1988; Serban 2012; Oswald 2015). Existing theories have largely sought to develop culture based theoretical frameworks for usage in marketing (Mick et al. 2004; Thompson and Arsel 2004).

[...] marketing gatekeepers such advertisers and fashion designers begin by selecting key meanings residing in cultural categories (e.g. gender) and cultural principles (e.g., manliness). Second, they transfer the meanings to consumer goods through advertisements, clothing



designs, and so forth. In the third stage, consumers appropriate these meanings into their lives through various rituals such as grooming and gift exchange (Mick et al. 2004: 3).

In addressing the cultural processes present in the consumer decision making process, marketers can gain critical insight.

While sociosemiotics and cultural semiotics have largely been utilized in the realm of marketing there is a lack of development and extension of biosemiotic theories for direct application and design of marketing materials. Existing semiotic research in this shared biological and cultural domain have largely tackled issues relating to attitudes towards living species and preference for zoological conservation (e.g. Kellert 1985; Frynta et al. 2013; Mäekivi and Maran 2016). Results from the aforementioned research can offer potential usage in the field of marketing and design, as they address what factors influence the preferences of the general public, a research question at the core of marketing. When combined, biosemiotics and marketing theory can give a firmer understanding of consumer motives and trends. The present research further expands the transdisciplinary usage of biosemiotic theories by offering concrete suggestions for the usage of this study in the marketing sector.

## **5.2. General Usage of Mascots and Characters**

As outlined in Chapter 1.5 the usage of character mascots has proven successful when used by government institutions and cities for varied purposes and shown benefit the sales and social media sharing for companies.

The usage of cute mascots for increasing tourism has been proven successful in Japan as shown by the success of Kumamon and other cute animal mascots (Brasor 2013). The usage of these characters by other cities could see potential benefits. Using mascots in geographic regions that seem to have a stronger response to cute character mascots (as shown in the ACR ratings in Chapter 3.3.2) may prove especially successful as a possible relationship between ACR and the active searching for cute products was seen in the data (Chapter 4). If the trends expressed in this research for countries such as Korea are still present within a larger respondent set, than the usage of city mascots may be good tools for increasing tourism.

Cities in locations such as Estonia, United States, Turkey, and Ukraine (all who had relatively higher ACRs) may additionally see benefit from using mascots.

Corporate brands may also find the usage of cute animal character mascots advantageous. Companies whose products and services align with pre-existing consumer expectations for cute mascots, as outlined in Table 15, may find the adoptions of such mascots successful such as food (71 mentions) and toys (88 mentions). Though products and services from a variety of sectors could see potential usage.

Nenkov and Scott (2014) suggest the usage of character mascots for social purposes such as increasing the consumption of healthy goods and activities such as (health foods, vitamins, and exercise).

The Robert Wood Johnson Foundation<sup>8</sup>, an organization that researches healthy eating, also suggests the usage of cute animal mascots for increasing the consumption of health foods. If health food producers are looking to incorporate additional mascots, it becomes increasingly important for not traditionally healthy food to utilize characters in demographics particularly sensitive to them to maintain their hold in the market (Chapters 3.3.3 and 4.2). While implementing the usage of a cute character may provide benefits, an attractive design is critical to its success and reception.

### **5.3. Designing a Cuter Mascot**

The research also provides insight as the suggested design of cute character mascots. Implementing the features outlined in Chapter 3.2.1 and 3.2.2 will aid in the design process. Additionally, this thesis has posited that animals and cute animal mascots may function under separate schemas for determining cuteness than that of human infants. This thesis also presented a set of features to take into consideration when establishing cuteness within a design: smile/positive expression, color, and furriness (Chapter 3.4). Additionally, features to avoid and ones that could detract from the cuteness of a design were also presented (Chapter 3.4). A practical knowledge of this schema could provide fundamental guidance for

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<sup>8</sup> Can be accessed online at <http://www.rwjf.org/>

designers and marketing consultants. This information could then be utilized not only in the creation of cute animal mascots, but also in improving upon existing designs.

