Cuteness and Singer's Expanding Moral Circle: Examining Cuteness as a Moral Issue

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Abstract

This essay will show visual cuteness to be a biological phenomenon where viewing the specific proportions of baby-schema causes an innate releasing mechanism to respond, thus creating a consistent group of reactions in viewers. Those reactions will be shown to create a 'halo' effect that is similar but distinct from the attractiveness halo effect. The cuteness effect will be demonstrated to be consistent with both the caregiving effect proposed by Lorenz and the social effect proposed by Sherman and Haidt.

The totality of those effects will be shown to be morally relevant in relation to the ethical theory of Singer, especially the concept of the expanding moral circle. Through examining recent studies on cuteness and relating those studies to the ethical theories of Singer a few obvious practical moral implications are created. Two of those implications will be examined to show that cuteness can be used to inform the practice of photolisting for adoption agencies and inform the justice system of a potential bias that remains unaccounted for. However, the potential for cuteness to create/explain moral reactions isn't limited to niche areas as the final section of this essay will document cuteness's broader ability to increase moral concern and account for moral reactions in a broader way.

1. Introduction

1.1 What is Cuteness?

This paper has the goal of establishing the understanding that the effects caused in response to cuteness are worthy of being examined as a moral issue. It will be shown that cuteness creates a 'halo effect', with consequences akin, but distinct from the halo effect associated with attractiveness. The halo effect of cuteness will be demonstrated to modify both judgments and treatment of individuals identified as cute in a demonstrable and systematic way, rendering the cute individual predispositionally biased against and receiving of differential treatment when compared to those who are non-cute. This overall effect created by cuteness has notably been seen as significant by numerous psychologists in relation to the theory of expanding moral circles of Singer, and for sound reason, as the psychological understanding of cuteness creates grounds for looking at cuteness as a potential way to expand moral concern (Kringelbach et al., 2016; Pizarro, Detweiler-Bedell, and Bloom, 2006; Sherman and Haidt, 2011). Due to that expected relationship, the cuteness effect will be looked at through the lens of the theory of expanding moral circles of Singer to examine how the cuteness effect creates moral deficiencies and opportunities. Two specific areas where the cuteness effect has overwhelmingly been shown to be morally relevant will be examined, photolisting in adoption and the visual bias in jury and bench trials. After investigating those examples this essay will briefly explore the potential of the cuteness effect to explain and modify moral responses in a more general way.

Before looking at the effects of cuteness as a moral issue, or attempting to quantify cuteness it is necessary to explain that this paper will not attempt to define the totality of what

the terms ‘cute’ and ‘cuteness’ are used in reference to and will instead limit itself to describing cuteness in relation to baby-schema. While this definition will be consistent with the vast majority of the psychological research on cuteness, it is knowingly incomplete. The definition will fail to include sounds, actions and visual factors unrelated to baby-schema that have been shown to correspond with ratings of cuteness (Cheok and Fernando, 2011; Koyama, Takahashi and Mori, 2006; Kringelbach et al., 2016). Yet, despite that preliminary data and the popular use of the term ‘cute’ in reference to things unrelated to baby-schema, the study of cuteness unrelated to baby-schema is still extremely lacking. The study of non-baby schema related cuteness has largely been limited to exploratory work, as the field is still examining what makes up cuteness unrelated to baby-schema and there hasn’t been the necessary replication to draw foundational conclusions in that area. Even after establishing what non-baby schema related cuteness is, there would still have to be studies performed to determine that the reaction to non-baby schema cuteness is taking place similarly to baby-schema cuteness and not as an independent phenomenon, as is proposed by Nenkov and Scott (2014) for whimsical cuteness. For those reasons non-baby schema related cuteness, while being potentially important to the definition of cuteness, will be largely ignored by this paper. This is less problematic then it seems, as the narrow definition of cuteness is sufficient for showing that cuteness is an issue with moral relevance. It is also less problematic due to depth in the testing between cuteness and baby-schema also, at minimum, pointing to baby-schema being central to things with a facial structure being rated cute (Alley, 1983a; Alley, 1983b; Glocker et al., 2009; Little, 2012; Sanefuji, Ohgami and Hashiya, 2007). For those reasons the use of both ‘cute’ and ‘cuteness’, for the remainder of this paper, unless otherwise specified, will be in reference to the narrow definition. With cuteness limited to the purposefully narrow scope of visual cuteness, the

remainder of this introduction has the task of defining baby-schema related cuteness so that, that definition can be used to examine the response to cuteness as a moral issue.

When the topic of cuteness is mentioned there is an understanding of what is being referred to. What is cute has a general acceptance that can be accompanied by the urge to cuddle or make the sound 'Awwww' appear out of seemingly nowhere. Cute doesn't require an explanation, people understand cute, as when something is pointed out as cute there isn't debate or an extended thought process, there is instead an immediate judgement. The nature of that immediate judgement was shown indirectly by Willis and Todorov through the use of trustworthiness and aggressiveness. Willis and Todorov (2006) showed that people's judgements about a person's attractiveness, likeability, trustworthiness, competence, and aggressiveness are made reflexively within a 100ms of exposure to a face, as there was remarkable consistency between reflexive judgements and judgments made in the absence of any time constraint. That immediacy and consistency lead them to conclude that, "Coupled with findings suggesting that inferences from facial appearance may be uncontrollable (Hassin & Trope, 2000, Experiment 4), our findings suggest that trait inferences from facial appearance can be characterized as fast, intuitive, System 1 processes." (Willis and Todorov, 2006).

This provides evidence to the immediacy of evaluations of cuteness, as both trustworthiness and the lack of aggression are traits attributed to people described as cute (Berry and Zebrowitz-McArthur, 1985; Fidler and Hodapp, 1999; Zebrowitz and Franklin Jr, 2014; Zebrowitz and Montepare, 1992). Given that a similar physical quality with similar effects, attractiveness, and measures directly associated with cuteness are created within 100ms, it would be expected that judgements of cuteness would also be made within 100ms. This understanding is consistent with reactions found in the amygdala and the fusiform face area found when

viewing images of babyfaced adults and infants for 200ms (Zebrowitz et al., 2009). It also explains the findings of Cassidy, Zebrowitz and Gutchess (2012), who showed that cute faces were resistant to being identified with qualities incongruent to their appearance, "…if a person *looks* dominant, that person will be remembered as dominant, over a person whose facial characteristics convey submissiveness, even if previous behaviors say otherwise." People view a face and almost immediately form an initial impression based on that person's facial cuteness, an impression that is then resistant to change.

Yet, while a person correctly identifies things that are cute, they fail to appreciate why exactly that something is identified as cute. This isn't to say that they couldn't pick out certain identifiable qualities associated with cuteness, as surely would be the case, only that they would run into the problem of being unable to identify the exact qualities that define the subject.

1.2 What specifically makes something cute?

Konrad Lorenz was the first to propose an understanding of cuteness that attempted to define the exact qualities that create cuteness. Lorenz's extensive work in ethology, specifically in instincts and biology, helped him come to understand cuteness as an innate releasing mechanism or IRM where specific stimulus causes a consistent reaction in a species, or as he describes it to, "…'recognize,' without any previous experience, a biologically relevant situation-in other words, to respond to it selectively by a teleonomically 'correct' and equally unlearned action pattern."(Lorenz, 1981, p. 153).

Lorenz (1981, p. 154) points out that it is important to note that the whole object or situation isn't innately 'known', instead there is a recognition of a number of independently effective, very simple stimulus that combines to create an unlearned, but consistent effect.

Lorenz (1981, p 156-161) found IRM's all over nature from the stinging response of the common tick to the stimulus of a 37-degree area and the smell of butyric acid to a jackdaws' rattling attack in response to anything carrying something black that dangles or flutters.

The description of people's response to a cute stimulus is described by Lorenz in similar terms. Cuteness, for Lorenz, is understood to be an IRM where,

> Humans respond with emotions and behavior patterns of parental care to a number of configurational key stimuli that can easily be analyzed-and also exaggerated. One of them is a high and slightly bulging forehead, a brain case large in proportion to the face and the visceral cranium, large eyes, rounded cheeks, short and stubby limbs, and a rounded fat body. (Lorenz 1981, p. 164)

Simply put the prominent features of human babies are identified as being responsible for eliciting a caretaking response. Those prominent features are referred to as 'Kindchenschema' or what English articles reference as baby-schema (Glocker et al., 2009). The stimulus, the features of human babies, leads to the response, caretaking behaviors. This leaves cuteness as the name that refers to the phenomenon of the mind recognizing baby-schema.

In the years since Lorenz's identification computers and photo editing software has made it possible to manipulate specific features of faces while holding other features constant. This has enabled the testing of Lorenz's insights on cuteness in exact detail. One such test of Lorenz's insight was the study by Glocker et al. (2009) that demonstrated the link between wider faces, larger foreheads, greater width between the eyes, shorter nose length, smaller nose width, and smaller mouths, or more generally the specific facial proportions found in infants to ratings of cuteness. The Glocker et al. study demonstrated exactly what Lorenz predicted. Infant faces with

low correlation with baby-schema were rated as less cute and people were less inclined to take care of those non-cute individuals, whereas the faces highly correlated with baby-schema were viewed as cutest and inspired significantly more care. The link between cuteness and facial maturity is further supported by the studies of Brooks (1960), McKelvie (1993) and Sternglanz, Gray and Murakami (1977).

This link between baby-schema and cuteness extends beyond facial features and also includes the shape of the head. The link between cephalic (head) shape and cuteness was established by Alley. Alley (1983a) created drawings congruent with a babyish head shape and a mature head shape while holding constant the facial features on the heads across all drawings. When those drawings were then related to ratings of cuteness the results were dramatic, when two head shapes are seen together the younger head shape is seen as cuter and when people are asked to put different head shapes in a line in the order of most to least cute the lines created correlate exactly with the participants lining the heads up in order of structural maturity.

This firmly establishes the impact of baby-schema on cuteness and the evidence for the caretaking effect is robust as well. Cuteness is responsible for a number of amplifications in responses related to caretaking. Sherman, Haidt and Coan (2009) showed that viewing cute images before attempting a task that required extreme carefulness resulted in 'significantly greater improvement in performance[s]' when compared to a subject who looked at images unrelated to cuteness. The cute photos used by Sherman, Haidt and Coan were probably looked at for a greater length of time than the non-cute photos, as Hildebrandt and Fitzgerald (1978) showed that cute babies are looked at for a longer duration than babies judged as less cute. If those same photos were then taken and used to ask participants which child they would want to adopt the preferences would be for those that were cutest as Chin, Wade and French (2006)

found that the facial correlates of baby-schema (roundness of the face and size of the eyes) are the strongest predictors of a child's adoptability. The advantage of being cute would continue after the baby was adopted as cute children are looked after with greater precaution than those that are less cute (Harrell, 2005).

Those results are found through the use of babies selected for their cuteness or facial maturity which exaggerates the results that would be found between two randomly selected babies, as babies are in general cute, but it is clear that being cute is related to a variety of nurturing results. This renders Lorenz correct about both what is responsible for cuteness and cuteness causing a caregiving effect.

Before moving on from Lorenz there is one further insight that was mentioned briefly at the beginning of this section that requires further elaboration. Lorenz points out that IRMs are not very sophisticated and are by their nature non-discriminatory, meaning that they can be easily tricked. Lorenz documents this when he writes that,

> It is an extremely reliable rule of thumb that an IRM can be assumed to be at work whenever an organism is 'taken in' by a very simple dummy or model. Conversely, if the attempt to elicit a certain response by a dummy fails, and it proves necessary to simulate a biologically relevant stimulus situation in all its details in order to release a response, or if even this proves to be impossible, the assumption is justified that the organism has *learned* to respond to a complex quality. (1981, p. 171)

Simplified this means that when the basic requirements for an IRM to work are met the IRM is triggered and it can easily be made to be triggered in error. Consequently, if the presumed IRM doesn't get triggered through the fulfillment of basic requirements and the expected reaction

doesn't take place then this counts as strong evidence that the subject has instead learned the response and it isn't an IRM.

Judgements of cuteness have been shown to take place in response to simple requirements in the non-discriminatory way that Lorenz described, consistent with the nature of an IRM. This can be shown through the relationship between cuteness and other species. In an experiment with cat, adult and infant's faces, Little used the same methods as the Glocker study and created three versions of a cat, adult and infant face (mature, infantile and neutral). Using those faces Little (2012) found a consistent result, the face matching baby-schema was rated as the cutest regardless of the head those features were viewed on. People were responding to the proportions of the face and skull and the species that possessed those features didn't make a difference in evaluations of cuteness. Cuteness's non-discriminatory nature is further supported by various studies with animals (Archer and Monton, 2011; Bellfield et al., 2011; Gazzano et al., 2013; Lehmann, Huis and Vingerhoets, 2013; Thorn et al., 2015) and has been demonstrated to also be consistent with ratings of inanimate objects (Miesler, Leder, and Herrmann, 2011). These results can be found independently of culture (Keating et al., 2003; Zebrowitz et al., 2012; Zebrowitz-McArthur and Berry, 1987), experience (Montepare and Zebrowitz-McArthur, 1989), and similar effects have been shown to take place in close genetic relatives (Paul, Kuester and Arnemann, 1996) all of which support the response to baby-schema existing as the process of an IRM.

If baby-schema is an automatic response, then it should have the ability to transcend group identity and when that has been tested it has produced results in accordance with that understanding. When people viewed in-group and out-group adults there was a notable in-group bias, Italian and Japanese subjects are significantly more willing to interact with people of their

own race, but that bias disappeared when in-group and out-group adults were replaced by in-group and out-group infants (Esposito et al., 2014). In addition to the neutralization of the in-group/out-group bias, infants dramatically increased the facial temperature of viewers independently of their group status, suggesting that the response was mediated by the autonomic nervous system and not dependent on experience (Esposito et al., 2014).

