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# Coping With Dissonance: Psychological Mechanisms That Enable Ambivalent Attitudes Toward Animals

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COPING WITH DISSONANCE: PSYCHOLOGICAL MECHANISMS THAT  
ENABLE AMBIVALENT ATTITUDES TOWARD ANIMALS

by

Sophie Veilleux

A Thesis Submitted in Partial Fulfillment  
of the Requirements for a Degree with Honors  
(Psychology)

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## Abstract

People generally tend to love and show care for animals. Yet they also purchase and consume animal products that are produced in a way that causes animals great suffering. This critical literature review focuses on the psychological mechanisms that ease or eliminate cognitive tensions associated with the recognition of one's contribution to animal suffering. The major mechanisms discussed are cognitive dissonance, psychic numbing, denial of mind, and linguistic objectification. Psychosocial factors are also discussed, including physical invisibility of animal cruelty, improper socialization about farm animals, and group biases. Recent studies specifically focused on human attitudes toward animals and their suffering are supplemented by attention to broader coping mechanisms associated with the large-scale suffering of others. The results of the research discussed in this review suggest that cognitive dissonance is the cause of unpleasant guilt associated with animal suffering and is thus a crucial motivating factor for behavioral or attitudinal change. Since most Americans do not cease consumption of animal products, attitudinal changes are presented as the preferred route to dissonance reduction. The mechanism of psychic numbing may aid in dulling the negative affect associated with mass suffering. Denial of mind to animals may ease tension by devaluing their suffering, which is likely also a result of linguistic objectification. Social factors are suggested as aiding these mechanisms. Overall these findings suggest that ending animal cruelty will involve significant psychological and social adjustments in the way we think about and address animals.

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## Table of Contents

Introduction.....	1
Cognitive Dissonance.....	5
Psychic Numbing.....	16
Denial of Mind.....	23
Speciesism as a Form of Discrimination.....	34
Conclusion.....	53
References.....	59
Author's Biography.....	68

## List of Graphs, Scatterplots and Photographs

Graph 1: Mean Agreement Ratings Based on Commitment Measure.....	10
Scatterplot 1: Mind and Edibility Ratings.....	27
Photograph 1: <i>Real California Milk</i> Advertising Campaign.....	39
Photograph 2: PETA's Real California Cruelty Campaign.....	40

## Introduction

Over ten billion farm animals are slaughtered for food each year in America alone (“Farm Animal Statistics,” 2013; Joy, 2010; Imhoff, 2010). Of those killed, the vast majority is made to suffer a life of imprisonment and misery at the hands of concentrated animal feeding operations (CAFO’s)(Imhoff, 2010). These animals will spend most of their lives cooped up in barren sheds with thousands of other animals, often suffering skin and respiratory infections from the unfathomable amounts of waste they lie in and the lack of ventilation within the structures. Unless they are among the very few who are raised in more humane conditions or farms, animals raised for food in this country will undoubtedly experience excessive and unnecessary suffering (Mason & Finelli, 2006; Plous, 2003; Singer, 1975/2002). Chickens used for meat (broilers) frequently experience broken and disfigured legs because their bodies have been artificially engineered to be larger than natural. Laying hens are so tightly packed in cages they are unable to stretch their wings or move around properly, and most of those who are deemed “free range” are still not able to go outside or exhibit many of their natural behaviors. Pigs, incredibly smart and affectionate creatures, become so hostile from overcrowding and captivity they often become cannibalistic. Their tails are snipped off without anesthetic to prevent chewing. Dairy cows are repeatedly inseminated with no contact from a bull, and may suffer inflamed and infected udders from over production. The mother and calf will be separated prematurely, which causes significant distress to both parties. If the calf is male it is likely it will be killed very young to produce veal. These are just a handful of the common practices of the modern American CAFO (Imhoff, 2010). Furthermore, abuse and mistreatment of the animals by factory workers is a common side effect of living and

working in these conditions (Foer, 2009). The average American consumes 270.7 pounds of meat per year, which is more than any other nation in the world apart from Luxembourg (Barclay, 2012). They also consume over 33 pounds of eggs, 31 pounds of cheese, and 600 pounds of non-cheese dairy products per year (Bryan, 2012). With such a high demand for animal products, it is frightening to think about how much longer animals will be made to endure these conditions.

Although Americans fund these practices by purchasing animal products, the treatment of animals on factory farms does not reflect an intrinsic dislike of animals. What is bewildering about the prevalence of farm animal cruelty in this country is that it contrasts shockingly with the prominent cultural values we have for loving animals. Our devotion to them is evident in so much that we do and enjoy. The majority of us own them as pets (62% to be exact) (“Pets by the Numbers,” 2014), and many pets are treated as members of the family. Animals fill our children’s books, television programs, photographs and artwork. Their pictures adorn our decor, clothing, and sometimes even our skin. We take great pleasure in seeing them outside in their natural habitats, and in observing them through television programs like *Planet Earth*. The majority of Americans believe animals should receive at least *some* protection from suffering and exploitation (Lusk, Norwood & Prickett, 2007; Moore, 2003). At the same time we also value our culinary traditions, which are meat-centric, highly cherished, and deeply ingrained in our history (Fiddes, 1991).

How is it possible for such stark contrasts to co-exist? Americans have a simultaneous passion for loving and eating animals, and somehow most of them seem to be just fine with that. Moralizing judgment aside, it’s just downright perplexing! With



such a highly evolved capacity for moral thought and such a wide breadth of knowledge about the ability of animals to possess emotions, intelligence, and cognitions (Roff, 2012; Savage-Rumbaugh et al., 1993) how is it possible that we so shamelessly exploit them? It is a “meat paradox” (Lombrozo, 2013, p.1; Loughnan, Bratanova, & Puvia, n.d, p.1) that has baffled animal rights activists for decades, and it would seem academic researchers are beginning to take an interest. The current literature on this subject proposes that these opposing yet co-occurring attitudes have potential to create significant psychological tension when both are made salient to the person possessing them (Bastien et al., 2012; Prunty & Apple, 2013). Although ceasing or reducing the consumption of animal products would be an effective way to ease this tension, cultural and traditional preferences make the idea of such an adjustment seem intimidating or unlikely to most. Considering that only .8% of Americans are vegan (consuming *no* animal products) (Herzog, 2011), it is clear that many people are making cognitive adjustments to cease or at least ease the mental disharmony associated with the consumption of animal products.

Empirical evidence is beginning to show that there are a variety of psychological mechanisms at work that seek to defend the mind from dissonant thoughts regarding animal suffering and its key involvement in our everyday lives (Bastien et al., 2012; Plous, 2003; Prunty & Apple, 2013). Naming and understanding these mechanisms, such as what summons them and allows them to perpetuate, will provide the animal rights movement with a stronger foundation to support the campaign against animal cruelty. Although there has been much philosophical debate to support a logical argument against the cruel exploitive practices of modern animal-rearing systems (Regan, 1983/2004; Singer, 1975/2002), the inability of this movement to gain significant popularity

(compared to that of women's and gay rights for example) shows that its premise is either valued less, being conveyed improperly, or up against a much stronger set of biases.

Though these issues may in fact be less concerning to most than those of the aforementioned movements, there is no doubt that the animal rights movement could benefit significantly from greater empirical support. Understanding and popularizing the mechanisms at work when we ignore or distort the problem of animal suffering will make such mechanisms more salient, and thus perhaps less effective. Ultimately what this work is seeking to convey is that improving animal welfare and abolishing at least the most heinous forms of animal cruelty is going to involve a significant reformation of the way we view animals and their suffering.