#### **5.4. Tailored Characters for Demographics**

This thesis also positions itself separately from existing research which viewed the features of cuteness more holistically. This research suggests that both the overall perception of cuteness and the key characteristics that compose cuteness have demographic variations. Different demographic groups seem to have varied preferences for characteristics (Chapter 3.3.3) and in the active searching for characters (Chapter 4.2). This thesis then provides potential insight as to the creation of a cute animal mascot for a certain group. For example, should the developers of Moomin seek to approach an African market, a redesign of the character with additional colors may be necessary. It is then advisable for marketers to collect data as to their target demographics preferences in viewing cute animal mascots, well before the design process begins. This thesis also provides a potential starting place and model (Chapter 3.5) for the collection and research of such data.

## CONCLUSIONS

The current study established a deeper understanding of the features that influence the perception of cuteness in animal mascots/characters. In establishing a typology for the analysis of animal mascots an investigation as to the wide-spread application of existing theories of cuteness was conducted by this research (*Kindchenschema* and whimsical cuteness). The results of this study challenged existing notions as to existing conceptions of cuteness and found that an anthropomorphic analogy and model in that of the *Kindchenschema* does not wholly account for the perception of cuteness in that of animal characters.

The survey portion of this research discovered a series of traits unaccounted for in existing models of cuteness that played a role in participant preferences namely: simplicity of design, emotional expression, color, roundness of shape, and the perceived texture of furriness. Further research as to the manipulation of these features would provide greater insight as to their role in the perception of cuteness. Demographic trends discovered within the research also provide further challenges to existing notions of cuteness by asserting the importance of cultural and social factors that factor into the perception of overall cuteness. This research has suggested that relying on the *Kindchenschema* as the foundational basis for the design and methodology of cuteness research severely limits the potential extension of cuteness theories. These former theories lack application beyond human infants, and fail to acknowledge the potential relevance of socio-cultural factors.

This research proposed an alternative model as to the constructions of cuteness consisting of

two categories: Biological Cuteness and Social Cuteness that is then interpreted by the perceiver and undergoes a process of cultural interpretation, expectation, and application of schemas leading to the final perception of cuteness. This model allows for a more holistic analysis of cuteness, that former theories lack, and yields applications beyond that of animal mascots and may be beneficial in the analysis of perceived cuteness of objects, artifacts, and living species more generally. This model itself needs to be further expansion and development as a theoretical framework, but it offers a starting point into the exploration of cuteness as both a socio-cultural and biological phenomenon. In investigating the relationship between perceived cuteness, brand awareness, and self-reported purchasing habits, the second portion of the survey discovered potential relationships between higher ratings in perception of cuteness and purchasing habits. This research suggested that both the overall perception of cuteness and the key characteristics that compose cuteness have demographic variations. Different demographic groups seem to have varied preferences for characteristics. In further investigating this trend, it was shown that groups, who rate cute characters on average cuter, are more expected to engage in the purchasing of cute products. These groups were also shown to be attracted to products with cute characters/mascots on them in general. This thesis suggested the targeting of products with cute animal mascots designed for specific groups may be beneficial in the uptake of goods in a given market place. Further research into this phenomenon is necessary as the self-reported purchasing habits of these groups may be more reflective of cultural and social habits.

Finally, this research stressed the potential usage for the results of this thesis and biosemiotics in general in the realm of marketing and advertising. The thesis offered concrete suggestions for the implementation of the results in the field of marketing and design. A practical knowledge of the factors that play into cuteness perception and an understanding of demographic trends can provide fundamental guidance for designers and marketing consultants.

Further investigation into the underlying principles that govern perception of cuteness and how these principles can be applied in marketing and other fields is necessary. The data and trends analyzed are rather expansive and offer a potential corpus of data and trends that

further researchers can utilize in their own investigations. This thesis offers a starting point into the research of cuteness as it is perceived in animal mascots and characters; and hopes to open a discussion as to the conceptualization of cuteness as a scientific model.