Going further and conclusively demonstrating that the same phenomenon is taking place when viewing cute features in adults as when viewing cute features in children, Zebrowitz et al. (2009) demonstrated that the same neural substrate was activated in response to babies and mature people with babyfaces, a result which could not be accounted for by other facial qualities. When the brain recognizes baby-schema there is increased signaling in the fusiform face area and the amygdala, a change that doesn't occur when viewing mature-faced men, which lead to the conclusion that, "These results demonstrate a neural babyface generalization effect, whereby perceivers' reactions to infantile facial qualities are evident in their neural activation to babyfaced adults just as in their first impressions." (Zebrowitz et al., 2009). This means that not only are people rating the same features on both adults and infants as cute, people's brains are also reacting in the same way to seeing cute features on adults or infants, which is consistent with the findings of Parsons et al. (2013).

That result has been replicated by Kringelbach et al. (2008) who used magnetoencephalography (MEG) to show that baby-schema affected activity in the medial orbitofrontal cortex (mOFC) and the right fusiform face area (FFA), while also demonstrating that adult faces could not replicate those results, leading to the conclusion that, "These findings provide evidence in humans of a potential brain basis for the 'innate releasing mechanisms' described by Lorenz for affection and nurturing of young infants. This has potentially important

clinical applications in relation to postnatal depression, and could provide opportunities for early-identification of families at risk." It is also noted that this reaction to infant faces happened, "…so quickly that they are almost certainly quicker than anything under conscious control." (Kringelbach et al., 2008).

The Zebrowitz et al. and the Kringelbach et al. studies on brain function is the internal actualization of the cuteness IRM working in the generalized way proposed by Lorenz. The results of those studies are what would be predicted due to the nature of cuteness being an IRM, the reaction people have to baby-schema isn't discriminating and seeing the features prominent in human babies creates the same reaction whether those features are actually on a baby, bandicoot or Volkswagen Beetle.

1.3 Dennett and the Strange Inversion

The importance of understanding cuteness as an IRM and how cuteness was created has been outlined by Dennett, who describes the matter as a 'strange inversion'. Instead of understanding cuteness as existing in something it should really be understood as one of Lorenz's IRMs, and only existing in the mind. Dennett uses this transfer of the place of origin to understand the existence of how phenomena such as sexiness, sweetness, funniness and cuteness come to exist (Dennett, 2009; Dennett, 2014).

This 'strange inversion' can be straightforwardly explained through the use of sweetness. The conventional folk wisdom is that something like a strawberry has within it an intrinsic property that causes the strawberry to be sweet (Dennett, 2014). It could be thought that the strawberry has some natural sugar that gives it a sweet taste and our bodies and brains are responding to that, but that would actually be understanding the process in reverse. If the entire

genome of the strawberry were examined to exhaustion there would still not be a hint of what sweetness is. The search would be going on in the wrong place.

Instead, the search should be looking at the brain as sweetness is created in a process not dissimilar to the cuteness IRM. Sweetness is nothing more than the evolved response of the brain telling a person that what they have just eaten is a high-density source of energy (Drewnowski et al., 2012). This can be traced to a receptor in the mouth from earlier than 35 million years ago that was adapted to detect fructose and sucrose in food, effectively changing the dietary preferences of our pre-human ancestors (Nofre, Tinti and Glaser, 1996). This taste is appealing when it is detected and responded to in the strawberry and equally appealing in non-food products which 90 000 animals and 4 000 children find out each year through the taste of antifreeze (Koerner, 2004).

Luckily, for individuals who inherited the receptor for fructose and sucrose, there wasn't a large number of harmful substances that possessed fructose and sucrose around 35 million years ago and our ancestors who found the specific taste of fructose and sucrose palatable were generally more successful than those who didn't. Over generations, this taste preference was selected for and at a point in time labeled sweetness. This is just as there is a flavor that young elephant's taste and would roughly be described in equivalent terms in the dung of adult elephants (Van Geel et al., 2011). It couldn't be the other way around, as it would be like the unheard fall of a tree in the forest; sweetness doesn't exist without someone tasting something. There are the signs that something may be sweet and the chemicals that would correspond with sweetness, but a thing needs to be eaten and processed to become sweet. Sweetness lives within the taster.

Cuteness takes place in the same way. Instead of something being eaten and a taste being processed, in the case of cuteness, something is viewed and that visual information is processed. It is in this processing of the visual information where cuteness is born and not in the object being viewed in this 'strange inversion'. Just as food items already possessed fructose and sucrose and early humans evolved to have a specific taste for them, babies possessed features identified with cuteness and people evolved responses to those features.

This may seem trivial, but a brief examination of Plato's allegory of the cave can provide depth to what Dennett is expressing in his idea of the 'strange inversion'. In Plato's allegory of the cave, people are chained to a spot and are unable to move. They are chained in such a way that all they can view is the shadows on the cave wall that they create or that are created behind them by people or puppets walking in front of a fire (Plato, 1886). In this situation, the reality which exists to the people chained down is limited to the shadows, shadows of the larger reality that lay out of view. This creates a distinction where there are two types of things in the allegory of the cave, the things existing in reality (the puppets and people that make the shadows) and the shadows that exist as the penumbra of the existing world. A phenomenon like cuteness would not exist in Plato's allegory as it exists in neither the shadows nor in the person making the shadow. It would instead be akin to pattern recognition of specific parts of the shadow, something made solely by the mind of the viewer. This is exactly what Dennett showed in his characterization of sweetness and cuteness as strange inversions; while there is an external reference, there is no external creation. This is different than something like a chair. A chair exists in the world without being viewed, it is something with an external creation, while cuteness is more like the recognition of a seemingly arbitrary pattern on the chair, one that only has meaning when viewed as meaningful. For that reason, phenomena such as cuteness fail to be

accounted for in Plato's allegory of the cave, as cuteness has more in common with pareidolia than either the shadows or the external world.

This is the extent of Dennett's argument which correctly describes cuteness as an evolved reaction to specific traits and eliminates all the other notions that could shroud the understanding of cuteness, mainly the strange inversion. This leaves cuteness as the interpreted response, the response that Lorenz predicted and that has since been verified. Cuteness's 'fructose and sucrose', the features that make someone react and cause the attribution cuteness to an object, is consistently found to be baby-schema.

1.4 Are Cuteness and Attractiveness the Same?

Visual cuteness and attractiveness are often used interchangeably in common parlance, while also being used that same way in journal articles, particularly in older studies involving infants (Hildebrandt and Fitzgerald, 1981; Sternglanz, Gray and Murakami, 1977). The use of the terms attractive and cute being used interchangeably in casual conversation is inaccurate, but not problematic, while the lack of distinction between the two terms in psychology is problematic as it obfuscates the conclusions drawn in studies involving infants, cuteness and attractiveness. This problem will be detailed after demonstrating the independence of cuteness and attractiveness.

That attractiveness and cuteness are distinct phenomena can be established in at least three independent ways, the ease in which they are separated in psychological studies, the difference in observed brain function when viewing images that possess either trait and how the cuteness halo and the attractiveness halo are distinct non-overlapping and often oppositional effects.

Cuteness and attractiveness can be isolated from each other. The majority of research involving cuteness and adults holds both age and attractiveness as a constant while varying facial maturity to come to significant results without confounding factors (Berry and Zebrowitz-McArthur, 1988; Brownlow, 1992; Gorn, Jiang and Johar, 2008; Keating et al., 2003; Lee, 2013). The practice of holding of age and attractiveness as a constant in cuteness studies is also performed with youths, but at a lower rate (Zebrowitz, Kendall-Tackett and Fafel, 1991; Zebrowitz-McArthur and Kendall-Tackett, 1989). That baby-schema can be manipulated in pictures of the same face in both adults and children creating extremes in the ratings of facial cuteness and maturity, while not having an effect on the attractiveness of the face, without difficulty, suggests that cuteness and attractiveness are independent. If what was found instead was that when a face was made look cuter those faces had to be transformed (given blemishes or made unsymmetrical) to maintain equal attractiveness ratings it would strongly suggest the cuteness and attractiveness weren't independent.

The second way to demonstrate the independence of cuteness from attractiveness is by looking at how brain function differs in reaction to cuteness and attractiveness. Two studies that looked at infant schema and brain function that controlled for attractiveness have demonstrated that difference. One study by Kringelbach et al. showed the even after controlling for attractiveness, emotional expression and arousal, baby-schema induced differential function in the orbitofrontal cortex. The study came to the conclusion that, "Thus, the orbitofrontal cortex appears to exhibit a very early specific neural signature or specific pattern of activity in response to infant faces. This signature is likely to be directly related to the saliency of the structural features of the infant face rather than to other factors, since the infant and adult faces were carefully matched in terms of emotional valence and arousal, and attractiveness." (Kringelbach et

al. 2008). Another study by Zebrowitz et al. came to the same result and showed again that while holding faces equal in attractiveness brain function will change based on facial maturity. In the Zebrowitz et al. (2009) study, brain function was found to be similar for infants and babyfaced men, but different for mature-faced men, even though there was no difference in the rated attractiveness of the mature-faced and babyfaced groups. Infant schema created observed differences in the amygdala and fusiform face area that could not be accounted for by attractiveness (Zebrowitz et al., 2009).

A third way in which cuteness can be shown to be different from attractiveness is the independence of the general effects which each cause. The effect of attractiveness is known as the attractiveness halo effect, while with cuteness there is an overgeneralization effect. A halo effect is a consistent cognitive bias where one trait or impression influences the views about the other traits held by that person. The phenomenon was first observed and described in 1920 by Thorndike who found an anomaly in ratings research; people's ratings in one category have a strong connection to ratings in different categories. The relationship between different ratings led him to conclude,

> The writer [Thorndike] has become convinced that even a very capable foreman, employer, teacher, or department head is unable to treat an individual as a compound of separate qualities and to assign a magnitude of each of these in independence of the others. The magnitude of the constant error of the halo, as we have called it, also seems surprisingly large, though we lack objective criteria by which to determine its exact size. (Thorndike, 1920)

This is exactly the case; people are unable to isolate evaluations of people into strict categories. Instead, one category often influences other categories, so that a single factor can be responsible

for creating a ‘halo’ that influences numerous other ratings. Attractiveness has been shown to have a particularly powerful ‘halo’ type of effect.

The understanding of attractiveness as a ‘halo effect’ was pioneered by Dion, Berscheid and Walster’s work in 1972 when they showed that people generally rated attractive people to be better in numerous ways unrelated to physical appearance, creating the connection between attractiveness and positivity in ratings thus establishing attractiveness as a halo effect. In their study, attractive people were judged to have more prestigious occupations, be more competent spouses, have happier marriages, have higher general happiness and be less likely to be single (Dion, Berscheid and Walster, 1972). Looking more specifically at the traits people attribute to attractive people there is a notable increase in rated competence, social appeal, intelligence, and a general agreement in a beauty is good effect, yet attractiveness halo isn’t completely positive as it is also correlated with vanity and a lack of modesty (Eagly et al., 1991; Jackson, Hunter and Hodge, 1995; Langlois et al., 2000). The cuteness effect does not have the positivity found in the attractiveness halo effect. When people (male or female), irrespective of age, are judged as cute they are also thought to comply with the wishes of others, be socially submissive, physically weak, naïve, warm and kind (Berry and McArthur, 1985; Fidler and Hodapp, 1999; Montepare and Zebrowitz-McArthur, 1989; Zebrowitz and Montepare, 1992; Zebrowitz-McArthur and Berry, 1987). From this, it can be seen how being cute or attractive effects the evaluation of numerous other judgements about a person. The difference in the evaluated traits ascribed to people by each phenomenon demonstrates that they each create an independent, non-overlapping, effect. Attractiveness creates a beauty is good effect, whereas the cuteness effect is more aptly described as creating the view that a cute person has a childlike disposition. Further, cuteness and attractiveness created create oppositional effects, as competence and naivety are

conflicting qualities that wouldn't be ascribed to the same person. The difference in the effects created by cuteness and attractiveness and the oppositional nature of those effects points to cuteness and attractiveness existing as separate phenomenon.

While cuteness and attractiveness are independent there is a correlation between the two phenomena which is especially strong at young ages (Kuraguchi, Taniguchi and Ashida, 2015; Luo, Li and Lee, 2011). Drawing a line of delineation between cuteness and attractiveness gets harder to accomplish the younger a person is. This can be seen in how ratings for attractiveness closely correspond to cuteness in young children and through how baby-schema has been related to attractiveness in young children's faces (Brooks and Hochberg, 1960; Lou, Li and Lee, 2011). The study of Luo, Li and Lee (2011) points to there being a strong correlation between attractiveness and cuteness in infants that weakens but stays significant until the age of four and a half. After that age, facial ratings of likeability and attractiveness start to resemble ratings for adults' faces for likeability and attractiveness (Lou, Li and Lee, 2011; Sternglanz, Gray and Murakami, 1977). Despite the degree of correlation between cuteness and attractiveness being greater in infants, there is still a separation between the two phenomena (Lou, Li and Lee, 2011; Zebrowitz and Montepare, 1992). This separation can be seen in how studies looking at cuteness in children can still find meaningful results when attractiveness is controlled for (Zebrowitz and Montepare, 1992; Zebrowitz-McArthur and Kendall-Tackett, 1989).

The problem is that research with children is consistently looking directly for cuteness or attractiveness individually without controlling for the other phenomenon and even occasionally treating them as being the same (Casey and Ritter, 1996; Hildebrandt, 1982; Waller, Volk and Quinsey, 2004). While the results from the studies on cuteness or attractiveness, that fail to control or account for the other effect, are technically 'correct', the implication that those results

are from cuteness and not attractiveness or vice versa is impossible to draw. The only redemption is that cuteness and attractiveness are so closely correlated in infants that it often wouldn't be anticipated to be problematic to the end result, outside of the uncertainty about the root cause of the effect being cuteness or attractiveness. To make specific conclusions though it would be necessary to account for both effects.