This thesis will review and synthesize a portion of the psychological literature related to this topic. Some of the mechanisms that will be discussed have been shown empirically to relate directly to our attitudes toward animals; others do not have such a direct connection, but are proposed and presented as also being applicable. In other words, psychological mechanisms that have been linked to inter-human prejudice and lack of affect toward human suffering may prove to also explain many of our paradoxical behaviors toward animals. It will begin with a discussion of the motivating capabilities of cognitive dissonance, and its empirically supported contribution to the lack of affect surrounding farm animal suffering. Then it will provide several examples of psychological and psychosocial mechanisms that shelter humans from dissonant thoughts about their role in the perpetuation of animal cruelty. Finally there will be a conclusion to discuss potential biases and significance of the thesis, as well as future directions for research.

## **Cognitive Dissonance**

Cognitive dissonance is a state of excessive mental discomfort that results from the co-occurrence of disharmonious thoughts, beliefs or values. One of the ways it can occur is when an individual's belief that a behavior is negative simultaneously conflicts with the person's enjoyment of that behavior (i.e. smoking cigarettes) (Harmon-Jones & Mills, 1999). Leon Festinger first proposed Cognitive Dissonance Theory in the late 1950's. He believed that the discomfort associated with this mental disharmony was capable of motivating a behavioral or attitudinal adjustment in an attempt to resolve the negative arousal (Prunty & Apple, 2013). Some psychologists have proposed that this conflict arises when people confront information regarding the violent and graphic origins of their animal-based food products (Bastian et al., 2012; Joy, 2010; Prunty & Apple, 2013). It is clear that many people have conflicting attitudes toward animals. For example, Braithwaite and Braithwaite (1982) surveyed the public on their opinions regarding animals and farm animal cruelty. Despite the fact that 90% of people disagreed with "inhumane slaughter practices," only 41% expressed disapproval for eating meat that was obtained through such practices. With the exception of strict vegans, most people partake in behavior that contributes to the continuation of animal cruelty in one form or another, often without even realizing it. Animal products are found in a surprisingly large array of items. For example while most of us are probably aware that cookies, ice cream, and chips contain dairy products, many would probably be surprised to hear that animal products are used in the brewing of certain beers and in a variety of perfumes (Sterbenz, 2014). Despite the prevalence of animal products in our everyday lives, it can be surprisingly easy to create mental distance from the idea that our

consumptive practices are contributing to animal suffering (Prunty & Apple, 2013). However, there are inevitably going to be times when this information is made salient. This might be the result of a discussion, an informative film or flyer, or perhaps just a piece of meat that still resembles its animal form (Plous, 2003). Although it may not be a universal trait, most people consider themselves compassionate toward animals to some extent. Thus many are going to feel dissonance when confronted with information that their behavior is contributing to the violent practices of industrial animal farming (Joy, 2010; Prunty & Apple, 2013).

Dissonance can be alleviated in a variety of ways. Based on Festinger's theory, when faced with cognitive disharmony the options are to remove or devalue the cognition that is dissonant, or add to/accentuate the cognitions that are consonant (Harmon-Jones & Mills, 1999). These options can include behavioral adjustments, which are still represented as cognitions in the above formula because behavioral adjustments ultimately result in cognitions. What Festinger and others found was that the path of least resistance is usually seen as most preferable (Prunty & Apple, 2013). Because culinary traditions are so deeply ingrained and valued (Fiddes, 1993; Foer, 2009), for many the path of least resistance may not be a behavioral adjustment. Considering only 3.2 % of Americans are vegetarians ("Vegetarianism In America," 2014) (and that term is often used quite loosely), and supposing that most Americans *don't* live in a constant state of uncomfortable mental disharmony, it is arguable that the majority are engaging in some form of cognitive adjustment to feel more comfortable about their consumer practices. Based on the various relief strategies proposed by Harmon-Jones and Mills (1999), if dissonance does result when our ambivalent attitudes and behavioral practices in regards

to animals are made salient, the variety of cognitive relief strategies could potentially be quite plentiful.

The effects of cognitive dissonance on peoples' attitudes toward animals have been displayed in research. For example, Loughnan, Haslam, and Bastian (2010) asked meat-eating university students to consume either beef jerky or cashews, randomly assigning half of the subjects to each category. Subsequently the subjects engaged in what was thought to be an unrelated task, indicating which animals they felt morally obligated to show concern for. Their hypothesis was that those who ate the beef jerky would be forced to confront what the researchers coined the "meat vs. morals paradox", which would in turn result in greater cognitive dissonance compared to those who had eaten the cashews. They predicted this dissonance would lead to greater denial of moral status to non-human animals, which in fact it did. Those who ate the beef identified significantly fewer of the 27 animals worthy of moral concern ( $m=13.5$ ) compared to those who ate the cashews ( $m=17.3$ ) (Loughnan et al., 2010; Lombrozo, 2013). This study is an example of seeking relief through devaluing a dissonant cognition. The opinions regarding the moral status of animals expressed by those who didn't eat the jerky shows the general (non-dissonant) opinion regarding the moral worth of animals. Because those who consumed the jerky arrived at a significantly different opinion, it can be suggested that they removed (or at least significantly devalued) the dissonant cognition by concluding that fewer animals are morally significant.

Cognitive dissonance can be a very powerful motivator because it urges people to remain consistent. Robert Cialdini (2001/2009) discusses this in his book *Influence: Science and Practice*. He explains how the innate desire most humans have to remain

consistent in regards to their prior commitments can be used in a manipulative sales technique. Specifically, once an individual has made a commitment it is likely they will do what they can to remain consistent with it. This could be explained by the fact that consistency is a valued human trait, as it reflects dependable and reliable characteristics. Yet this tendency can be also be a downfall. Cialdini provides an example of this by revealing a sneaky technique used by toy companies to avoid plunging sales after the holidays. After several months of advertising the most up and coming toys of the holiday season, large toy manufacturers specifically under stock said products in their stores. This is because they *know* parents have promised their children these toys and will feel obligated to follow-up on that promise, out of a desire to remain consistent. Kids have to have presents under the tree, so parents will purchase *other* toys to be opened on Christmas morning, then go *back* and buy the promised item when the holidays end and the item is re-stocked (Cialdini, 2001). Clearly there is power in understanding the human desire to remain consistent.

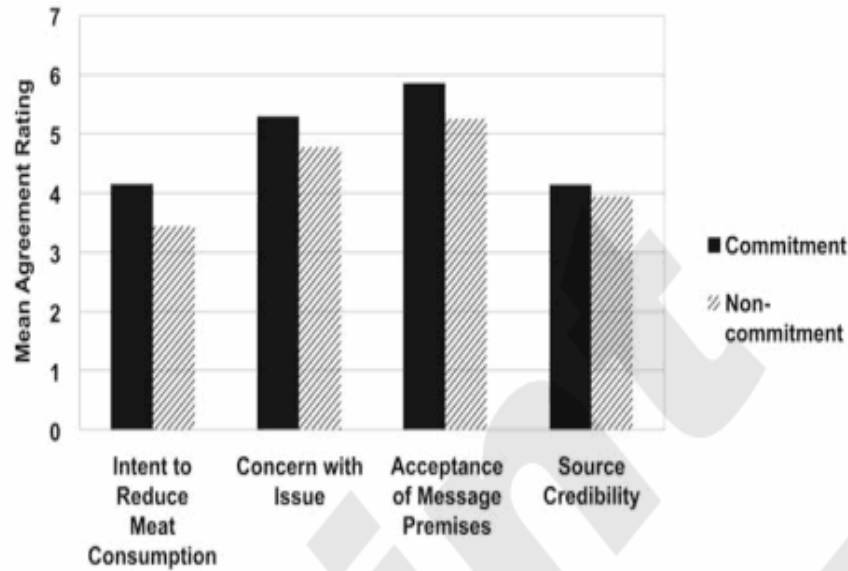
With this desire in mind, Jared Prunty and Kevin Apple (2013) examined the effects of commitment and cognitive dissonance in their study *Painfully Aware: The Effects of Dissonance on Attitudes Toward Factory Farming*. They wanted to see if voluntary commitment to a statement condemning inhumane methods of meat production would increase receptivity to an anti-factory farming message. As Cialdini's example demonstrates, commitments can have a powerful impact on people's future behavior. Thus the researchers hypothesized that participation in the commitment condition would cause those subjects to feel more motivated to adopt attitudes, beliefs, and behaviors that reflected an opposition to factory farming than those in the control group. The subject