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# KOKKUVÕTE

## LOOMAMASKOTTIDE / -TEGELASTE ARMSUSE TAJU

Magistritöö eesmärgiks oli luua üldalused armsate loomamaskottide / -tegelaSte kujundamiseks. Selleks testiti, kas antropomorfne analoogia *Kindchenschema* kujul on rakendatav loomamaskottide / -tegelaSte armsuse tajumises. Kui kujundamise alused olid määratletud, loodi armsusele ja maskottidele / tegelastele kaasaegne ja ülemaailmne bränditeadlikkus ning identiteet. Lisaks oli eesmärgiks ühendada turundus ja bioloogiast lähtuvad armsusteooriad, et anda soovitusi selliste armsate tegelaSte kujundamiseks, mis võimaldaksid kasutada potentsiaalset tururuumi.

Pakkudes terviklikku ülevaadet praegustest teaduslikest armsusteooriatest, leidis antud töö, et olemasolevad armsuse tajumise uurimused keskenduvad peamiselt väikelastele ja tegelikele loomaliikidele. Nende uuringute tulemused ei pruugi pakkuda arusaama sellest, millised tegurid määravad armsuse loomategelaSte disainimisel. Antud magistritöö arendas esmalt välja loomamaskottide ja -tegelaSte semiootilise liigituse, mis võimaldas olemasolevate bioloogiliste ja armsusteooriate rakendamise.

Läbiviidud laiaulatusliku uuringu tulemuste analüüsimisel avastas antud magistritöö mitmeid tunnuseid, millega olemasolevad armsusmodelid ei ole arvestanud, kuid mis on vastajate eelistuste seisukohast olulised. Need tunnused on: disaini lihtsus, emotsionaalne väljendus, värv, kuju ümarus ja karvase tekstuuri visuaalne tajumine. Antud töös esilekerkinud demograafilised suundumused esitavad täiendavaid väljakutseid olemasolevatele armsuse mõistetele, kuna kinnitavad kultuuri- ja sotsiaalsete tegurite tähtsust, mis mängivad rolli üleüldise armsuse tajumisel.

Kui võtta armsuse kujundamise ja metodoloogia aluseks *Kindchenschema*, seatakse tugevad piirid armsusteooriate potentsiaalsele laiendamisele. Teisisõnu, väikelaste armsusteooriale põhinemine ei arvesta võimalike oluliste sotsiaal-kultuuriliste teguritega. Loomamaskottide / -tegelaiste disainimise empiirilise mudeli loomine nõuab semiootiliste ja bioloogiliste mudelite katsetamist ja laiendamist. Antud magistritöö pakkus alternatiivse mudeli, mis koosneb kahest kategooriast: bioloogiline armsus ja sotsiaalne armsus. Neid kategooriaid tõlgendab tajuja (inimene) ning seega toimub kultuurilise tõlgendamise ja ootuste protsess, mis viib lõpliku armsuse tajumiseni. See mudel võimaldab terviklikumat armsuse analüüsi, mis on eelnevates teooriates puudulik. Samuti pakub antud mudel rakendusi, mis võivad olla kasulikud objektide, artefaktide ja üldisemalt olemasolevate liikide tajutava armsuse analüüsimisel.

Uurides seost tajutud armsuse, bränditeadlikkuse ja vastajate poolt nimetatud ostuharjumuste vahel, tuvastas antud uuringu teine osa potentsiaalse suhte kõrgemalt hinnatava armsuse tajumise ning ostuharjumuste vahel. Antud uuringust tuleb, et nii üleüldisel armsuse tajul kui armsuse põhitunnustel on demograafilisi variatsioone. Erinevatel demograafilistel rühmadel näivad olevat erinevad eelistused armsuse tunnuste suhtes. Seda nähtust uurides osutus, et demograafilised rühmad, kes hindavad maskotte keskmiselt armsamaks, ostavad eeldatavalt rohkem armsaid tooteid ning on tõenäolisemalt mõjutatud ja köidetud armsate toodete poolt. Antud töö leidis seega, et konkreetsetele rühmadele suunitletud armsate loomamaskottidega tooted võivad edendada antud turul kaupade omandamist tarbijate poolt.