1.5 Sherman and Haidt on Cuteness

Now that Lorenz's views have been summarized and the evidence supporting those views has been given it appears that everything Lorenz predicted was correct. Lorenz though, and many researchers, are defining cuteness's effect in a way that is narrower than evidence points to it being. Sherman and Haidt's paper *Cuteness and Disgust: The Humanizing and Dehumanizing Effects of Emotion* gives a compelling argument detailing why the cuteness effect isn't limited to caretaking. Haidt and Sherman show that results supporting the caretaking effect of cuteness weren't wrong, just that the focus of those studies was narrowed in such a way that they were ignoring part of the cuteness response people were having; cuteness prompts sociality in people and not just caretaking. This social effect of cuteness is also able to account for many of the results attributed to caretaking such as wanting to look at cute things longer (Hildebrandt and Fitzgerald, 1978), being more willing to take care of something cute (Alley, 1983b; Glocker et al. 2009) and keeping closer account of children high in baby-schema (Harrell, 2005), but also can account for notable outlying effects.

The outlying effects of cuteness that are not compatible with the caretaking theory are the time at which cuteness peaks and the correspondence of both baby talk and positive facial expression with ratings of cuteness. Babies don't peak in cuteness at birth or shortly after, it takes 6 to 10 months for a baby to reach their peak cuteness, a peak from which they slowly

decline (Sherman and Haidt, 2011). If cuteness' adaptive value was limited to caretaking the time at which being cute would create the greatest benefit would be when the baby was first born, as that is the time that they are the most dependent and helpless.

Further evidence against the exclusivity of the caregiving theory comes from Hildebrandt's work on facial expression. When facial expressions are broken into three groups, positive, negative and neutral, and are then rated on their perceived cuteness what is found is that infants are seen as cuter when they have positive expressions (smiles/excitement) and less cute when they have negative expressions (crying/angry) (Hildebrandt, 1983). This would be the opposite of what one would expect given the caregiving theory of cuteness, as an infant being angry or crying would be strong cues that the infant is in need of some type of care. This evidence does fit with the social theory of cuteness though as positive facial expressions encourage social interaction (Gladstone and Parker, 2002).

A third problem for the caretaking theory of cuteness comes from that odd high-pitched voice that often accompanies 'oohhs' and 'ahhhs' when viewing something cute. These noises often used in the presence of babies can be traced back as far as 'buo' and 'pappa' being baby words for food and drink in the Latin of 116-27 B.C. Rome (Ferguson, 1964). The connection between cuteness and baby talk, however, only traces back to 1992 when a study by Zebrowitz, Brownlow and Olson established the connection between the two. Zebrowitz, Brownlow and Olson had adults attempt to teach a game to a child by giving instructions through the telephone. Before the adult placed the telephone call they were given one of two photos featuring the child they would be teaching, one highly correlated with baby-schema and one where the child was more mature looking. The result they came to was clear, "…facial babyishness influenced baby talk even when baby- and maturefaced children were equated in age, attractiveness, and

perceived competence [which] suggests that a small approximation to the craniofacial qualities that distinguish infants from adults may in and of itself be sufficient to elicit this speech register." (Zebrowitz, Brownlow and Olson, 1992). This is problematic for the caretaking explanation of cuteness, as the connection between caretaking and linguistics/paralinguistics has little plausibility. There is nothing linking a person's diction or tone with care. It is, as Haidt and Sherman (2011) point out, a social phenomenon used to communicate and would further support a social theory of cuteness.

Taken together, the fact that babies don't peak in their cuteness until after their needs have peaked, that faces are cutest when they have positive expressions and that baby talk is directly connected to cuteness it is clear the caretaking effect is too narrow to account for the entirety of the cuteness effect. The social effect of cuteness proposed by Sherman and Haidt better accounts for those three reactions, while also being a reasonable explanation for understanding much of what has been attributed to the caretaking effect of cuteness.

Taking this information together Sherman and Haidt's social theory can then be combined with Lorenz's theory of cuteness as an IRM to create the understanding of what it means when something is referred to as visually cute. Visual cuteness can then be defined as the activation of an IRM in the mind due to the recognition of the specific features of baby-schema which creates the cuteness effect that has aspects of sociality and caretaking in accordance with the theories of Lorenz and Sherman/Haidt. That definition is what is supported by research involving visual cuteness and is consistent with the recent definition by Kringelbach et al. which details that, "The prevailing view of cuteness came from the founding fathers of ethology, Nobel prize winners Konrad Lorenz and Niko Tinbergen. They proposed that the cute facial features of infants form a 'Kindchenschema' (infant schema), a prime example of an 'innate releasing

mechanism' that unlocks instinctual behaviours." (Kringelbach, 2016). With this definition of cuteness, it is then possible to examine the moral issue that the cuteness effect creates. The issue of the perception of baby-schema causing two otherwise equivalent things to be treated in a systematically biased way.

This is how Singer's expanding circle is applicable to cuteness, as that differential treatment of things that would otherwise be equivalent has been shown to have the characteristics of increasing empathy (Batson et al. 2005), bypassing group bias (Esposito, 2014), inspiring caretaking/protection (Alley, 1983b; Glocker et al. 2009) and causing feelings for the increased need for care/protection (Knight, 2008; Kruger, 2015). All of those affects could potentially be used to increase moral consideration where it currently exists and expand moral consideration to where it isn't present. This use of cuteness is consistent with Singer's overall goals of building a morality that takes advantage of the biological framework of morality (Singer, 2011b, p. 170) and expanding moral consideration in general (Singer, 1974), both of which will be looked at in greater depth in the proceeding chapter. Due to looking at cuteness through the understanding of Singer's work, this essay will emphasize the potential positive conclusions created through a better understanding of cuteness and its effects. This is due to Singer's ethics being utilitarian (Ng and Singer, 1981).

1.6 Objections to the Universality of Visual Cuteness

Before moving on to Singer and examining cuteness's effect as a moral issue, an objection to the definition and understanding of cuteness needs to be examined. The objection may be made that there is a lack of consistency in the reactions to baby-schema that leads to cuteness not being a universal response and therefore rendering cuteness unable to be used to expand the moral circle universally. While the vast majority of results indicate that baby-schema

works in universal uniformity and a study with the Tsimane' people (Zebrowitz et al., 2012), a people uninfluenced by outside culture, found consistent results, there have been differences in the reaction to baby-schema found in two cases, Black adult men and Chinese adult women.

Black male CEO's, unlike white CEO's, are more successful when they possess features corresponding with infants (Livingston and Pearce, 2009), and of more interest, both in the United States and Kenya babyfaced black men failed to receive greater help than their mature-faced equivalents (Keating et al., 2003). It has been posited that having a babyface is disarming which is, "…attenuating stereotypical perceptions that Blacks are threatening." (Livingston and Pearce, 2009), whether that is the case or not, there is clearly an effect modifying the cuteness IRM in adult black males that requires explanation and further study.

The noted difference in cuteness with Chinese adult females is that their rated competence levels are equal to mature-faced Chinese adult females (Zheng et al., 2016), although the measures being used to evaluate competence (ratings of leadership, confidence and intelligence) were different than previously used measures for competence (Poutvaara, Jordahl and Berggren, 2009). Further, the fact that there was a documented difference in the relationship between competence and babyfacedness isn't surprising, as the results concerning the correspondence between competence and baby-schema have had mixed results in past studies (Poutvaara, Jordahl and Berggren, 2009; Zebrowitz and Franklin, 2014). While the differential reaction to cuteness in Black adult males is an anomaly that requires further research, there is less concern about an outlying effect with Chinese adult females.

2. Cuteness and the Expanding Circle

2.1 Cuteness, Morality and Singer

The cuteness of a child, adult or animal affects both the thoughts and actions towards that child, adult or animal. The differences in which characteristics are attributed to cute things in combination with the differential actions directed towards individuals high in baby-schema together create a situation where individuals with babyfaces are treated as morally distinct from things that are non-cute. This difference in moral consideration of things high in baby-schema can be seen in how cute children are less likely to be abused (McCabe, 1984) or abandoned (Weiss, 1998) and are treated with better care in general than non-cute youths (Kelley et al., 1996; Montirosso et al., 2011; Langlois et al., 1995). Judgments of babyfaced adults show this same pattern of moral elevation as they are repeatedly regarded to be warmer, less likely to be intentionally harmful and more deserving of help (Berry and Zebrowitz-McArthur, 1988; Keating et al., 2003; Zebrowitz-McArthur and Apatow, 1984). It is also observable in animals where cute animals are regarded as being more in need of care (Kruger, 2015), where cute images of animals generate greater support (Knight, 2008) and where the thought of eating a cute animal causes feelings of disgust (Ruby and Heine, 2012).

This moral elevation for things with cute features and the general understanding of the cuteness effect has led to the proclamation that cute things are moralized differently than their non-cute equivalents (Kringelbach et al., 2016; Sherman and Haidt, 2011). The difference in moralization has often been seen, by psychologists, in relation to the ethical philosophy of Singer and specifically in relation to his theory of moral spheres (Kringelbach et al., 2016; Pizzaro,

Detweiler-Bedell and Bloom, 2006; Sherman and Haidt, 2011). For Singer the categories of moral responsibility can be broken down into existing in two distinct groups, one where there is moral relevance and one where there is no moral regard (Singer, 2011b, p. 120-121).

It is this understanding of moral spheres and the documented difference in moralization that occurs due to the cuteness effect that has peaked the interests of psychologists studying morality, despite the topic receiving little attention philosophically. The difference in moralization that takes place due to cuteness is an avenue for things that are not a part of the moral sphere to obtain moral consideration, in essence changing the sphere in which they exist and granting them morally relevancy.

Pizarro, Detweiler-Bedell, and Bloom were first to note this connection between cuteness and the expanding the moral sphere writing that,

> Nobody feels guilty about kicking a rock for the simple pleasure of doing so, but doing the same thing to a child is universally forbidden. What's the difference? Somewhere between rocks and children, moral codes across all cultures draw a boundary line – there exists what the philosopher Peter Singer has characterized as a 'moral circle' that distinguishes things that are worthy of moral concern from those that are not. (2006)

Pizarro, Detweiler-Bebell, and Bloom recognized obvious differences in moralization and came to the understanding that there must be some point at which an object became worthy of moral concern. They posited that children were universally accorded entrance into the moral sphere, but didn't speculate further as to why or how, specifically, a child gains immediate moral status. Instead, they examined empathies ability to expand moral concern and while that is a worthwhile area of study with encouraging results (Harmon-Jones, Peterson and Vaughn, 2003; Marjanovic,

Struthers, and Greenglass, 2012), their question, ‘Why isn’t a rock immediately worthy of moral concern, when child is?’ went unanswered.

That question would be left to Sherman and Haidt who refined the ideas found in the Pizarro, Detweiler-Bebell and Bloom paper and came to a conclusion that would answer the question of ‘Why are children immediately granted moral status?’. Sherman and Haidt acknowledge empathies ability to affect the moral circle but come to the conclusion that empathy cannot account for the immediate inclusion of objects as morally relevant. This conclusion is drawn from the inability of empathy to stimulate the mentalization of objects that are not already highly mentalized (Sherman and Haidt, 2011). Sherman and Haidt (2011), instead, turn to cuteness as the cause of the immediate moral inclusion of children due to its ability to create mentalization of objects and animals. A person doesn’t feel empathy for a rock, but a rock can have infantile features that cause that particular rock to be mentalized in a distinct way from other rocks. Sherman and Haidt then come to the same conclusion as Pizzaro, Detweiler-Bebel and Bloom, that what is responsible for children being immediately granted a moral status can be used in combination with Singer’s concept of the moral circle,

> It seems that any child –even one of another race living halfway across the world—is granted automatic membership in the moral circle (at least once attention is drawn to it). If this is true then any affective mechanism related to the perception of a child (e.g., perception of something as childlike or babyish) would be a candidate for conferring social value, for triggering the mentalizing processes, and for expanding the moral circle. Following this rationale, we propose that cuteness expands the moral circle and that it does so by motivating sociality, which in turn activates processes of mind perception. (Sherman and Haidt, 2011)

Sherman and Haidt understand that cuteness changes how an object is mentalized and moralized thereafter and that those changes can account for why children are included in the moral circle as soon as attention is drawn to their status as children. Pizarro, Detweiler-Bebell and Bloom's question is then answered, the difference between a child and a rock that grants immediate moral status is the child's cuteness.

The connection between cuteness and Singer's moral spheres would then be posited a third time by Kringelbach et al. who supported and furthered the understanding and conclusions drawn by the work of Sherman and Haidt. Cuteness is described by Kringelbach et al. in agreement with Sherman and Haidt as an innate releaser of sociality and mentalization, with Kringelbach et al. (2016) even going so far to describe cuteness as a 'Trojan horse' for care and protection. The 'Trojan horse' works through the creation of rapid activity in the orbitofrontal cortex and slower sustained processing in wider brain networks associated with emotional appraisal (Kringelbach et al., 2016). With the reference of cuteness as a Trojan horse, it is then not surprising that Kringelbach et al. also look to combine cuteness with the moral spheres of Singer describing that,

> …cuteness is a general promoter of sociality acting through mentalisation, the ability to treat infants and even inanimate objects as psychological agents. As such, cuteness may more generally serve to maximize moral concern by expanding the moral circle; that is, the boundary drawn around entities deemed worthy of moral consideration. (Kringelbach, 2016)

and,

> Given that children are (in principle) universally forbidden targets of harm, cuteness could serve to expand the moral circle. Any cute infant is automatically granted membership to the moral circle and cuteness can then be extended to other people (or objects). As such, cuteness-triggered positive mentalising could instigate wider social engagement and perhaps even empathy and compassion. (Kringelbach, 2016)

Together the three articles show a pattern of identifying children as being distinct in that they are moralized and mentalized differently than other objects and people, while the latter two articles go further and connect moralization and mentalization to the specific features of children that cause those effects to take place. This explains what causes cute children to be abandoned less often (Weiss, 1998), why babyfaced adults are more likely to be helped (Keating et al., 2003) and how it is cute animals are often seen as unsuitable for human consumption (Ruby and Heine, 2012). Cuteness causes those things to be moralized in a way that children with a cleft lip, mature-faced adults or ugly animals are not (Estren, 2012; Parsons et al., 2013).