pool consisted of 28 females and 34 males, all omnivores. Subjects placed in the commitment condition completed a survey item prior to the rest of the study, where they were asked to indicate whether they agreed or disagreed with the following statement: “Animals should not be made to suffer needlessly in the production of meat” (Prunty & Apple, 2013, p. 6). This material was kept in front of the subject in large bold print for the duration of the study. Subjects in both conditions then received an educational intervention, which consisted of a booklet that was published and distributed worldwide by the animal advocacy group *Vegan Outreach* in 2007. The authors described this material as graphically depicting the following:

...prevalent methods employed in the industrial raising and slaughtering of farm animals, and documents their accompanying living and dying conditions according to recognized industry standards. Empirical claims made in the booklet are supported with footnotes, most of which either cite academic sources or refer to data provided by the USDA (p. 7).

After reading this material, subjects in both groups participated in a follow-up questionnaire (Prunty & Apple, 2013).

The researchers hypothesized that participants in the commitment condition would have a higher mean agreement rating towards messages conveying “intention to reduce meat consumption,” “concern with the issue,” “acceptance of message premise”, and “source credibility” (Prunty & Apple, 2013, p. 8). All but the latter were confirmed with significant results, which are displayed in Graph 1.



**Graph 1: Mean Agreement Ratings Based on Commitment Measure.**

(Prunty & Apple, 2013, p. 8)

By agreeing with the original statement, participants in the experimental group voluntarily committed to the stance that they implicitly endorse the viewpoint that animals should not be made to suffer needlessly in food production. The results shown above indicate that the initial commitment influenced the experimental groups' opinions regarding farm animal suffering and intention to make behavioral adjustments.

Dissonance throughout this study would thus result in the experimental group from the following cognitions: "I believe farm animals should not needlessly suffer in the production of meat," "Farm animals suffer needlessly in meat production," and "I contribute to farm animal suffering by eating meat" (Prunty & Apple, 2013). As a result of the dissonance experienced in the experimental condition, subjects sought to adopt a stance regarding farm animal welfare that better reflected their initial commitment to being concerned with the issue, creating a more harmonious sense of internal consistency.



The results of this study show that cognitive dissonance is capable of motivating attitudinal adjustments regarding animal abuse, yet the limitations of the research paradigm allowed for only narrow observation of attitudinal change. Outside of a research setting, cognitive dissonance could potentially lead to a variety of behavioral and cognitive outcomes, the latter of which will shortly be discussed in greater detail. Since the focus of this paper is the psychological maintenance of ambivalent attitudes toward animals, there will be little discussion of attitudes that are *not* so ambivalent, such as an adherence to a vegetarian/vegan lifestyle. Yet it is important to note that this is a reaction to animal cruelty that is gaining popularity in America. The aforementioned 2008 poll published in *Vegetarian Times* found that although only three percent of Americans follow a vegetarian-based diet, ten percent (22.8 million people) say they follow a vegetarian-inclined diet (“Vegetarianism In America,” 2014). Therefore although many people might find a vegan lifestyle too intimidating, they may be seeking and finding a reduction of dissonance simply by making the effort to cut back on animal products.

The results of this study could provide a foundation for future research intending to aid the animal rights movement. Gaining an understanding of how dissonant thoughts about animal suffering can arise and how people cope with them is the first step to creating an impetus for behavioral and social change. If cognitive dissonance is a common factor associated with information on animal suffering, the first step activists should take is to make such information more prevalent. An understanding of the psychological coping mechanisms that follow will then allow activists to combat those

mechanisms by understanding ways that could render them less effective, in turn making behavioral adjustments seem more appealing.

What is also important to note about this study is that it examines attitudes following an involved dissonance induction. Despite the severity and prevalence of animal suffering, it is surprisingly easy to avoid confrontation with this information if one so desires (Joy, 2010; Plous, 2003). Thus the applicability of this study to larger samples is difficult because many people may never receive any elaborated information on animal suffering. This is made possible in part by the efforts of corporate animal farming operations to remain invisible to the outside world.

### ***Invisibility***

In his article *Psychological Mechanisms in the Human Use of Animals*, Scott Plous (1993) stated one of the easiest and most efficient ways dissonances could be avoided is by distancing one's self from information that could conflict with pre-existing cognitions. When information on an uncomfortable subject is not particularly widespread or pressing, it can be easier and thus preferable (at least from the point of view of Festinger's theory) to simply choose not to think about it. Paul McCartney famously quoted that "If slaughterhouses had glass walls we'd all be vegetarians" (Joy, 2010, p. 71). The less the public knows about farm animal suffering the more its existence can be denied, and the less regulatory hassle corporate farms have to go through as they pump out animal products. In her book *Why We Love Dogs, Eat Pigs and Wear Cows*, Melanie Joy (2010) discusses some of the key aspects of animal production that enable psychological barriers toward the issue to be so effective. According to her and others,

invisibility and secrecy of the practice is crucial in enabling avoidance of these issues (Plous, 2003; Sunstein & Nussbaum, 2004). With a slaughter rate of ten billion animals per year (not including the estimated ten billion fish and other sea animals slaughtered each year), U.S. agribusiness kills over 19,000 animals per minute, or 317 animals per second (Joy, 2010). Despite such enormous production levels, most of this business is a well-kept secret, partially due to its remote locations and the conditions of intensive confinement that the animals are raised and slaughtered in. The fact that these operations are highly concentrated, and usually deny entrance to outsiders, keeps them heavily shielded from the public eye (Imhoff, 2010). Though the public may prefer it that way, the operations themselves also have a lot of incentive to keep their business private.

The U.S. meat and poultry industry contributes 832 billion dollars annually to the economy (5.8% of our GDP), and a handful of big companies are controlling that market. For example: in the beef packing industry, 4 companies control 83.5 % of the market (Joy, 2010). This is an incredibly profitable business, fueling a lot of economic motivation on behalf of these companies to avoid any major legal or social action that might hinder their practices. Lack of media coverage further aids their ability to remain enigmatic, with little information on the suffering of farm animals ever making headlines (Foer, 2009; Sunstein & Nussbaum, 2004). Part of the reason for this is because it is illegal to take photographs in many of these operations; consequently a lot of investigations have to be done undercover. Several of the major animal farming states, such as Utah and Idaho, have enacted what is being called “Ag Gag Laws,” or anti-whistle blower laws, which seek to criminalize those who publically discuss the farm’s procedures (“Anti-Whistleblower Bills Hide Factory-Farming Abuses from the Public,”