Antud uurimus rõhutas saadud tulemuste ja üldisemalt biosemiootika võimalikku rakendamist turundus- ja reklaamivaldkonnas. Lõputöös esitati konkreetsete ettepanekud tulemuste rakendamiseks disaini- ja turundusvaldkonnas. Praktilised teadmised teguritest, mis panustavad armsuse tajumisse ja demograafiliste trendide mõistmine, võivad pakkuda põhilisi juhiseid disaineritele ja turustamiskonsultantidele. Antud magistritöö pakkus lähtepunkti teadusuuringutele armsusest, nagu armsus on tajutud loomamaskottide ja -tegelaiste puhul, ning loodab innustada arutelu armsuse kui teadusliku mudeli kontseptualiseerimise teemal.

## APPENDIX

The following survey will take approximately 10 minutes to complete. The information collected from this survey will be used for the purposes of a Master's Thesis at the University of Tartu.

The information gathered will not be shared with third parties and the respondents anonymity is insured.

- Jason Mario Dydynski

### 1 → Demographic Questions

a. What is your age?\*

b. What is your racial/ethnic identity?

c. What is your Gender?\*

d. What is the highest degree or level of school you have completed? (If currently enrolled, highest degree received.)\*

e. What is your marital status?\*

f. Do you have children?

g. What is your employment status?\*

h. What is your country of Citizenship/Identification:\*

i. What country do you currently live in?\*

## 2 → Preliminary Questions

a. What features do you associate with cuteness?

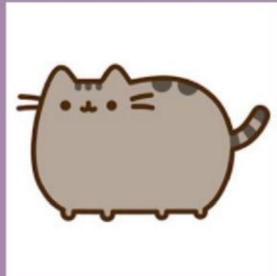


- b. What would be your definition for the term cute/ cuteness with regards to animal mascots/ characters?

3 → Mascot Questions:

The following section will present you with a series of animal mascots. For this you will need to rank the cuteness of the charecters on a scale of 1-5 with 1 being not at all cute and 5 being extremely cute.

- a. Please rate the cuteness of this animal mascot/ character. \*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

- b. Please rate the cuteness of this animal mascot/ character. \*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

c. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

d. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

e. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

f. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

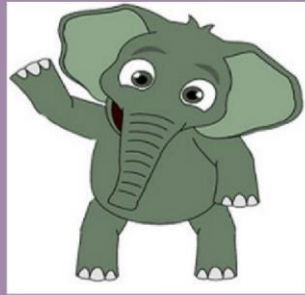
g. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

h. Please rate the cuteness of this animal mascot/ character.\*

h. Please rate the cuteness of this animal mascot/ character.\*



1

2

3

4

5

Not at all cute

Somewhat cute

Extremely cute

i. Please rate the cuteness of this animal mascot/ character.\*



1

2

3

4

5

Not at all cute

Somewhat cute

Extremely cute

j. Please rate the cuteness of this animal mascot/ character.\*



1

2

3

4

5

Not at all cute

Somewhat cute

Extremely cute

k. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

l. Please rate the cuteness of this animal mascot/ character.\*



1	2	3	4	5
Not at all cute		Somewhat cute		Extremely cute

a. Which of these mascots/ characters is the cutest?\*



b. What features make this mascot/ character cute?\*

c. Which of these mascots/ characters is the least cute?\*





I



J



K



L

d. What features take away from the mascot's/ character's cuteness?\*

e. Were you familiar with any of these mascots/ characters before this survey. Select all that apply

Choose as many as you like



A



B



C



D



E



F



G



H



I



J



K



L

5 → Ending Questions

- a. 1.What products, brands, services, and media would you expect to see cute mascots/ characters on?\*
- b. Do you actively look for certain brands or brands in general with cute animal mascots/ characters? If so why?\*
- c. Do you own/ consume any products, foods, services, or media that use cute animal mascots/ characters? If yes please list some of the products/services/foods/media below:\*
- d. Do you find yourself more drawn to products/ services with more cute animal mascots/ characters? If so why?\*
- e. Thank you for your time. Please share any additional comments or thoughts you may have:

**Submit**

press ENTER

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