The obvious implication of that difference in moralization being that the cuteness effect can and should be used as a way of expanding the moral sphere, to exploit cuteness ability to increase moralization to create greater ethical responses. Yet before getting directly into expanding the moral sphere through the use of cuteness, it is necessary to explore the concept of the moral sphere and the ethical work of Singer to appreciate what it means to ‘expand the moral sphere’ in accordance with Singer’s ethics. It is also required to prove that moral spheres exist in the way Singer describes and that the use of cuteness to expand the moral circle is consistent with the ethical theory of Singer before practical applications of cuteness to Singer’s theory can be examined.

However, before moving on to Singer's ethics the articles of Pizarro, Detweiler-Bedell, and Bloom, as well as, Sherman and Haidt, and Kringelbach et al. leave the necessity of providing a further examination of the idea that cute children are universally regarded as morally consequential. Two points about that universality need to be made, even though their obviousness often leaves them unstated. One, cute children being universally seen as morally relevant doesn't render any child immune from being treated immorally. Two, while the abstract idea of 'the child' is granted moral status, when faced with specific children their degree of cuteness is variable, with children possessing facial deformities being viewed as considerably less cute (Coy, Speltz and Jones, 2002; Rayson et al., 2017).

This second point leaves an interesting follow-up, in that, does simply imagining a child create the cuteness effect rendering even the abstract idea of 'a child' as cute? If that were the case it would account for why the abstract 'child' or 'children' are granted immediate moral status. My prediction would be that when a person is asked to imagine a child, there would be the activation of the orbitofrontal cortex in a similar fashion as seeing a cute child and that would partly be responsible for creating the mentalization and thus the granting of moral status. This would be consistent with recent studies involving memory (Gelbard-Sagiv et al, 2008; Schlegel et al., 2013).

2.2 Singer and the Moral Sphere

"You can get a room full of academics to start nodding their heads just by saying the phrase 'expand the moral circle' (a reference to Singer, 1981)" note Haidt and Sherman (2011). The phrase is superficially appealing, and for a sound reason as attempting to increase morality is a laudable goal. Yet, there is a depth of knowledge in the concept of the 'expanding the moral circle' that is built into the ethics Singer defends in his work *Expanding the Moral Circle,* of

which the moral circle is only a part. This epistemological background gives meaning and a framework in which the idea of the moral circle becomes relevant.

The bedrock on which Singer builds his ethical theory is rationalism and altruism, both of which are supported by the documentation of their universality. Yet, there have been changes in where Singer draws support for his rational altruistic conclusions since that work was published. In the original print of *The Expanding Circle* Singer uses Hume to point out the disinterested nature of moral appeals (Singer, 2011b, p. 93) and a self-supported argument for the basis of the equal consideration of interests in ethical decisions (Singer, 2011b, p. 109-110). This has changed recently, as Singer now draws on the axioms of Sidgwick, particularly on universal beneficence, and Parfit's support for objective moral truths to make the argument for rational altruism (de Lazari-Radek and Singer, 2012). This seems to be due to an error he saw within his original argument as,

> The judgment that 'one's own interests are one among many sets of interests' can be accepted as a descriptive claim about our situation in the world, but to add that one's own interests are 'no more important than the similar interests of others' is to make a normative claim. If I deny that normative claims can be true or false, then I cannot assert that this claim is true. (Singer, 2011b, p.199)

In building on Parfit's argument for objective moral truths and Sidgwick's defense of self-evident judgements through the use of reason, which renders the origin of those judgements irrelevant, Singer is able to come to the same conclusions he stated within *The Expanding Circle* (de Lazari-Radek and Singer, 2012).

Singer came to those ethical conclusions through studying biology and he was heavily influenced by the sociobiology of Wilson. The sociobiology of Wilson resulted in two things for

Singer. The first being an understanding of the impact of biology on human nature and specifically its role in the creation of human ethical feelings. The second result is the conflict that Singer had with the ethical conclusions drawn by Wilson, which created the impetus for Singer to write, *The Expanding Circle* (Singer, 2011b, p. xii). In this conflict Singer finds Wilson trapped in a position of ethical subjectivism due to Wilson's ascription of all forms of non-biological ethics as being derived from matters of emotion which have their root in biology, leaving ethics variable to the whims of emotion (Singer, 2011b, p. 85). If Wilson was correct in his understanding of ethics it would mean that, "…it would be as inappropriate to criticize ethical judgement as it is to criticize gastronomic preferences." (Singer, 2011b, p.85).

It is that biological understanding of human nature and the conflict with Wilson's ethical conclusions in *Sociobiology* that underpins much of Singer's work and provides the foundation for the conclusions he draws about ethics. Singer realizes that evolution takes place at the level of the gene so that it is the individual genes and not the individual, group or species that is the focal point for change (Singer, 2011b, p. 9). In that understanding he sees the same challenges that many authors studying ethics and evolution come to see, how can a self-interested genetic understanding of evolution account for the creation of all the cooperation and altruism that exists?

To move beyond that self-interest Singer accepts that kin altruism, reciprocal altruism and group altruism, which could only take place under specific conditions, are able to create a rudimentary morality (Singer, 2011b, p. 91). This establishes a base morality that can be seen in social animals. This isn't the only source of morality though. There is also a cultural or traditional morality that is created over time by culture, and both of those factors work together

to create human morality, "…unless, foolishly, we try to insist that one of these two is the sole cause of a complex behavior." (Singer, 2011b, p. 52).

With that understanding of the biological underpinnings of moral thought Singer then attempts to build an ethic that is consistent with that understanding, but that escapes the subjectivism of Wilson. This is first done through the use of the 'is' and 'ought' distinction from Hume. Singer points out that Wilson's sociobiology can correctly describe why people have the moral feelings they possess, but it is unable to move beyond those feelings and establish that those feelings are morally correct, as, "They are theories about what people do in these situations. They have nothing to say about what people should do." (Singer, 2011b, p. 82)

This is restating the 'is'/'ought' problem for Singer as it simply extends the distinction between science and ethics to also include ethics and biology. Science can describe moral feelings, but it cannot explain if those feelings are correct therefore there must be something else that can provide a grounding for ethics if it is to exist at all beyond subjectivity.

Rationality is put forth as a way of grounding ethics by Singer. It is rationality that makes ethics possible, as without rationality there are only moral feelings that are evolved predispositions or cultural customs, each a relic of the past that provides no support for their moral identity (Singer, 2011b, p.72). Rationality is able to find the basis for ethics, which comes from a quality that all ethical claims must necessarily have; when someone is making an ethical claim or trying to justify an action they must make claims with a specific quality, disinterestedness (Singer, 2011b, p. 93-94). Singer refers to David Hume in pointing this essential disinterestedness out, citing that a person making a moral claim must, "Depart from his private and particular situation and must choose a point of view common to him with others; he must move some universal principle of the human frame and touch a string to which all mankind

have accord and symphony" (Singer, 2011b, p. 93). It is that common disinterested view of a decision that is the universal principle. It is from that disinterested view that moral rules can be recommended on the justification of their good consequences (Singer, 2011b, p. 108). Together this means that a decision is ethical if when looked at in a disinterested way, with equal consideration of interests, it has justifiable consequences. This is referenced to both as 'the principle of impartial consideration' (Singer, 2011b, p. 109) and 'the principle of equal consideration of interests' (Singer, 2011b, p. 110). The question then is, justifiable consequences to who?

That question is answerable by again using the disinterested point of view. It is through that view that it can be seen, "That one's own interests are one among many sets of interests, no more important than the similar interests of others…" (Singer, 2011b, p.106). This leaves justification open-ended and variable. Singer creates an example of one calculation that he could perform for the simple task of going out with friends or visiting his father and weighing the effects of the possible decisions for all parties involved, yet for larger decisions, Singer's line for whose interests should be included in the consideration of a decision is much broader (Singer, 2011b, p. 101).

Singer makes the argument that anything with interests should have those interests weighed, which includes any animals capable of suffering or enjoyment (Singer, 2011b, p. 123). A firm line is drawn by Singer (2011b, p. 106) at things with interests because ethical decisions can only take place through the impartial viewpoint with the equal consideration of interests, with an entity that has no interests the impartial viewpoint becomes nonsensical as there is nothing to take into consideration.

This isn't to mean that all interests are equal, as Singer notes the evolutionary understanding that people have dispositions that create special obligations to their kin and neighbors, and for that reason, it is only required that there is the rational understanding that one person's interests are no more important than the similar interests of other people to their own kin and neighbors (Singer, 2011b, p. 118). This equal consideration of interests does extend to animals, as Singer finds that there is no exceptionality that creates a categorical difference between human and non-human species that would provide the basis that could justify unequal consideration (Singer, 1974). Yet while the equal consideration of interests extends to animals, animals are sufficiently different so that treatment can still be extremely varied (Singer, 2011a, p. 51). This creates a situation where, while the interests of non-human animals should be weighed equally with those same human interests, there are acceptable differences in treatment.

In summation, ethical feelings are a product of nature and nurture, but those feelings don't form a system of morality or ethics until rationality is able to understand the consequence of a person's actions. A rational examination of ethics quickly finds two moral truths, first, that one's interests are no more important than those same interests in others (Singer, 2011b, p. 105-106), and, second, that all ethical appeals are necessarily disinterested appeals (Singer, 2011b, p. 93-94). This equality of interest and the necessity of the disinterested point of view are so binding that it creates a situation where everything with interests should have those interests weighted when they are a part of an ethical decision.

That is the summary of the foundation of Singer's ethical theory as expressed in *The Expanding Circle*, but there is still the idea of the moral circle, the area of interest to psychologists, that requires explanation. Singer's view is that ethics exists in a state of struggle where natural desires and cultural customs create ethical feelings centered on the family and the

identified in-group, which conflicts with rationality which points to ethics extending to anything with interests.

While natural desires were unable to form a system of ethics, they are able to establish a moral circle between family and close friends through kin and reciprocal altruism. This created an in-group and out-group, those who required moral consideration and those that did not. Rationality has since been working as the force to extend that natural moral in-group, expanding the circle and creating the need to treat larger and larger groups as morally relevant (Singer, 2011b, p. 113-114).

This means that moral progress is the increased use of reason in ethical judgments which results in the increase of the disinterested weighing of interests to include more people and animals and/or the increase of the depth of disinterestedness shown in ethical evaluations (Singer, 2011b, p. 190-191). It also explains why it is that people easily make many disinterested justifiable ethical decisions with their family but are notoriously inferior at being disinterested and taking into consideration the interests of strangers (Singer, 2011, p. 147). The 'stranger' is unidentifiable and part of no group and due to that lack of belonging, it lacks an identity that would grant it true moral consideration. It is only after the 'stranger' takes on qualities of personhood, or group identity, that it becomes morally relevant as part of a moral circle.

2.3 Do Moral Circles Exist in a Way Consistent with Singer's Theory?

Another brief aside is necessary before moving on and showing how cuteness can expand the moral circle and positively affect human morality. With Singer's theory of moral circles explained the task is then to verify that those moral circles exist in the way Singer describes. There is a great deal of evidence that moral circles exist and exist in a way that is consistent with

Singer's philosophy. This is the conclusion that can be drawn based on experiments involving in-group and out-group bias and examinations of brain function when viewing the actions of in-group and out-group members.

Creating self-identified group membership is surprisingly easy to establish. It can be created in numerous ways which include playing games as a group (Sherif et al., 1954/1961), cheering for a sports team (Hastorf and Cantril, 1954), or even spontaneously through simply being assigned to a group in a knowingly arbitrary way (Tajfel and Turner, 2004). Once that group membership is established it creates a dynamic where concern and welfare are skewed towards that group identity and despite the identity being so easily created it becomes resistant to change (Sherif et al., 1954/1961). This in-group identity has been documented to cause self-imposed group segregation, negative behavior, and harm towards people of an identified out-group (Sherif et al., 1954/1961).

Those in-group and out-group biases show that the concept of an in-group and out-group exists, but economic games show how group identity can affect evaluations of who matters in a given situation. This can be directly observed in decision making regarding the division of money by people after they are given a group identity. When people with an established group identity are asked to divide money the divisions they make are made in ways that maximize in-group profit at the expense of total profit, even when the cost to the in-group is small (Tajfel et al., 1971). Group identity, under certain conditions, provides the complete context as to who matters economically, to the degree that the only people that receive economic concern are those that fall within the in-group.

The bias towards the in-group is omnipresent, which is evidenced by its existence not simply being a matter of differential evaluation of information, but rather by changing how an

event is actually being seen. That was the conclusion Molenberghs et al. (2013) came to when they examined how observational bias, created through in-group/out-group dynamics, made viewers observe an event in a biased way. The proof of that inference came from an experiment where people were put into groups and then asked to play a game where individual group members had to react faster than an opponent to hit a button in front of them. Afterward, individuals watched video recordings of the competition and had to decide whether the in-group member or the out-group member had hit the button first.