2014). Yet occasionally undercover exposes do make the news, such as the recent footage released by The Humane Society of the United States revealing dead piglets being gutted and fed to the sows to immunize them against a deadly diarrhea virus (“Undercover Exposé,” 2014). The few instances where this has happened have led to food recalls, such as the incident that occurred in 2008 when the largest beef recall in history took place. This was due to the large controversy sparked by undercover footage released by the Humane Society, which filmed workers dragging and pulling cows to the slaughterhouse by forklift because they could no longer stand. One hundred and forty three million pounds of beef were recalled in total, though most of it had already been consumed, primarily in the form of school lunches (Martin, 2008). Instances of public outrage leading to government intervention such as this make it clear that it is beneficial for these industries to keep their practices invisible. It is also preferential for the consumer, because such disturbing information can make a continuation of highly cherished eating habits significantly more laborious. As Prunty and Apple (2013) point out, many people don’t want to hear about animal abuse because nobody wants to accept that it’s happening. Therefore both parties are enthusiastically perpetuating the invisibility of the system. Yet incidents such as that of the beef recall show that Americans *can* feel driven enough to take social action, at least when animal cruelty is popularized and presented to them in a way that inspires passion and a desire for change. Relating such incidents back to the discussion of cognitive dissonance, they illustrate that people who still consume meat don’t necessarily always choose an attitude adjustment over a behavioral one. These types of scenarios where social action has taken place should be investigated thoroughly to provide activists with a better understand of how to motivate change.

Misconceptions about farm animal cruelty are likely further aided by the fact that many Americans seldom or never have the opportunity to engage in significant interaction with farm animals, since only 30% of Americans live in rural areas where farm animals are most likely to be raised (Brashear, 2012). Many have had little to no animal contact outside a handful of house pets, thus animals of a farming or wild nature are particularly mysterious and foreign. With only 2% of Americans now living on farms (“Demographics,” 2013), it is not surprising that there is an emotional disconnect in this country between humans and the animals they eat. We spend enough time with dogs and cats to understand that each of those animals has its own personality and set of preferences. If Americans aren’t spending time with farm animals it’s likely they don’t develop the same level of understanding of their cognitive and emotional capabilities. Thus most Americans are not only disconnected with the problem of animal suffering on a physical level, they have become disengaged with farm animals all together, which could be a crucial factor in an overall disregard for farm animal suffering (Herzog, 2010; Jackson, 2011; Joy, 2010). It is likely this invisibility lends great aid to psychological mechanisms that cause lack of affect and indifference toward this issue.

## Psychic Numbing

Coping with widespread violence is something humans have become accustomed to (Slovic, 2007). Throughout the years we've lived in a world filled with much death and sadness from wars, crime and disease. Though there is no doubt we *do* feel sadness for the millions of people enduring misery, most of us are able to avoid getting bogged down by all that and stay focused on our own personal here and now. Like animal suffering in America, many of the major problems facing our planet remain physically unseen by other parts of the world; that being said, information is far more widespread and accessible than it once was. With the recent rise in media outlets like Twitter and Facebook, global news is becoming something everyone can readily access without looking too far. Still, there is a noticeable disconnect between the large scale suffering of countless others and what Paul Slovic (2007) calls a “numb indifference” from the rest of the global population (Ropeik, 2011). Why does this happen? In his article *If I Look at the Mass I will Never Act: Psychic Numbing and Genocide*, Slovic (2007) proposes that moral disengagement from large-scale atrocities arises from the fact that they are often conveyed in a quantitative form. Such descriptions have already been used throughout this paper, (i.e. ten billion slaughtered each year.) Although technically these events are usually more terrible in scale, we seem to feel a stronger emotional and empathetic connection to those issues that aren't represented statistically. When tragedies are conveyed in a statistical matter much of our empathy shuts off; this tendency is known as psychic numbing (Slovic, 2007; Ropeik, 2007).

Mother Teresa once said, “If I look at the mass I will never act. If I look at the one, I will” (Slovic, 2007, p.1). When the individual stops being seen, mass suffering

becomes easier to evade psychologically. Hence why this mechanism is such an enabler for avoidance of large-scale episodes of violence like animal suffering, genocide, and war. Slovic (2007) analyzes the psychological underpinnings that, when combined with poor efforts by the government and media to raise awareness, allow us to “retreat to the twilight between knowing and not knowing” about the horrors of genocide (Slovic, 2007, p.1). This *twilight* is also where most people find themselves in regards to animal suffering. The majority will have heard or seen *some* information on the matter, but probably not enough to be fully informed, unless directly seeking such information out (Joy, 2010). It is a matter of knowing something terrible is going on, but not really connecting with what that something is. Slovic quotes Samantha Power’s (2005) text, *A Problem from Hell: America and the Age of Genocide* to summarize the essence of this emotional disconnect. “The atrocities that were known remained abstract and remote... Because the savagery of genocide so defies our everyday experience, many of us failed to wrap our minds around it...” (As cited in Slovic, 2007, p.1) Like genocide, the horrors of animal factory farming are often incomprehensible to people who have never experienced or studied them. It is difficult to fathom a world where as a regular matter of business, millions of piglets have their tails and testicles snipped off, and baby chickens are ground up alive (Imhoff, 2010). This information is frightening and uncomfortable to those of us who live a relatively pleasant existence. The severity of such tragedies coupled with incomprehensible numbers and physical separation makes this disturbing information difficult to comprehend as reality (Joy, 2010; Slovic, 2007).

Fetherstonhaugh, Slovic, Johnson, and Friedrich, (1997) sought to quantify the tendency we have to become desensitized to the value of life in large tragedies. They

named their hypothesis the “psychophysical model,” which Slovic (2007) describes as “our diminished sensitivity to a wide range of perceptual and cognitive entities- brightness, loudness, heaviness, and money- as their underlying magnitudes increase” (Slovic, 2007, p.1). Their work stems from that of the physiologist Ernst Weber, who in the eighteenth century did some of the earliest and most significant research in the areas of sense and touch. He studied what is known as the *just noticeable difference* (JND), which refers to the human capability to differentiate changes in sensations of touch, weight, light etc. (Hergenhahn, 2005). He discovered that the human ability to discriminate between stimuli is not dependent on the actual weight difference but on the relative difference, depending on how big or small the stimuli is. Thus the JND is much more dependent on the size of the original stimulus than it is on the actual change. For example, if you only have two candles lit it is easy to notice when a third has been added. If you have one hundred candles lit, an additional candle is unlikely to be detected. Thus he concluded that perception of change is a relative matter. His work, ultimately culminating in what is now known as Weber’s Law, represents the first quantitative law in psychological history (Hergenhahn, 2005). The aforementioned psychophysical model applies much of Weber’s theory to the human perception of the value of life. The basic premise being that the value and perception of human life is also determined in proportion to the overall amount (Slovic, 2007). This was demonstrated in a study done by Fetherstonhaugh, Slovic, Johnson and Friedrich (1997), who evaluated people’s willingness to fund a variety of lifesaving medical treatments. They asked people to indicate how many lives would need to be saved to warrant the spending of a ten million dollar grant. They found that when the at-risk population was 15,000, the mean of



expected lives saved to warrant the spending was 9,000. When the at-risk population was 290,000, the mean of expected lives saved was 100,000. This shows that 9,000 lives were considered more valuable in the smaller population than nearly ten times that amount in the larger population, representing an illogical tendency when conceptualizing suffering and need (Fetherstonhaugh et al., 1997).

Studies like this show that the value of life seems to be more dependent on the *proportion* of lives saved rather than *number* of lives saved, which holds important claims in the world of animal suffering. With a slaughter count of ten billion per year in America alone (“Farm Animal Statistics,” n.d.), the numbers are incomprehensible. Therefore what might seem like a lack of empathy may in fact be the result of an inability to connect with the problem. Later in his article Slovic (2007) discusses the story of a dog that was trapped on a floating tank alone in the pacific. The dog’s plight was publicized and people were so moved by the situation and found it so heartbreaking that the coast guard spent \$48,000 on rescue efforts (the dog did not survive). Though that money could have been much more effectively spent providing life-saving care for thousands of other dogs, it was allocated to this dog because people were significantly empathetic to its suffering.