There was a trick in this study though, as the video of the button pressing competition had been edited so that the in-group member and the out-group member hit the button at exactly the same time in the video. As expected, people still judged their in-group team members to have hit the button first (Molenberghs et al., 2013). Further, when viewers' brain function was observed while watching the film there was increased activation of the inferior parietal lobule (an area crucial to perception-action coupling) pointing to the participants not coming to a biased decision, but actually viewing the video of the competition in a biased way (Molenberghs et al. 2013).

This is sufficient to demonstrate that there is a clear in-group/out-group bias, but Singer's theory of ethics doesn't simply require in-group and out-group bias to exist. It requires specific features in the treatment of in-group and out-group members. The defining characteristic in Singer's in-group and out-group is that there is a moral concern for those that were a part of the in-group and no moral concern for those in the out-group. This leads to the question, do moral decisions have the same in-group/out-group bias as was demonstrated in the study of economic decisions?

The evidence in this area is complicated, but there is a large moral effect that accompanies in-group identity and out-group identity. This evidence can be seen in both the actions and brain function of people when confronted with moral problems and group membership. Group membership acts as a set of colored glasses through which a moral act is viewed and understood.

An example of this is how out-group transgressions against in-group members are viewed differently than other transgressions of the same nature. Molenbergh et al. (2014) showed this in an experiment where people viewed transgressions of intentional harm performed in 4 different ways, in-group vs in-group harm, in-group vs out-group harm, out-group vs. out-group harm and out-group vs. in-group harm. Through the comparison of the same act and varying the victim and perpetrator the finding was that there is a difference in how in-group and out-group actions are judged, as brain function differs situationally despite the transgressions being the same. This difference in brain function was accompanied by a notable increase in the moral sensitivity to crimes committed by out-group members against members of the in-group. When a member of the in-group, part of the moral circle in Singer's terms, is harmed by an out-group member, not part of the moral circle, there is greater activity in the left orbitofrontal cortex (OFC) as well as increased coupling between the left OFC, left amygdala and insula, the parts of the brain that are most consistently involved with moral reasoning (Molenberghs et al., 2014). This shows group membership can modify how a moral act is viewed, and that people are morally sensitive to the actions of out-group members towards in-group members.

This difference in moral reaction to in-group and out-groups can also be seen in how empathy is activated. The use of electroencephalography (EEG) has revealed that when people see members of an identified in-group as sad they exhibit similar activation patterns to

themselves being sad, while when sad out-group members are viewed that activation pattern is not present (Gutsell and Inzlicht, 2012). This lack of activation of empathetic response is a feature of the relationship between out-groups and prejudice; when prejudice increases so too does the lack of empathetic response in observed brain patterns (Gutsell and Inzlicht, 2012). This difference lead psychologists Gutsell and Inzlicht (2012) to the conclusion that, "These findings provide evidence from brain activity for an in-group bias in empathy: empathy may be restricted to close others and, without active effort, may not be extended to outgroups, potentially making them likely targets for prejudice and discrimination." People don't respond to the emotional states of out-group members as they would members of the in-group, a result consistent with a similar study involving pain (Fiske, 2009).

It is clear from this that group membership can modify both how moral acts are perceived and reacted to, but in all the studies cited there has still been some moral response to the actions of the out-group, so that the in-group/out-group bias created doesn't exist in the moral dichotomy that Singer proposes. However, there is still reason to believe that this dichotomy does exist in extreme outgroups.

There are specific ways in which a person can be pushed out of the moral circle, and thus be morally excluded in the way described by Singer. This moral dichotomy was seen in a study involving groups that are linked with disgust (poor people, drug users, and the homeless). Those groups associated with disgust when viewed did not activate the medial prefrontal cortex (mPFC) above baseline levels, the area which is linked to ascribing things with a mind and intentions (Fiske, 2009). Along with that failed activation, there were the behavioral correlates of dehumanization and lack of moral inclusion as there was, "…failure to use intent verbs in describing the target's typical day, self-reported failure to attribute a mind to them, and self-

reported unlikelihood of interacting together." (Fiske, 2009). This points to members of an out-group, who are thought of as disgusting, being morally indistinguishable from things that are given no moral consideration.

This failure to ascribe a mind to members of an out-group is also reflected in how secondary emotions are viewed based on in-groups and out-groups. Primary emotions are the typical reactionary emotions ascribed to people and many animals, including sadness, anger, and happiness, but secondary emotions are complex emotional states such as disillusion, gratefulness, and admiration. Those secondary emotions are attributed to members of the in-group but are not ascribed to animals or out-group members (Leyens et al., 2000). Leyens et al. (2000) who studied the relationship between group membership and secondary emotions concluded that, "It remains, however, that the data reported here do not appear very optimistic. Without awareness, people tend not to attribute secondary emotions to out-groups. They deny to others, even non-threatening ones, the possibility of having such secondary emotions." This leaves the out-group dehumanized, stripped of a mind and complex emotion.

This dehumanization of the out-group isn't limited to taking human qualities away from a person in the out-group. Situations, where there are strong negative feelings towards an out-group, can cause what would be empathy in in-group circumstances to be viewed with schadenfreude instead. When people with strongly negative views of an out-group see a member of that out-group in pain there is no empathetic reaction, in its place what is found is an activation in the parts of the brain associated with reward processing (Hein et al., 2010). Members of a reviled out-group are not only treated as not morally relevant their suffering often causes dopamine to be released in the viewer (Hein et al., 2010). This explains the happiness that can accompany in-group member's views on the plight of out-group members. Not only is there

less, or often no, moral response to equivalent actions that would cause a moral response in the case of the in-group, those negative actions are often viewed positively.

This degree of moral difference, the lack of emotional response to outgroup members and the reward processing of the pain of out-group members points to Singer's moral in-group and out-group roughly, but not exactly, corresponding to in-group and out-group bias. This is to say the difference between out-group bias and the moral out-group of Singer has a difference of degree and not of kind. Singer's outgroup then is akin to an out-group viewed as strongly negative or viewed with disgust.

Levi Strauss described this type of outgroup existing consistently at the tribal level, as his anthropological studies led him to write that,

> Humanity is confined to the borders of the tribe, the linguistic group, or even, in some instances to the village, so that many so-called primitive peoples describe themselves as 'the men' (or sometimes—though hardly more discreetly—as 'the good', 'the excellent', 'the well-achieved') thus implying that the other tribes, groups or villages have no part in the human virtues or even in the human nature, but that their members are, at best, 'bad', 'wicked', 'ground-monkeys', or 'louse eggs'. (Levi-Strauss, 1952)

That is a description of the extreme outgroup, the group that would be outside Singer's moral sphere, and the evidence from simple in-group/out-group experiments where people are assigned groups in an openly arbitrary way points to how close simply being a member of a different group puts a person into being outside of Singer's moral circle.

2.4 A Twofold Understanding of the Relevance of Cuteness on Morality

The culmination of this research on cuteness and the ethical theory of Singer is in how those two subjects can be combined to create a twofold understanding of the relevance of cuteness on the moral sphere. One where an increased moral response can situationally be used to create enhanced ethical outcomes and two where the bias created by cuteness could be accounted for to create greater equality in results. The first understanding will look to exploit the cuteness IRM so that people's natural responses and inclinations can create practical changes in response, whereas the second will attempt to account for the cuteness IRM. This section of the paper will look to provide reasonable speculation into the areas where there is analogous research supporting cuteness's ability to cause moral change.

This idea is completely 'Singerian' as his understanding of both biology and ethics leads Singer (2011b, p. 170) to the conclusion that, "We must begin to design our culture so that it encourages broader concerns without frustrating important and relatively permanent human desires." Singer's finest example of the idea of working with human desires to design society in a meaningful way is the promotion of contraception over celibacy. Singer (2011b, p. 170) explains that, "Preaching celibacy as a moral ideal may appeal to a few, but is unlikely to reduce population growth significantly, for it involves the frustration of an important human desire. Contraception, which allows for the satisfaction of this desire but prevents its natural consequences, has been more successful."

Just as the knowledge of human desires creates an expectation that one approach will be much more successful and require less effort to ensure the same outcome in the case of the promotion of contraception over celibacy, recent gains in our knowledge of humanity can inform decisions on a broader variety of issues. To that end, the data that surrounds the cuteness effect can be exploited or mitigated situationally within society to create outcomes that can be

impartially defended in a rational way. This would be an increase in morality in a way that is consistent with Singer's ethical philosophy.

2.4.1 Changing adoption. Changing adoption is a fertile place to start, as the information surrounding the factors that affect adoption preferences are well known and the mechanisms used by adoption agencies are already in place to take advantage of the cuteness effect in various ways. Cuteness has been shown to be the largest single factor in a person's adoption preference when tested for women and was the second most significant predictor of a male's adoption preference (Volk, Lukjanczuk and Quinsey, 2005; Volk and Quinsey 2002; Waller, Volk and Quinsey, 2004). Attractiveness has also been shown to be highly correlated with adoption preference, which isn't surprising as it is so strongly correlated with cuteness in people at young ages the terms can almost be used interchangeably without consequence (Chin, Wade and French, 2006). This isn't to say that cuteness or attractiveness is the only factor that affects adoption, as there are various other factors that affect adoption rates including sex, age, race, medical conditions and family status (Avery, 2000). What it is showing is that due to the strength of the correlation between adoption preference and cuteness it should be looked at as a way of increasing adoption rates, especially for those groups adopted at a lower rate.

With the cuteness of children being an important factor in adoption preference, it would seemingly be something that would want to be accounted for by adoption agencies. The importance of being able to account for adoption preference based on visual data is especially significant given the prominence of the practice of photolisting since its establishment in 1957 and the practices proliferation to national programs in the United States, Canada and Russia (Avery et al., 2009; Freundlich, Gerstenzang and Holtan, 2007). Yet, while the practice of photolisting mirrors methodology from tests on cuteness in relation to adoption preference,

adoption agencies make no use of those studies findings. A guide for photolisting children provided by Adopt Us Kids describes a 'well done' picture as 'engaging' and note that, "Photographs in print or on a web page typically are what first catch a family's attention." (Freundlich, Gerstenzang and Blair, 2004). A step by step procedure is provided as a guide for taking the photo of the child for the purpose of photolisting,

> 1. Take photographs at a time that is convenient for the child. Don't take her out of her favorite class or stop him just as he is going to basketball practice. 2. Focus on the location for the child's photograph. The easiest and best pictures frequently are outdoors, because there is plenty of light and the child is free to pose in a play area. 3. Let the child pick a favorite outfit and background for the photo. Be sure the child's hair is clean and cared for and child looks well-groomed. 4. Consider taking pictures of the child doing a preferred activity or with a special toy. Keep in mind, however, that the child should be clearly visible in the photo. For example if the child loves soccer, rather than taking a picture of her playing soccer, take a picture of her in her soccer uniform or holding a soccer ball. Make it fun! 5. Individualize the photographs for each child. Vary the locations so that all photographs do not use the same background. A standard background for all photographs can create the impression that the children are being 'painted with the same brush' or were photographed in a depersonalized line-up. 6. Consider the child's skin tone when picking the background. 7. Use color film. 8. Take close-up photographs of the child (or children if a sibling group) that are face forward, and of the waist or shoulders up. 9. Set aside enough time so that you won't feel rushed. Plan to spend at least an hour at the photo session. 10. Shoot an entire roll of film at the session – at least 24 shots. This number of photos generally guarantees that three or four photos will be

> acceptable. Develop the film immediately! (The extras can go into the child's Life Book.) 11. Have a familiar person, such as a social worker or foster parent, present during the photo session to put the child at ease. 12. Photograph siblings together in the same picture. Children who are photolisted together are more likely to be adopted as a sibling group. When prospective adoptive parents see children together in a photograph, they are better able to understand the importance of the children remaining together. 13. Have the child help pick the 'best' photo. (Freundlich, Gerstenzang and Blair, 2004)

These procedures seem effective in taking the child's desires into account, as the timing, activity/toy, clothing, setting and photo choice are selections that are advised to be dictated by the child. Other technical concerns are briefly addressed in terms of lighting, use of film, the focus of the picture (close up, face forward, from the waist or shoulders up) and what to do in the case of siblings. These directions clearly put the autonomy of the child as what is valued most, as the control of the photo is unmistakably dictated by the child.

This approach may be ideal for the day of the photoshoot, but it is seemingly short-sighted in terms of the long-term goals of the child if that child's overall goal is to be adopted. If the overall goal of the photoshoot is a successful adoption, then the beneficence of the child should take precedence over autonomy. The beneficent approach would be to have photos taken in a way that uses what research points to as being the most effective in creating a preference for adoption. Data on different approaches to pictures and profiles should be kept to give a guide to the factors that affect overall success rates and as that data doesn't currently exist the approach that should be taken first is that which emphasizes the child's cuteness as it has been shown to have the largest effect adoption preference in women and is significantly correlated with men's adoption preference (Volk, Lukjanczuk and Quinsey, 2005; Volk and Quinsey, 2002).

To that end, pictures could be aided through the use of ‘artificial cuteness’. ‘Artificial cuteness’ is what I will refer to as increasing a person’s rated cuteness in ways that are not dependent on a person’s facial shape or proportions. There has been evidence cuteness can be enhanced by a child participating in childlike behavior or dressing as an adult, which has been found to be especially effective for increasing the judged cuteness of boys (Koyama, Takahashi and Kazuo, 2006). A different type of cuteness has also started to be described in whimsical cuteness, which potentially may be able to raise the cuteness of a photograph (Nenkov and Scott, 2014).

The use of artificial cuteness could be particularly useful for children that fit the demographics of those that are adopted at a lesser rate. Children who are older, black, male or that have medical conditions are adopted at rates lower than other children and spend longer amounts of time waiting for placement (Avery, 2000; Wulczyn, 2003). This demographic bias creates a starting point for implementing a paradigm shift within photolisting websites. It could be examined if the hard to adopt population are rated lower in cuteness (which is surely the case based on age-related adoption preference) and also be examined if raising the cuteness of the photos of children from the hard to adopt demographic starts to close the adoption rate gap. This wouldn’t be expected to erase the gap as there are numerous factors that go into the choice of whether to adopt a specific child/children, but the strength of the correlation between adoption preference and cuteness creates an expectation that it would have a demonstrable effect. This would simply be implementing a change where no longer are photolisting websites for adoption looking for ‘engaging photos’, using props like soccer balls, or letting the child pick the photograph to be used and instead focusing on selecting the photo that looks the cutest and if props are used, using ones the correspond with an increase in cuteness ratings.

Why not go further? Instead of using props for artificial cuteness and selecting photos in which the child looks cutest, just skip that process to manipulate the photos after they are taken so that the child looks cuter. There are many reasons to limit photo protocols in adoption. The first is practical, as bringing a dress-up hat or small selection of whimsical props is easier than editing a photo. A further reason is that manipulating a photo to a great degree may cause a difference between expectation and reality when the child is met which may be detrimental and discourage the person/persons from adopting at all. Yet, the most damning argument against the direct manipulation of photographs is another factor that has been shown to make it harder to be adopted, race. While race has been shown to be less effective in its effect on adoption preference than cuteness or attractiveness, it does make up part of the factors that makes a person harder to place in adoption (Chin, Wade and French, 2006; Golle et al., 2015). The argument then could be made that in addition to photos manipulated to increase cuteness, other factors could also be manipulated, in essence supporting the ability of photos to be manipulated so that black individuals looked less back. The paradigm shift in photolisting being advocated isn't arguing that, that should be done; it is instead simply advocating for changing the priorities within the selection process and changing the types of props used. It is redefining 'best photo' taken to be in greater accordance with 'the photo that is most likely to create a successful adoption' and not attempting to misrepresent the appearance of the child.

Due to cuteness increasing feelings of protection (Alley, 1983b; Knight, 2008), willingness to care (Glocker et al., 2009) and being associated with adoption preference (Chin, Wade and French, 2006; Golle et al., 2015; Volk, Lukjanczuk and Quinsey, 2005; Volk and Quinsey, 2002), it would be expected that photolisting sites with cuter children would have higher adoption rates if there were no confounding factors. It would also be advantageous for the

hard to adopt demographic, as decreasing the gap in cuteness would equalize a major factor in adoption preference.

This would be putting forth a Rawlsian implementation of cuteness on photolisting, where an inequality, in this case, increasing cuteness for the hard to adopt demographic, is acceptable under the condition that it is advantageous for everyone as a whole and especially the least well-off, which would be the demographic adopted at a lower rate. It would also be using cuteness in a Singerian way to attempt to increase the appeal of initial impressions of photolisted individuals and increase overall adoption rates by taking advantage of both the adoption preference and increase of the feelings of care that are created by the cuteness IRM.

2.4.2 Anonymizing defendants in court cases. The ideal of justice is epitomized in Lady Justice's blindness and scales which signify that everyone stands equal under the rule of law and has a verdict is rendered impartially based on the evidence presented. Yet, the decisions of lady justice are performed by people who are a collection of historical baggage which includes predispositions and biases. This evolutionary and cultural history creates the necessity to limit the impact of those predispositions and biases, which includes taking into account the cuteness effect.

There is evidence that an accused person's cuteness has a general effect on assessments of their innocence/guilt and also on the awards/penalties in the event that they are given (Berry and Zebrowitz-McArthur, 1988). Mock trials demonstrate how adults highly correlated to baby-schema are significantly more likely to be viewed as guilty of crimes of negligence and innocent of intentional crimes (Berry and Zebrowitz-McArthur, 1988). Further, a Zebrowitz and McDonald (1991) study looking at 506 cases from small claims court confirmed that, that identical bias exists in the legal system, finding that mature-faced defendants were found guilty

at a higher rate for intentional crimes, while babyfaced defendants were found guilty at higher rate in negligent crimes. The power of the cuteness effect on intentional crimes in small claims court was staggering, “Whereas less than half of the most baby-faced defendants lost these cases [intentional cases], almost all of the most mature-faced defendants did.” (Zebrowitz and McDonald, 1991). Facial maturity wasn’t limited to affecting judgments of wrongdoing it also affected the monetary awards of the judges. There was a noticeable trend whereas the defendant increased in facial maturity, they were forced to pay larger awards, but only to plaintiffs who were relatively baby-faced (Zebrowitz and McDonald, 1991). A partial solution to differential judgement created by the cuteness effect would be the proportional readjustment of awards based on the bias created by the facial maturity of the parties involved.

That is an unsatisfying and focused solution to a singular part of the problem though, but there is a clear way that can eliminate the bias created by cuteness and all other visual bias; make lady justice truly blind. Have the option for a trial where the accused is hidden from view from only the jury or judge depending on who is rendering the verdict in the trial. This would eliminate the possibility of visual bias and also eliminate some gamesmanship, such as dressing people in a specific way or putting eyeglasses on a defendant to make them look less dangerous (Brown, 2011). It would be an opportunity to let the arguments and evidence to speak completely for themselves.

Yet there are numerous objections to a trial where the accused isn’t ever seen by the person or persons rendering the verdict. Rather than going over all the reasonable objections to a system where the accused isn’t seen by the people/persons rendering the verdict, it is sufficient to pick out the strongest argument against such as system, as that argument is sufficient enough to

cast doubt that the justice system should be set up in a partially blinded way. The argument that a system set up in a blinded way would render the defendant dehumanized.

How important seeing the accused is can be shown by how the placement of the accused affects conviction rates and how facial features affects sentencing. In the former, mock trials, using the same evidence and actors, found that a defendant behind a dock was found guilty 46-47% of the time, whereas those same defendants when sitting next to their lawyer were only found guilty 33% of the time (Rossner, 2006). In the later Black and White inmates with more pronounced Afrocentric facial features were given harsher sentences, which led to the conclusion that there is stereotyping based on the facial features of an offender that is largely overlooked (Blair, Judd and Chapleau, 2004).

The impact of where a defendant is placed and the facial features of a defendant being relevant legal factors shows the importance of visual information in trials, but the question remains, what would the complete absence of viewing a defendant result in? Ideally, there would be mock trials to provide a foundation for that answer, but no such trials exist. The only hint of an answer comes from examining the identified victim effect, which shows that the greater degree that a victim is made known the greater support and empathy that victim receives (Erlandsson, Bjorklund and Backstrom, 2015; Kogut and Ritov, 2005). An unseen defendant would then be expected to inspire less empathy and support than an identified defendant. Still, further studies with the identified victim effect have shown if a victim is seen as responsible for the situation they are in then they are viewed more harshly than an unidentified victim (Kogut, 2011). These studies point to the result of the defendant not being seen possibly differing greatly based on the viewed responsibility of the defendant and the nature of the crime committed. The fairness of having the option to have a trial taking place where the victim isn’t seen by the

person/people rendering the verdict would then be expected to vary to a great degree and require much further research.

Yet, there are various ways in which a person may not be present at their trial. There is the option to voluntarily not be present during the trial as was ruled in *Diaz v. United States* (1912), to leave court as was ruled in *Taylor v. United States* (1973) or to be involuntarily removed from court, which happened in *Illinois v. Allen* (1970), and each of those trials lawfully proceed in trial in absentia. These cases use the application of rule 43 of the federal rules of criminal procedure where a person can voluntarily be absent and waive the right to be present so long as they are present at the start of the trial (Cornell Law School, n.d.). Given that there is an option for people to be tried in their absence under certain conditions it seems reasonable that if a person thought their appearance was going to cause a bias against them that would result in the loss of the presumption of innocence they could be tried in such a way that the person/persons rendering the verdict wouldn't be able to see the accused, but where the accused could still be present in the courtroom to be able to 'face their accusers'. Given that a person can, under multiple conditions, be absent at their trial the arguments against the option of being unseen at one's own trial seem completely inconsistent.

While that would solve problems created by visual bias in those trials, the cuteness effect would still need to be accounted for in trials where the accused is seen. It would be impossible to mitigate completely the effects of cuteness on the outcome of the trial, but a change could create greater fairness in the justice system.

That change would be using a person's facial maturity as a contributing factor in assessing the grounds for appeal depending on the nature of the crime committed. This is due to the increased likelihood that people with cute features are viewed as guilty of negligent crimes

and people with mature-faces having an increased likelihood of being seen as guilty of intentional crimes (Berry and Zebrowitz-McArthur, 1988; Zebrowitz-McArthur and Kendall-Tackett, 1989). The weighing of facial maturity should especially be taken into consideration in decisions involving appeals where a mature-faced person is found guilty of an intentional crime due to the conviction rate changing from less than half for cute individuals to where almost all mature-faced defendants were found guilty (Zebrowitz and McDonald, 1991). While it could be argued that studies show a link between personality and facial maturity, which could account partially for the change in the conviction rates, those studies would be unlikely to account for such a substantial change, as there isn't support for such a strong appearance based determination of personality (Berry and Brownlow, 1989; Little and Perrett, 2007). Further, while it would be expected that people with specific personality traits would be more likely to commit a specific type of crime, that correlation would need to be established before the personality to facial maturity correlation would have any relevance.

These differences demonstrated in the expectations and conviction rates of mature and cute faced individuals, without corresponding strength in the behavioral data of those individuals, means that there is likely a situation of over-conviction and under-conviction depending on the facial maturity of the people involved and the nature of the crime committed. Due to that, there is reason to investigate the option of a trial where the accused remains unseen from the person/people rendering the verdict to determine if such a trial could be performed in a fair way where the lack of viewing the defendant doesn't lead to the defendant's dehumanization. While there are many valid arguments against such a trial, the fact that a person has the option to be tried completely in their absence renders those objections inconsistent with current practices. Even with that option in place, the cuteness effect would still be applicable to

the judicial process in the grounds for appeal, as there is reasonable data to support the belief that there is ongoing over-conviction and under-conviction based on the type of crime commented and defendant's facial maturity. These applications of the cuteness effect to the justice system would be in line with Singer's understanding of natural inclinations and would be a way to at least partly account for errors made because of those inclinations. This would be attempting to minimize the effect of cuteness to create greater equality.

2.5 Increasing the Moral Circle

The last practical application of the cuteness effect is broader in its scope than the previous applications. The cuteness effect can be used to increase moral concern where it is already present and create moral concern where it wasn't present before. This is in accordance with the understanding of cuteness and its application to morality that was purposed by Sherman and Haidt (2011).

This application of cuteness comes from the general understanding of how cuteness has been shown to have powerful effects on moral feelings, specifically cuteness will be shown to have significant effects on moral treatment and consideration. This disparity in moral evaluation for babyfaced individuals will focus on the evidence that possessing cute features increases feelings of protection and empathy in a way that verifies that cuteness can expand the moral circle. After looking at the evidence for cuteness's effect on morality, a few instances where that effect had an impactful influence over how an event transpired can be examined.

A person with cute features is treated in a morally distinct way, an outcome similar to the effect of being identified as an in-group member. The evidence for this comes from a variety of studies with animals and infants. Cuteness affects the feelings of care towards an individual.

Glocker et al. (2009) exhibited cuteness's effect on care by demonstrating that as a baby's cuteness increases so does a person's willingness to take care of that baby. This finding could also be described in the opposite way, as it would be just as fair to say that as the cuteness of a baby decreases so does the willingness of a person to take care of that baby (Glocker, 2009). The effects of cuteness on care were also observed in a study that examined the relationship between aesthetics and individual's attitudes towards different animal species. Consistent with the findings in the Glocker et al. study, animals that were cute garnered greater feelings of support for their protection; people are much more willing to support the protection of a baby harp seal or baby cougar than the Ozark big-eared bat (Knight, 2008).

Those feelings of support and protection are further confirmed by the differential desires people have for animals with cute features and the feelings people have in how those animals would respond to those desires. This was the subject of a study by Kruger who demonstrated that there was a correlation between an animal possessing neotenous features and the desire to hold, pet and adopt that animal (Kruger, 2015). Along with neotenous features affecting personal desires, those features were also shown to have an influence over people's ratings of the appreciation that animal would have for that nurturing treatment, as animals with infantile features are viewed as appreciating being held and petted to a greater degree (Kruger, 2015). Further, there is a necessity for that care in the mind of the viewer because those animals with babyish features are seen to be less likely to be able to survive on their own (Kruger, 2015).

Accompanying the feelings of care, there is evidence that an increase in empathy is also afforded to things with cute features. This was shown in a study that was attempting to confirm that similarity was an important factor in the generation of feelings of empathy, but instead found that a child, dog, or puppy were able to create significantly more empathy than a target that was

similar to the participant (Batson et al., 2005). This lead the authors of that study to the conclusion that,

> Practically, to the extent that variation in empathy felt for strangers is a function of nurturance rather than of perceived similarity, the best strategy to increase empathic feelings is very different from the one usually recommended. Rather than highlighting commonalities with the target in an attempt to evoke protective nurturant concern. We suggest that two conditions may be necessary to evoke nurturant concern (a) the target must be perceived to have some need for care and protection, and (b) the potential empathizer must value the target's welfare... (Batson et al., 2005).

This result can be directly linked to cuteness through the study of Lehmann, Huis and Vingerhoers (2013) who correspondingly found that feelings of empathy are linked to baby-schema in animals and people. Further, the conditions seen as important for the generation of empathy by Batson et al., the need for care/protection and the valuing of the individuals welfare, are satisfied spontaneously through the possession of cute features as was shown in the studies of Parsons et al. (2013) and Knight (2008).