Deborah Small and George Lowenstein (2003) have researched this tendency, which Small has labeled *The Identifiable Victim Effect*. People are much more likely to offer aid to a specific identified victim rather than a statistically or vaguely defined group. As was the case with the floating dog, this bias in human thinking can cause very inefficient and improper allocation of resources and lack of affective response from onlookers when it is most needed. Small and Lowenstein (2003) examined these issues in

a study titled *Helping a Victim or Helping the Victim: Altruism and Identifiability*. The purpose of their research was to gain an understanding of this tendency, in hopes of improving the effectiveness of charitable giving. In study one they provided 234 Pittsburgh civilians with 5 dollars, which they were given the choice to anonymously donate. They presented potential donors with a letter requesting money for supplies to build a house for a family in need via Habitat for Humanity. Four potential families were described, each with a similar amount of need. The independent variable (IV) was manipulated by describing the said family in need as “*has been selected*” or “*will be selected*” (Small & Loewenstein, 2003, p.4). Their results showed that those subjects who received the letter indicating that a family *had* been selected yielded more donations ( $m= 2.93$ ), (even though the letter did not specify *which* family,) compared to those in the *will be selected* condition ( $m=2.33$ ). The researchers controlled for the possibility that those in the “will be” selected condition might find the charity untrustworthy in a follow-up study and were able to conclude this did not play a part in subject’s decisions (Small & Loewenstein, 2003).

What this kind of research demonstrates is that humans carry biases when conceptualizing the need and suffering of others. If subtle alterations such as those noted above can have a significant impact on charitable giving, more work needs to be done to investigate other alterations that may be having a similar effect. Future research needs to further analyze the causes of psychic numbing and improper allocation of aid, so that charities and activists can avoid language that fails to elicit a reaction. An understanding of the causes of the identifiable victim effect would be beneficial as well, because understanding the roots of our empathy could assist in applying it to situations involving

large quantities of people and animals. Better media representation is undoubtedly also going to be crucial. The massive response to the plight of the floating dog lends to troubling thoughts about the animals whose plight is going unnoticed just because their suffering never makes headlines. Because farm animals are so seldom represented in the news and other informational outlets (Joy, 2010; Foer, 2009; Singer, 1975/2002), psychic numbing toward their struggle can take full effect.

Yet there is hope that this lack of representation in the media won't always be the case. In 2013 a film called *Blackfish* was released on the popular streaming website Netflix. This film is an expose of the cruel and inhumane methods used to capture, train, and hold captive the Orca whales who star in the SeaWorld's most famous acts. The film focuses on one whale's story in particular: Tilikum, the largest whale to ever be held in captivity, who is held responsible for the deaths of three trainers. His biography begins with his initial capture as an infant in Canada in the mid 1980's. Using underwater blasts to interfere with the sonar of his pod, Tilikum was isolated from the group, scooped up in a net, and sent to a life of captivity (Cowperthwaite, 2013). With a massive internet following and a popular vehicle for distribution like Netflix, this film is one of the most infamous animal rights documentaries to date. It has spurred an uproar involving protests and petitions against SeaWorld, the most notable of which is California's current attempt to pass legislation banning the captivity of Orcas, a fight which is currently still ongoing (Peterson, 2014; Janes & KXTV, 2014). Clearly this movie has presented information about animal cruelty that people can relate to and feel passionate about. Through Tilikum's story, the film gives viewers a victim they can identify with, yet whose plight is applicable to and raising concern for all whales in captivity today. This is an example

of how the identifiable victim effect (Small, 2003) might be used to gain wider sympathy for animal suffering. Perhaps what is most important about this film is not just that it exposes animal cruelty, but that it educates viewers on the victims behind the cruelty. Orcas are highly evolved and intelligent creatures. The film gives insight into the nature of how they think, for example explaining that due to their social nature, the pods exist more as one mental unit than individual whales, with intimacy bonds we can't even truly fathom (Cowperthwaite, 2013). This kind of information about the complex minds and existence of animals can spark a humbleness within us that respects how much intelligence and emotional depth animals possess.

## Denial of Mind

Philosophers have debated whether or not animals have “minds” for centuries (Singer, 1975/2002; Sunstein & Nussbaum, 2004). Aristotle’s opinion on this matter reflects many of the attitudes we hold today. Like modern humans, he did not deny that humans and animals shared a common nature, but he did advocate that animals were put here for our purposes. (It should be noted that he also felt the same about slaves) (Singer, 1975/2002). Aristotle believed that “if nature makes nothing incomplete, and nothing in vain, the inference must be that she has made all animals for the sake of man”(Aristotle & McKeon, 1941, p. 137). He uses religious logic to set the stage for humans to feel morally justified to treat animals as mere utilities. Such attitudes are what continue to combat the foundation of the animal rights campaign. Deciding whether or not animals *are* in existence for our uses, at least partially, is a crucial factor in the debate on whether or not to grant them certain rights. Many activists would like to see all animals granted the right to life, but if most citizens are of firm belief that they exist for our consumptive purposes then that right will continue to be denied (Singer, 1975/2002; Sunstein & Nussbaum, 2004). Although some of Aristotle’s teachings may have spurred negative attitudes toward animals, the philosopher to be notoriously disliked by the animal rights community is Descartes, who in the first half of the seventeenth century came to the conclusion that animals don’t have souls (Wilson, 2010). He believed animals work the same way a clock would, with all parts responding to stimuli as they are specifically designed to do. Animals, he believed, do not possess souls because they are incapable of reason. Therefore any kind of seemingly sentient reaction was simply a mechanistic response, and could thus be discarded without pity for the animal. He explains his logic

behind these conclusions in *Discourse on Method* in the fifth meditation. Although he confirms through the dissection of various human and animal cadavers that animals contain many/most of the same physical parts as humans, their inability to communicate to humans is proof that they lack the rational capacities granted to all human beings. Thus he concludes that humans are surely the only beings to possess souls, for no human could be “so dull-witted or stupid that they can’t arrange different words together so as to form an utterance that makes their thoughts understood”(Descartes & Bennett, 2010, p.22). He explained that this lack of ability “doesn’t show merely that the beasts have less reason than men; it shows that they don’t have reason at all” (Descartes & Bennett, 2010). Through this reasoning he justified live dissection and experimentation on dogs and other animals (Sunstein & Nussbaum, 2004); Singer, 1975/2002; Wilson, 2010). Descartes denied animals the capacity to suffer, thus warranting the world free reign for their use and abuse. Although he was an incredibly influential thinker, not all agreed with his assumptions about animal design. In 1780 Jeremy Bentham published his *Introduction to the Principles of Morals and Legislations*, famously quoting “The question is not, Can the *reason*? Nor, Can they *talk*? But, Can they *suffer*?”(As cited in Joy, 2010, p. 56) Finally the world was beginning to question the moral responsibility associated with animal rearing.