Beyond evoking feelings of support, protection and empathy there is evidence that infants, due to their cuteness, are automatically included in as part of the in-group. This can be seen in how people of different cultures react differently to adult faces depending on whether they are seen as in-group or out-group members, but that same difference isn't found with infants. When adult members of an in-group and out-group are viewed there are physiological differences, as well as differences in people's ratings of their willingness to interact (Esposito et al., 2014). When those same measures are used to look at the faces of infants belonging to an in-group or out-group those differences based on group identity disappear as both in-group and out-

group infant faces cause the same ratings and physiological reaction (Esposito et al., 2014). Infant faces mitigated the power of group identity and while this result may not hold in instances of hated out-groups, it does demonstrate the ability of cute features to transcend group identity.

Together this creates the understanding that entities that are high in baby-schema look like they need more help, create greater desires for protection/care and generate more empathy. That can go a long way for accounting as to why attractive infants are treated more playfully, with greater attentiveness and with greater affection (Langlois, Casey and Sawin, 1995). Along with generating nurturing feelings, things that are cute may not face the same hostilities as their appearance allows them to bypass by in-group/out-group bias. As members of the in-group they are morally relevant, which accounts for why children are almost universally forbidden as targets of harm.

When that moral effect of cuteness is used in combination with other social effects it can lead to dramatic outcomes. Take for instance the case of Mary Bale, the English woman who put a cat in a garbage bin as she walked home. The act was caught on video and while the act deserved a reaction, the reaction that took place was well out of any reasonable proportion. There were death threats, the creation of a 'Death to Mary Bale' Facebook group, and a news article was printed with the title "Is Mary Bale the most evil woman in Britain?" reactions which caused the need for Miss Bale to be put under police protection (Bell, 2010; Bloom, 2014, p. 11; Meikle, 2010).

This is an over-reaction that is consistent with the works of Batson et al. (2005) who demonstrated a link between nurturing feelings and empathy, Lehmann, Huis and Vingerhoets (2013) who displayed that same link of empathy but with baby-schema instead of nurturing feelings, and Kruger (2015) who showed that cute animals are seen to be in greater need of

protection. The strength of those empathetic feelings is further amplified by the form of the cat which Knight (2008) found to be particularity robust in the generation of feelings of support, as the baby cougar was the highest-rated, of the animals tested, in the categories of cuteness and support. While the cuteness of the cat is among numerous factors that cause this type of response, the cats aesthetics generating feelings of support/protection and the generation of empathy seem especially relevant, relevant to the point that the proportional response to someone putting a pet fish in a trash bin, an act with worse consequences, would be expectedly less.

Another case where a person's visual cuteness seemed to play a large role in how that person was viewed after committing a crime was that of Dzhokhar Tsarnaev where his cute appearance caused both doubt and sympathy surrounding his role in the bombing of the Boston Marathon (Allen, 2013; McConville, 2013; Rosin, 2013; Segran, 2015). Dzhokhar Tsarnaev and his older brother, Tamerlan Tsarnaev, are responsible for the coordinated bombing which killed 3 people and injured more than 260 others during the 2013 running of the Boston Marathon, an act which was caught on video (BBC News, 2015; Grasinger, 2015). Despite the severity of the crime committed and the amount of evidence demonstrating the guilt of Dzhokhar Tsarnaev, he received much more sympathy and his guilt was questioned to a greater degree than would have been expected. There was a '#freejahar' hashtag that trended on Twitter, presumptions of innocence, expressions of sympathy often in relation to his appearance as 'cute' and the attribution of his acts being controlled by his older brother (Breuklander, 2013; Rosin, 2013; Ross, 2013). These reactions are completely different than the response created by the arrest of Lee Boyd Malvo, who committed similar terrorist acts, who also had an older person influencing their actions, who was a similar age when the crimes were committed and who committed those crimes in the same society (Associated Press [AP], 2017; Volpp, 2014). The disparity in the

reaction to those acts would involve a multitude of factors, but cuteness stands out as having a great deal of explanatory power in the differences in the observed reaction.

Those reactions are exactly what would be expected with the cuteness effect playing a defining role. The questioning of guilt due to cute people being seen as less likely to be guilty of intentional crimes (Berry and Zebrowitz-McArthur, 1988), the increased sympathy due to an increased empathetic response (Batson et al., 2005), and the diminished expectation of being a leader or active participant due to increased judgements of submissiveness, naivety, and willingness to comply to the requests of others are all reactions associated with being cute (Berry and McArthur, 1985; Fidler and Hodapp, 1999; Zebrowitz and Montepare, 1992). This reaction is notably more pronounced with women (Rosin, 2013; The Daily Mail Reporter, 2013), which further confirms cuteness's role in creating this reaction as women have shown to have greater sensitivity to cuteness (Lehmann, Huis and Vingerhoets, 2013; Lobmaier et al., 2010; Parsons et al., 2011; Sprengelmeyer et al., 2009) and to have greater reactions in response to cuteness (Fullard and Reiling, 1976; Glocker, 2009; Hildebrandt and Fitzgerald, 1978; Volk and Quinsey, 2002). A further prediction that would provide evidence of the cute appearance of Dzhokhar Tsarnaev being the leading cause of the moral sentiment would be that after the acceptance of the evidence of his guilt that Dzhokhar would be judged more severely, consistent with the findings of Berry and Zebrowitz-McArthur (1988).

A different interpretation of the evidence, by Volpp, attempts to explain the support Dzhokhar received through the explanation that he was considered part of the 'White' in-group while his brother was seen as part of a Muslim non-white out-group (Volpp, 2014). This conclusion, while explaining the sympathetic reaction, doesn't explain what made Dzhokhar part of the in-group and Tamerlan part of the out-group. It could be posited that Dzhokhar looked

'whiter' than his brother, but there is no evidence for that explanation. The evidence instead points to the conclusion that there wouldn't be a significant difference in how White the brothers would be viewed based solely on appearance. This can be seen in two studies that determined it was appropriate to group the two brothers together in their racial appearance (Klontz and Jain, 2013; Kteily et al., 2014). It can also be seen in the media coverage surrounding the question of what race the brothers were a part of, as there were many articles written about the brothers regarding questions surrounding their race, but none suggesting that the brothers differed in race. Examining those articles in further detail the descriptions point to them being seen as looking racially similar, "They both have dark hair and are relatively light-skinned." (Izadi, 2013), "Whatever their racial status, they seem to resemble young American mass murderers more than al-Qaida members." (Walsh, 2013) and "Although neither brother matched the visual prototype of a white American, both hailed from the Caucasus, the region that gave rise to the term 'Caucasian,' and both had lived in America for many years." (Kteily and Cotterill, 2015). This isn't to argue that they would be rated exactly as white as each other if they were examined individually, just that there is no reason to believe that there would be the significant difference needed to explain such a differential level of treatment.

Additionally given the nature of the crime Dzhokhar would easily have been understood to be an 'Islamic terrorist', especially given his Islamic tweets or the message he wrote in the back of the boat in which he was captured which included remarks of, 'The U.S. Government is killing our innocent civilians', 'there is no God but Allah and that Muhammad is his messenger' and 'Fuck America' (Bever, 2015; Mcphee, Katersky and Ross, 2013). It also fails to explain the demographics of the sympathy created. There is no reason to believe that men would be less inclined to see Dzhokhar as White, while it has been shown that it is reasonable to believe that

men would see him as less cute. While it is worth noting again that a large event like this is the product of many different factors interacting, the cuteness effect appears to be especially important to account for the moral response of people to the actions of Dzhokhar Tsarnaev.

There is one other dynamic that may be postulated as being a factor in explaining the sympathy, doubt of guilt and doubt surrounding the active role played by Dzhokhar that is worth briefly addressing. While Dzhokhar is noted as being cute, he is more prominently recognized as being attractive (Essig, 2013; Podhoretz, 2013; The Daily Mail Reporter, 2013). Could Dzhokhar's attractive appearance help partly explain the elevated moral reaction? Attractiveness does well at explaining some non-moral elements of the reaction, as there has been a strong relationship established between attractiveness and attention (Langlois et al., 2000), but attractiveness is less effective at explaining the sympathy he received and the doubts about his role and guilt in the bombing.

Attractiveness is related to competence (Langlois et al., 2000), being socially skilled (Zebrowitz, Collins and Dutta, 1998) and being seen as dominant/acting as a leader (Eagly et al., 1991), which renders the ability of attractiveness to account for Dzhokhar being seen as submissively led by his brother highly problematic from an attractiveness perspective. Attractiveness is a factor that would predict reactions in direct conflict with being seen as someone being submissively led, which means other factors not only had to mitigate that effect but completely subvert it.

The argument for Dzhokhar's guilt being questioned, due to his attractiveness is slightly more plausible, but still far from being strong. A study by Castellow, Wuensch and Moore (1990) found that unattractive defendants in sexual harassment scenarios are seen more often as guilty, which is consistent with the general understanding of the attractiveness halo (Mazzella

and Feingold, 1994). That general understanding is questionable though as the general effects were small and other studies have come to the conclusion that attractiveness didn't have an effect on the determination of guilt (Purnell, 2016; Stewart, 1980). Those differential results can be explained by examining the specific type of crime committed as a study by Cannon (2012) linked attractiveness to being seen as less likely to be viewed as guilty of being a stalker but had no impact on guilt for the crimes of burglary or murder (which would be most relevant to the crimes committed by Dzhokhar). Due to the small effect or non-existent effect sizes and the finding that guilt was unaffected by attractiveness in the crime of murder, the suggestion that attractiveness can account for the widespread doubt of guilt raised by Dzhokhar isn't supported.

The last effect is sympathy which has been correlated to attractiveness (Bennett, 1997; Gunnthorsdottir, 2001; Pruitt, 2017). Yet while attractiveness can be associated with an increase in sympathy, it doesn't do so universally. The type of act committed, age of the person, and gender of the person each has been shown to have a large effect on the amount of sympathy a person receives. The type of act affecting sympathy can be seen in the effect of attractiveness on sentencing, as while there is a general trend for attractive people to receive shorter sentences, that trend doesn't hold for crimes like swindling, where the attractiveness of the perpetrator can be seen as helping the person commit the crime, or the crime of negligent homicide, where attractive people (who are judged to be more generally intelligent) inspire higher expectations and may be held to a higher standard (Mazella and Feingold, 1994). The general increase in sympathy also is affected by age, as a Fisher and Ma (2014) study found that attractive children received less sympathy, which the authors suggest is due to attractive children being seen as less in need. This wouldn't be expected to be applicable to Dzhokhar though due to his age being 19 at the time of the Boston bombing. What can be seen as contributing to receiving less sympathy

is that Dzhokhar's gender. When attractive males are viewed in pain there is less activation in the brain structures associated with empathy (anterior cingulate cortex and the anterior insula) than is observed for unattractive men or attractive females (Jankowiak-Siuda et al., 2015). Together this shows while attractiveness is associated with a general increase in sympathy, the demographic which Dzhokhar is a part of and the type of crime committed leads to the expectation that the significant increase in sympathy wasn't due to Dzhokhar's attractiveness.

With ingroup/outgroup bias and attractiveness shown to be inconsistent with the response received by Dzhokhar it further strengthens the argument that cuteness is the only explanation able to account for the specific qualities observed in the elevated moral reaction. Bloom (2013) comes to the same explanation in what he describes as an 'unsettling but correct' conclusion that it was cuteness that is responsible for the widespread empathetic response given to Dzhokhar. Unsettling in this case perhaps, but not universally so, as a general increase in the presumption of innocence and empathy towards those who have been accused of committing a crime seems like a positive outcome when viewed in more general terms. The problem is not the response itself, but the variability and proportionality of the response based on superficial features.

The empathetic reaction Dzhokhar received would fairly be described as an over-reaction based on cuteness, but it is the same emotional empathetic response that is posited as explaining the success of the anti-sealing campaign (Marland, 2014; Small 2012). Just as the cuteness of Dzhokhar led to an emotional empathetic response the iconic image of a sealer with a hakapik striking a young seal in the skull caused a similar response. This is due to the feelings of empathy, support and protection that are inspired by things that are cute. Yet, in the case of the seal, the same reaction would be viewed largely as a positive and correct response.

The cases of Mary Bale and Dzhokhar Tsarnaev are examples of how the cuteness effect can expand the moral circle and cause increased moral sensitivity. Those two examples demonstrate how the cuteness effect can also lead to immoral consequences. In the case of Bale, there is a heightened reaction to her acts against a cute animal that lead to a disproportionate level of anger towards her. In the case of Dzhokhar, his cuteness causes an irregular level of sympathy and presumption of innocence given the nature of the crime committed and the amount of evidence of his guilt. This large-scale variability in the reactions based on cuteness is surely sub-optimal and immoral, yet those heightened reactions point to the ability for cuteness to expand the moral circle, to increase moral reactions where they are present (the Bale case) or create moral reactions where they wouldn't regularly take place (the Tsarnaev case). While limiting the extremes of the cuteness effect on morality is a worthy goal, so too is selectively using those reactions to create improved moral outcomes, or as Singer would write it, "The goal of maximizing the welfare of all may be better achieved by an ethic that accepts our inclinations and harnesses them so that, taken as a whole, the system works to everyone's advantage." (Singer, 2011b, p. 157).

Those specific cases display how cuteness can account for influencing moral reactions and provide suggestion where those reactions should look to be minimized or maximized situationally, as the ideal of innocent until proven guilty is best endorsed through the maximization of cuteness, while the threat of death and possibility of harm caused by over-reactions to the injury to cute things should be minimized.

Yet, those two cases provide situational answers and Singer is concerned with extending morally in a way that is more grandiose. There is at least one way where cuteness may be especially effective in expanding the moral circle in a way that is consistent with the large-scale

empathic change that is Singer's goal; label food products with pictures in a way that is not dissimilar to current practices with the labeling of cigarettes. This would be an attempt to work towards satisfying Singer's goal of extending equality to other species, which is based on the equal consideration of interests in which it follows, "…that we ought to become vegetarian." (Singer, 1979) This is especially important given the ubiquity of factory farm conditions where, to Singer, there is such negative surroundings and treatment that the animals' lives are more of a burden than a benefit, making the practice indefensible from the utilitarian point of view Singer supports (Singer, 1979; Singer, 2016).