Philosophers have since continued to discuss the meaning of animal minds. In his book *Kinds of Minds: Towards an Understanding of Consciousness*, Daniel Dennett (1996) conducts a thorough analysis of what it could mean to possess a mind. His work leads to a discussion of sentience, the ability to have experiences and be aware of them enough to make a positive or negative interpretation, as well

as intentionality, or the awareness of a deliberate decision. All of these questions are important to the study of animal intelligence and emotion, but many of the answers are difficult or possible to confirm. Despite the fact that certain aspects of animal consciousness may always remain mysterious, there is no longer any doubt that many animals possess minds of some form. Groundbreaking research discoveries, such as when Kanzi the famous Bonobo started producing novel sentences via lexigrams, made it impossible to deny the presence of conscious thought in a non-human animal (Savage-Rumbaugh et al., 1993). Yet which animals receive this status might depend more on the subjective need of humans than objective scientific criteria. In his book *Some we Love, Some we Hate, Some we Eat*, Hal Herzog (2010) discusses the tendency of humans to categorize animals, affording certain species the role of “pet” whilst others are merely “research subjects.” Others may be considered “wild” and furthermore many are deemed “consumable.” These categories are often defined less by the animal’s legitimate purpose or role on earth, but rather represent their greatest utility to humans. The arbitrariness of these categories is reflected in the cultural differences seen in the human use of animals. For example, parts of Asia farm dogs for human consumption (Chang, 2010). In the Hindu regions of India, cows are considered holy, and it is illegal to slaughter them (“sanctity of the cow (Hinduism),” n.d.). These types of cultural differences between how we categorize animals shows that the roles we attribute to them are a human affair, not a natural one. Research has shown that these categories often govern which animals we attribute a theory of mind, and that these attributions are often a result of our attempts to make the

exploitation of certain species less morally troublesome (Bastian, Loughnan, Haslam, & Radke, 2012).

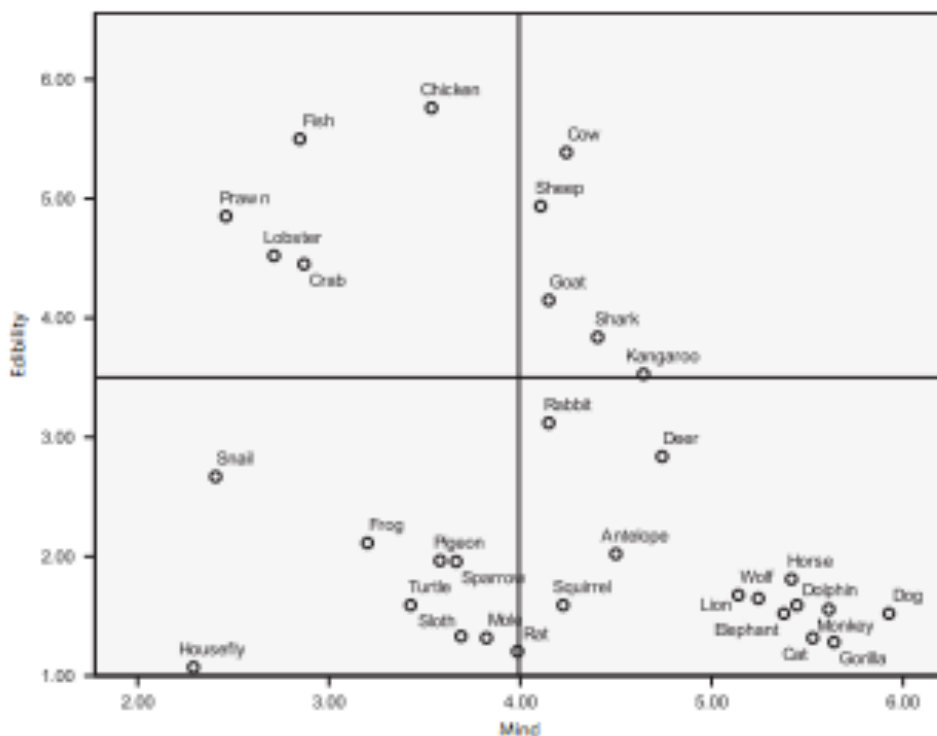
Recognizing that animals have minds warrants some degree of acceptance of their ability to experience fear, pain and suffering on a basic level at the very least. In his book *Eating Animals*, Jonathan Safran Foer (2009) defends a vegetarian lifestyle with personal accounts he feels convey that animals are very mentally present in their pain and suffering. He recounts a pig slaughter he witnessed while acquiring information for the book, where one pig in particular was lying on the ground trembling while the rest were still walking about.

It is not uncommon for pigs awaiting slaughter to have heart attacks or become nonambulatory. Too much stress: the transport, the change of environment, the handling, the squeals from the other side of the door, the smell of blood, the knocker's waiving arms... (p.160).

Such descriptions easily highlight why contemplating the presence of a mind in the animals we exploit for labor or food may rouse uncomfortable feelings. If we refer back to the discussion of cognitive dissonance, the research that was discussed suggests that meat eaters are curbing these unpleasant cognitions by changing their attitudes toward animals, (remember one of the core ways to alleviate cognitive dissonance is to devalue the dissonant cognition)(Prunty & Apple, 2013). In a study titled *Don't Mind Meat? The Denial of Mind to Animals Used for Human Consumption*, Bastian, Loughnan, Haslam, and Radke (2012) suggest one of the ways humans do this is to deny minds to animals used for food, thus devaluing their moral rights and making their suffering less legitimate. They proposed three



hypotheses aimed to examine this concept. First they explored whether or not perceptions of animal minds was negatively associated with their perceived edibility. Seventy-one subjects (Australian psychology students) completed a questionnaire that rated 32 animals, mainly mammals, on their possession (or lack of) 10 mental capacities using a 7-point scale. These capacities were both experience-related (i.e. hunger, fear, pleasure, pain, rage) and agency-related (self-control, morality, memory, emotion, recognition, and planning) and were drawn from previous work on mind-perception. Following this evaluation, participants rated each animal on its level of edibility, as well as how morally wrong it would be if they ate each of the animals (vegetarians were excluded from the analysis.) Perceived mind was found to be negatively associated with the animal's edibility and vice versa, seen in Scatterplot 1 below.



**Scatterplot 1: Mind and Edibility Ratings** (Bastian et al., 2012, p. 249)

These data show that the hypothesis for study one was supported: animals considered consumable were afforded less of a mind than animals considered inappropriate for consumption (Bastian et al., 2012).

Relating back to what was stated previously about the cultural differences in animals used for food, future directions from this work could examine the concept of mind and edibility in a variety of different cultures. It would be interesting to discover if the animals found on the left side of this quadrant would vary based on culture, and if they would reflect that particular culture's food preferences as this graph seems to, (keeping in mind that this is an Australian study, hence why kangaroo is bordering on edible) With that kind of evidence, researchers could further solidify the concept that the general public's theory of animal minds is highly motivated by their culinary preferences.

The next section of their study examined more specifically the effects of *dissonance* on attribution of a theory of mind to animals used for food. Bastian et al. (2012) wanted to know whether meat-eaters would be keener to deny the minds their food once had when animal suffering was made salient, thus suggesting that dissonance directly motivates mind denial. They presented 66 meat-eating students with a questionnaire that required them to observe a photo of an animal (cow or sheep) surrounded by grass. The animal was described as either living on a farm, with the description: "This lamb/cow will be moved to other paddocks, and will spend most of its time eating grass with other lambs/cows," or as being bred for meat consumption, stating: "This lamb/cow will be taken to an abattoir, killed, butchered, and sent to supermarkets as meat products for humans" (Bastian et al.,

2012, p. 250). After the descriptions, every participant rated the animals on their possession of 15 mental capacities on a 7-point scale. They found that participants who were reminded that the animal would be used for food rated it with significantly lower mental capacities ( $m = 4.08$ ) compared to those who did not ( $m = 4.30$ .) Thus they felt able to conclude that dissonance may in fact motivate mind denial (Bastian et al., 2012). This portion of their study cleanly supports and lends new information to the work of Prunty and Apple (2013), in that it suggests an alternative cognitive adjustment for reducing dissonance associated with animal suffering.

The final study of Bastian et al. (2012) looked at the effects of commitment to eating meat on denial of mind. They questioned whether people who were expecting to eat meat later in the study would have a greater tendency to deny minds to the animal in question. One hundred and twenty-eight Australian students were recruited. They were asked to provide the same ratings as those in study two, after being provided with a photo of a cow or sheep and the description of its pleasant life on the farm as was described previously. After rating the animal on its mental capacities, participants were then given an unrelated task that lasted about twenty minutes. They were then informed they would be participating in consumer ratings, and that continuation in the study would involve eating whatever they were asked. This condition ensured that those who continued had agreed and committed to the possibility of eating meat. Participants were then instructed to write an essay on the processes involved in raising cattle/sheep, all the way through to how the meat gets to the shelves of grocery stores. Participants in the high-dissonant

condition completed this task with the meat they would soon be eating sitting in front of them. Participants in the low-dissonance condition completed the same task, but were given only fruit to eat. After the essay and during the eating phase, participants were asked to complete another cow/sheep rating task, based on which animal they were consuming. Participant ratings did not differ by animal type, so the sheep and cow ratings were collapsed into one measure. Although both groups in the initial assessment did not show significant differences in mind attribution, significant reduction in attribution of mental capacities was found between time one ( $m=4.31$ ) and time two ( $m=4.03$ ) for the meat-sampling condition. No such time effect was found in the fruit-sampling conditions (Bastian et al., 2012). These findings support their hypothesis regarding the effects of commitment on active dissonance reduction, which pertains to the previous discussion about the effects of commitment on consistency.

What these findings suggest in a broader scheme is that those who commit to the role of omnivore will probably experience significantly more dissonance when thinking about farm animal suffering. Commitment to an omnivorous status means upholding certain beliefs about the moral insignificance of animals compared to humans. It is thus interesting to postulate what indirect effects meat eating and animal exploitation could have on the advancement of theories related to animal minds, intelligence and mental ability as a whole. If we naturally preferred not to eat meat, would science and popular culture view the animal kingdom as it does now?

The theories discussed in this section are directly related to those that have been discussed previously, as they add evidence to the idea that when faced with such dissonance, people who eat meat tend to conceptualize animal cruelty and death in an abstract way. Treating and thinking about animals as if they lacked a soul, mind, or sense of self reduces the moral quandary of harming them. The theory of cognitive dissonance explains that we must change either our thoughts or behaviors to ease discomfort. Since we wouldn't have a problem inhumanely raising or butchering objects, conceptualizing animals as things instead of beings is a good example of how changing our thoughts can re-establish personal harmony. To conceive of them as lacking a mind is one way to view them as such.

This preference for viewing animals used for food as not possessing minds is contrasted by a great sense of joy in seeing that certain other animals do. The tendency to attribute human-like mental qualities to animals is known as anthropomorphism, and it is an important aspect of Western pet-culture. Americans spend 42 billion dollars annually on their pets, which is more than we spend on movies, video games, and music combined (Herzog, 2010). Clearly these categories can have large ramifications for the way animals are treated by society.

There is a growing interest in research examining the benefits of appreciating the emotional support animals can provide in the home, and much is already being done to promote "pet therapy," such as providing returning soldiers with therapy dogs (Crane, 2014). One of the most comprehensive studies to examine the role of pets in human well-being was a longitudinal examination of over ten thousand Australian and German citizens. Headey, Grabka, Kelley, Reddy,

& Tseng (2002) asked participants a variety of health and pet-related questions in both 1996 and 2001. After controlling for variables such as sex, age, partnership status, and income, they were able to statistically conclude that people who were medium (5 years) to long-term (always) pet owners go to the doctor an average of 10% less frequently than non-pet owners. It is obvious that pets are much more than household objects to most people. For many they are a shoulder to lean on, someone to talk to, a best friend; there is no doubt that pet owners attribute mental qualities to the animals they live with. Contrast that fact with the results of Bastian and colleagues and it is clear that humans often use socially constructed categories when attributing mental capacities to animals.

These findings hold important meaning for the animal rights movement. They show that the classification systems used to develop a theory of mind for animals could largely be based on that animal's particular utility to humans, not their genuine mental ability. When examining the animals in Scatterplot 1 there are some notable inconsistencies between people's assumptions and scientific findings. For example, goats are shown as having been attributed significantly less mind than cats. Though cats are hardly dumb animals, recent research on goats highlights their ability to solve complex problems and retain such solutions for at least 10 months (Briefer, Haque, Baciadonna, & McElligott, 2014). Although a more thorough comparison of goats and cats might need to be made to draw any firm conclusions, it is likely that the accurate distance between goats and cats on a mind attribution scale should not be equivalent to the distance between goats and prawns (shrimp.) Such distance is seen in Scatterplot 1. Since goats

are typically “edible” and cats are typically “pets,” it is likely this attribution is based on human categories and not genuine ability.

Future research could investigate social factors that could help to defy these stereotypes, such as more direct contact with farm animals and more educational information about their mental capacities. Organizations like National Geographic work very hard to educate the public about wild animals, and much of what they do has an impact on wildlife preservation (Kukelhaus, 2014). If similar programs could be provided about the animals used for food and combined with exposes about their current status in the world, perhaps many of these misconceptions could be corrected.

### **Speciesism as a Form of Discrimination**

Many notable animal rights activists have been quick to point out the similarities between human-human and human-animal discrimination (Pluhar, 1995). In his work *Animal Liberation*, Peter Singer (1975/2002) explains how the general thought process seen in discrimination toward humans is fundamentally equal to that seen in discrimination toward animals.

Racists violate the principle of equality by giving greater weight to the interests of members of their own race when there is a clash between their interests and the interests of those of another race. Sexists violate the principle of equality by favoring the interests of their own sex. Similarly, speciesists allow the interests of their own species to override the greater interests of members of other species. The pattern is identical in each case.

(p. 9)

Speciesism, as defined by Singer, is “a prejudice or attitude of bias in favor of the interests of members of one’s own species and against those members of other species” (Singer, 1975/2002, p.6). Prejudice, by definition, is a “disrespectful attitude or negative evaluative response to groups as a whole or toward individuals on the basis of their group membership.” (Jackson, 2011, p. 20) Singer’s argument is that these attitudes resemble the same human tendency to justify ill treatment of a particular group based on group membership alone. He addresses several of the key defenses of animal exploitation, such as the superiority of human intelligence, and refutes them with basic philosophical logic. “If possessing a higher degree of intelligence does not entitle one human to use another for his or her own ends, how



can it entitle humans to exploit nonhumans for the same purpose?” (Singer, 1975/2002, p. 6) Of course this is only the tip of a much larger and heated debate about the status of animals, but his argument does raise important questions about the fundamental principles of discrimination and moral evaluation. In her book *The Dreaded Comparison, Human and Animal Slavery*, Marjorie Spiegel (1988) supports the argument that speciesism and other forms of prejudice are similar, a comparison she claims is “only offensive to the speciesist: one who has fully embraced the false notions of what animals are like” (Spiegel, 1988, p. 27). The false notions she refers to are the negative bias assumptions Singer (1979/2002) and others describe to be characteristic of all forms of prejudice, including speciesism. These could include assumptions that the out-group is less able to feel pain, less capable of emotional suffering, and less worthy of moral consideration based on stereotyped opinions about intelligence or behavior (Bernstein, 2004; Plous, 2003). Spiegel’s work provides a thought-provoking argument at the very least, suggesting (with an array of photographic support) that the capture, sale, and lifelong exploitation of animals are highly similar to that of blacks during the slave trade. Other authors may approach the subject more timidly, but many express a similar opinion that speciesism and discrimination share a common nature. For example Lynne Jackson’s (2011) book *The Psychology of Prejudice: From Attitudes to Social Action*, devotes an entire section to the parallels between human and animal discrimination. Jackson is adamant that these problems don’t just parallel; they intermingle. She supports this concept with a variety of empirical evidence highlighting possible correlations between attitudes towards animals and

attitudes towards humans. For example, a study done by Costello and Hodson (2010) showed that participants primed with essays on human-animal similarity reported more humanized and positive attitudes toward immigrants afterwards than did those primed with an essay that emphasized human-animal differences.