While all things with interests should have their interests weighted equally, there is a line of delineation for Singer between things that are self-conscious and those that are not. This is due to the death of a thing possessing self-consciousness also bringing to an end their long-term goals, which adds to the severity of the death, although his arguments supporting the link between self-consciousness and the ending of future goals being morally relevant has the dangerous quality of being intuitively correct, but philosophically unconvincing (Singer, 1979). That 'thwarting long-term desires' is sufficient to equating that something has greater moral relevance seems like a non-sequitur and while it is agreeable that an increased capacity for understanding would lead to the availability of more complex types of enjoyment, the end sum of that enjoyment may not be different and there seems to be no way to weigh such things with any degree of certainty.

Despite that, the equal consideration of interests does show that there is a reason to support vegetarianism. Further, the argument that the majority of meat consumed is created in a process in which the interests of the animal are of minimal value makes it reasonable to ask the question, does the amount of suffering endured by the majority of animals raised for

consumption make the life that they endure worth living? It is also harder to defend current practices in light of the number of dietary options available which don't lead to ethical questions like the one posed in the previous sentence. For those reasons, it is sensible to attempt to expand the moral circle to increase the moral consideration given to animals killed for consumption and this could be effectively achieved through combining labeling for meat products and cuteness.

The presumed effectiveness in the labeling of meat products with pictures of cute animals being seen as lessening the appeal of those products is evidenced in multiple ways, but perhaps the strongest indicator comes from advertising. Cuteness has the ability to garner and increase intention. People are more interested in and relate more to animals that are seen as cute (Gazzano et al., 2013). This is why people are more likely to stop and talk to someone who is walking a puppy than an older dog (Gazzano et al., 2013).

This is part of the social effect of cuteness and it is corroborated by other studies involving animals. That social effect can be seen in who people would rather give a playful gift to, as when people are given the choice to give a toy to a cute dog or a non-cute dog, it is the cute dog that people prefer to give the toy (Golle et al., 2015). It can also be seen in how a dog's cuteness is directly related to the amount of interaction received. When the cuteness of a dog increases there is an analogous increase in the amount of interaction received by the dog's handler and the dog itself (Gazzano, et al., 2013). This increase in interaction can be taken advantage of by way of gaining attention for activities unrelated to the cute subject. When asking people to fill out a questionnaire having a puppy nearby increased the response rate by 42% and the use of a picture of a male infant nearly doubled the response rate (Bellfield et al., 2011).

With this demonstrated increase in the ability to garner attention and how easily that attention can be transferred it's not surprising that cute animals play an important role in

advertising. They appear representing many products aiding in providing attention, identification, promotional continuity and the transfer of meaning to a product (Phillips, 1996). Baby animals are especially prevalent, taking part in many of the largest ad campaigns and promoting many of the largest brands (Horovitz, 2015).

What is also telling is where baby animals are not used as an endorsement. In advertisements for meat, baby animals are conspicuously absent, as they make up 0.5% of animals depicted in the marketing of meat (Grauerholz, 2007). This is consistent with the finding that people are disgusted by the thought of eating animals high in cuteness (Ruby and Heine, 2012). Further, the amount of support afforded to things that are cute and the increased feelings of protection associated with cute features demonstrate a relationship that is inconsistent with being a food product (Alley, 1983b; Knight, 2008).

The effectiveness of labeling meat products with baby images of the animal is also supported by the argument that ‘animals’ and ‘meats’ are concepts purposely made to seem distinct and unrelated to each other (Grauerholz, 2007). That separation is created in a process where meats prior existence as being part of an animal is minimized through being transformed to be unrecognizable and through the use of a different language (i.e. beef instead of cow) that further disassociates the end product with its former existence (Buscemi, 2014; Grauerholz, 2007). Labeling meat with pictures of the baby animal would make it harder to ignore the association of meat to an animal that had its own interests.

Together this shows that while it is perfectly acceptable for a piglet to hock cellular phones, that same isn’t true for pork hocks. This is due to baby animals creating an association in the advertising for food products that companies would like to avoid. The labeling of a pork product with a picture of piglet would increase disgust at the thought of eating the product,

inspire feelings of protection/support which would be negatively associated with being a product for consumption and would moderately break down the separation created between meat products and the animals that those products come from. This would not be anticipated to lead to widespread changes in dietary preferences, but it would be thought to have a measurable effect on the amount of meat consumed. Perhaps, more importantly though, it would start a conversation about the ethics of meat consumption, and cause the animal from which the meat was taken to be morally considered at least briefly. It would be a starting point for creating the widespread moral consideration for animals raised for consumption, which would match Singer's overall goal of attempting to both grant animals moral consideration and to raise animals from their place as second-class moral citizens (Singer, 2016).

3. Conclusion

3.1 Cuteness and Morality

This essay had the goals of defining cuteness and using that definition of cuteness to examine the effect that cuteness had in relation to Singer's expanding circle theory of morality. It was shown that cuteness has a direct effect on the judgements and treatment of children, adults and animals. The cuteness effect created increased moral reactions and situations of unjustified inequality. Those effects created opportunities where cuteness could be taken advantage of or mitigated, situationally, to increase ethical outcomes within the framework of Singer's morality. Those moral opportunities were shown in how adoption photolisting websites could be reformed in a way that would be expected to increase adoption rates, how the justice system could decrease visual bias and the false conviction rate and how cuteness can be used to increase moral concern in a general way. Further, consistent with Singer's broader ethical goals, the labeling of meat with cute images was advocated as a way to extend moral consideration.

Those goals were accomplished by creating a purposefully narrowed definition of cuteness that was limited to baby-schema. This was necessary due to the studies involving cuteness and the treatment of children, adults and animals being nearly ubiquitous in their use of baby-schema related cuteness in their testing, as well as the field of non-baby schema related cuteness being limited to exploratory studies which prevented the ability to draw foundational conclusions. Despite using a narrow definition, that definition worked at a practical level to explain cuteness's existence as an IRM that causes immediate reactions and differential treatment/judgement. That bias in treatment and judgement was found with a remarkable consistency, which was evidenced by the uniformity in results despite studies varying the age of the participants, the age of the individuals being judged, the culture those people were from and

the species or object which those features were placed on. Further, those judgements were linked together by MRI and EEG studies that demonstrated that baby-schema created brain function independent of other facial qualities. The cuteness effects proposed by Lorenz and Sherman/Haidt of nurturing and social behavior were looked at and it was concluded that there was evidence for a large social effect with elements of nurturing behavior. Cuteness was then defined as the recognition of baby-schema which induces an IRM of an increased social and nurturing response.

Two problems were also addressed, one, in an outlying effect where the reaction to baby-schema was inconsistent with the field of research on cuteness and, two, the error of conflation between cuteness and attractiveness. In the first adult black males that are high in baby-schema were treated differently than other babyfaced groups but no explanation beyond speculation could be made without future research. In the second, reasons were given for supporting the independence of cuteness and attractiveness. The evidence for that independence came from how easily separable cuteness was from attractiveness, how brain function differs when viewing cute and attractive stimuli and in how the attractiveness halo effect and the cuteness overgeneralization effect caused independent, non-overlapping and, often, oppositional effects.

Cuteness is seen as an important phenomenon in relation to Singer's ethical philosophy by multiple psychologists who noted the obvious fit between cuteness and the expanding moral sphere, due to the mentalization caused by baby-schema that corresponds with promoting moral relevance. To that end, this essay used the definition of cuteness created in the introduction to examine its relevance to Singer's ethics and the existence of moral spheres.

Singer's ethics was shown to exist as a response to Wilson's sociobiology, and while Singer disagreed with the subjectivist ethical conclusions drawn by Wilson there was agreement

about the evidence for the biological background of human morality. Due to this acceptance of the biological foundations of morality, the system of ethics created by Singer expounds the virtue of working symbiotically with natural inclinations to create moral outcomes that are more probable to be successful. Those inclinations can be taken advantage of in a 'Singerian' way when they are consistent with the two universal criteria for a decision being ethical, the decision being looked at from a rational disinterested point of view and that all those with interests have their interests weighed equally.

The next task was examining the theory of moral circles to see if such a system was compatible with the reality of moral consideration. To determine if moral circles existed in the way Singer concluded in-group and out-group bias was examined and it was determined that extreme out-groups show evidence for there being a complete lack of moral concern, which is consistent with being outside of the moral circle.

With the evidence for the existence of moral circles, it was then possible to combine Singer's ethical theories with the demonstrated effects of cuteness to show how taking advantage of the natural inclinations created by cuteness could be harnessed to create moral outcomes. The first instance looked at was the adjustment of photolisting websites to take advantage of cuteness's effect on adoption preference. Reasons were given for supporting a paradigm shift in the determination of which photo an adoption photolisting website should choose to present to potential adopters. Due to the similarity between the methodology in cuteness studies on adoption and the process used by photolisting websites, there is an opportunity to take advantage of the findings of those studies, to put emphasis on the cuteness of photographs to increase adoption rates. This would be especially relevant as a measure to potentially increase the adoption rate for individuals within the demographics that adopted less often.

In the second instance, it was detailed how a preferable moral outcome could be created by taking cuteness into account. By understanding cuteness's effect, it was shown that it was reasonable to support an option for people to be tried in a way in which they were present but unseen by the people/person rendering the verdict in a trial. This would eliminate visual bias, including the bias created by baby-schema, yet due to the unlikelihood of such a practice being put in place, a second recommendation was made. A person's facial maturity should be a relevant factor in granting appeals, as the evidence based on studies with cuteness points to there being an over-conviction rate for babyfaced individuals in the case of negligent crimes and a similar over-conviction rate for people with mature faces in intentional crimes.

After looking at those two specific topics, two specific events showed the ability for cuteness to account for moral response in a public reaction. In the case of Mary Bale, the target of her actions caused a reaction out of proportion with what would be expected. This was the cuteness effect being an influence to help to cause a moral over-reaction. Similarly, Dzhokhar Tsarnaev, due to his appearance, created an outpouring of feelings surrounding the questioning of his guilt and the degree in which he was coerced into the act of bombing the Boston Marathon by his older brother. There was evidence that cuteness should be looked at as being the cause of those outcomes, as well as, being the cause of the demographics involved in that response. This again was another over-reaction, as equivalent crimes were committed by Lee Boyd Malvo under similar circumstances, yet there wasn't the sympathetic response afforded to Dzhokhar. This difference in reaction in correspondence to baby-schema was shown in numerous studies and the expected results in the two situations of moral over-reaction were consistent with what would be expected if the results from the studies on cuteness were extrapolated onto real events.

Finally, Singer's goal of creating increased moral concern for animals was attempted to be furthered through the use of cuteness. By taking advantage of the moralization created by cute images the labeling of food products with pictures of cute animals would lead to the increased possibility that choosing to buy meat would no longer be looked at as a morally irrelevant choice, and further, it would also help dispel the dissociation between meat products and animals.

Together this demonstrates that the understanding of cuteness and its effects can be used in specific situations, such as within specific parts of adoption and the legal system to take advantage or mitigate people's natural inclinations and create preferable moral outcomes. It can also help account for differing moral reactions on a large-scale, which should lead to the anticipation of reactions and the ability to minimize/maximize those reactions depending on the intended goals. In the case of Mary Bale, or a similar situation, there wouldn't be the need to wait until there was a tangible threat of violence or retribution for the police to be notified that there is a need for the protection of a person, as the act itself would be sufficient reason for expecting that there would be such a need.

Cuteness modifies moral reaction and expectation, as things high in baby-schema inspire greater feelings of protection/support (Alley, 1983b; Knight, 2008), a greater willingness to be cared for (Glocker et al., 2009; Knight, 2008), are treated with more precise care (Nittono et al., 2012; Sherman et al., 2013), receive more help (Keating et al., 2003), are seen being less intentionally harmful (Berry and Zebrowitz-McArthur, 1988; Zebrowitz-McArthur and Kendall-Tackett, 1989), cause disgust at the thought of being eaten (Ruby and Heine, 2012), are less likely to be abused (Klein and Stern, 1971; McCabe, 1984) and further cuteness causes a significant bias that is almost completely unnoticed but is as pervasive as other similar biases in

that cute people are seen as better suited for jobs requiring submissiveness and warmth (which end up being lower status jobs) (Collins and Zebrowitz, 1995; Zebrowitz, Tenenbaum and Goldstein, 1991), are less likely to be chosen as leaders in times of turmoil (Little et al., 2007; Spisak, 2012), have less short term and long-term military success (Mazur, Mazur and Keating, 1984; Mueller and Mazur, 1996), are more likely to be adopted (Golle et al., 2015; Volk, Lukjanczuk and Quinsey, 2005; Volk and Quinsey, 2002), viewed to be more likely to make negligent mistakes (Berry and Zebrowitz-McArthur, 1988) and are seen as less capable as children (Ritter, Casey and Langlois, 1991; Zebrowitz, Kendall-Tackett and Fafel, 1991).

The greater the depth of the understanding of people's natural reactions, of which the response to cuteness is one, the further that understanding can be used to increase moral outcomes. While ethical feelings are not singularly a product of evolution, as culture modifies ethical feelings to varying degrees, knowing the biological background of ethical feelings will allow for the potential to tailor policies to work with those predispositions, rather than against them, when possible. This tailoring is required to take place within a larger ethical framework not grounded in ethical feelings, as there is reason to doubt that those ethical feelings correspond to ethical truth. Knowledge of human biological history can start to account and correct for those types of errors, but those errors must first be discovered and recognized as such.

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