Therefore it may be possible that prejudice and speciesist attitudes affect each other, and it has also been proposed that the psychological mechanisms that fuel prejudices are also at work with speciesism. Empirical support for this is not in abundance yet, but a variety of researchers have addressed a growing interest in this topic, warranting further discussion here.

Scott Plous (2003) examines the possibility of psychological similarities in speciesism and prejudice in a chapter titled “Is There Such a Thing as Prejudice Toward Animals?” which is part of a larger essay on *Understanding Prejudice and Discrimination*. On the first page he displays his opinion that “if the core of prejudice and discrimination amounts to prejudging and treating others poorly based on their group membership, there is no question that certain types of animals qualify as targets of discrimination” (Plous, 2003, p. 509). Though he *is* careful to note “there are important differences between the subjugation of people and the subjugation of animals” (Plous, 2003, p. 510), he argues that “if animals are viewed as an out-group in the same sense that members of another race, religion, or nationality are regarded as an out-group, then psychological research on intergroup relations may be relevant to how people perceive animals” (Plous, 2003, p. 523). This opinion could be crucial to the study of human-animal interaction because it would warrant a vast array of psychological literature and data to become

applicable to the speciesism debate. Although much research may be too specific to the human-human focus, arguably work such as that of Slovic (2007) and colleagues (previously discussed in the section on psychic numbing) *could* in fact be broadened to legitimately include animals as victims, if Plous' opinion proves defensible. If the psychological community were to officially notice animals as victims of out-group discrimination comparable to that of humans, it is likely that the issue of animal rights would gain significant credibility and attention.

As noted above, consumer interaction with farm animals modern America is now limited. Lack of exposure and knowledge about particular groups can result in serious misjudgments due to unsupported and bias stereotyping (Allport, 1954). Gordon Allport, one of the most influential psychologists in the area of prejudice and discrimination, posited a hypothesis known as the Intergroup Contact Theory, which suggests that much human prejudice is due to a lack of exposure to the out-group. He believed that the more groups interact, the more they will appreciate and understand each other's similarities and differences, thus reducing prejudice (Allport, 1954). This theory has been supported by several studies. Thomas Pettigrew and Linda Tropp (2006) conducted *A Meta-Analytic Test of Intergroup Contact Theory* using 713 independent samples from 515 studies, in hopes of synthesizing and solidifying the data on this theory. They found that intergroup contact typically does reduce prejudice, and their findings controlled for the possibility of results based on participant selection or publication biases that may have been considered confounds in smaller studies. This is of particular interest because they discovered that contact effects generalized to a large variety of out-

group targets and contact settings. Thus their results suggest that while Allport's theory was originally devised purely for racial and ethnic encounters, it may now be possible to extend it to other groups (Pettigrew & Tropp, 2006). If such a theory could be applied to animals, the implications would be dramatic. Large populations lack exposure to animals used for food, which several authors argue is due to a lack of educated socialization regarding farm animal's existences.

### ***Socialization***

Any kind of prejudice or discriminatory ideology is typically driven in part by concepts that have been socialized, via parents, peers, teachers, the media, a person's religion, and other affinity groups (Jackson, 2011). For example, World War Two era Germans were born into a culture that had adamantly disrespected Jews for centuries, and this helped make the Holocaust possible. In his book *Becoming Evil: How Ordinary People Commit Genocide and Mass Killing*, James Waller (2007) describes, "the moral exclusion of Jewish victims was laid in the centuries preceding the Holocaust.... The centuries-old image of the vile and diabolical Jew was woven into the fabric of German, and European, culture" (Waller, 2007; p. 207). Plous (2003) discusses how we are socialized to think about farm animals, indicating that his own research on the matter reflects how socialization leads to improper conceptualization of their lives. Plous conducted a study examining children's impressions of farm animal welfare, interviewing 57 children between first and fifth grade and asking whether a variety of animals (wild, pet, and farm) ever felt unhappy. Of the students, only 26% said that farm

animals sometimes feel unhappy, compared with 46% who thought companion animals at times feel unhappy, and 53% who thought wild animals feel unhappy (Plous, 2003). Based on what is now known about farm animal suffering, it is clear that children are not socialized to think realistically about farm animals. Plous (2003), Singer (2003), Joy (2010), Jackson (2011) and many others all discuss the social background behind these misconceptions, and the impacts they can have on farm animal welfare. The main exposure most children have to farm animal life may be through stories like *Charlotte's Web*, where farm animals are depicted as living out a pleasant and relatively happy existence. Picture books, toys, and advertising often reinforce the idea that even if farm animals have to die for our benefit, they enjoy a pleasant existence up until that point. An example of this is the *Happy Cows come from California* commercials, which portray dairy cow life as endless lush green fields and an overdose of sunshine, seen below in Photograph 1.



**Photograph 1: *Real California Milk* Advertising Campaign**

(“Happy Cows | Real California Milk,” n.d.)

Although a minority of lucky cows might be blessed enough to live their lives in such a way, it should be common knowledge that the majority do not. Of the some nine million dairy cows in America, 85-95 percent are being raised in confinement, not in a pasture (Robinson, 2011). The problem with these kinds of ads is that they contribute to an already deeply ingrained misunderstanding about the lives of farm animals. People for the Ethical Treatment of Animals (PETA) was quick in their attempts to crush this fallacy, seen below in Photograph 2.



**Photograph 2: PETA’s Real California Cruelty Campaign**

(PETA, 2011)

For many these ideologies remain steadfast and true, partly because much of society reinforces the (what Melanie Joy deems) “myths” surrounding them (Joy, 2010). She explains how various sectors of society adhere to the idea that animal suffering is a necessary part of human existence. For example the American Dietetic Association (ADA) recommends three cups of milk per day, despite growing evidence that links milk to increased risk of cardiovascular disease, various cancers, and diabetes. For example, the researchers of the most comprehensive study of nutrition ever conducted, *The China Study*, concluded after 20 years of research that animal products are directly responsible

for a wide variety of America's chronic illnesses. Their findings are based on longitudinal data of over 6,500 Chinese participants, many of who consume few to no animal products due to cultural preferences. These researchers urge readers to adopt a vegan lifestyle, and have seen astonishing disease reversal in patients who have done so (Campbell & Campbell, 2005). If the results of this study are any indication of the truth, it is likely this recommendation of three cups of milk per day is linked to the fact that the National Dairy Council is one of the largest sponsors of the ADA (Castillo, 2014; Joy, 2010; Foer, 2009).

Since confronting information regarding animal suffering is unpleasant, and people are motivated to reduce that unpleasant feeling, many will continue to seek out and attend to information that is congruent with the idealistic concepts they held as children. This is a process known as the *confirmation bias*, which specifically is the human tendency to interpret evidence that confirms one's pre-existing beliefs. This bias can cause us to attend only to information that supports our beliefs, and either manipulate or reject information that doesn't (Taylor, 2011). As Plous (2003) stated, one of the easiest ways to avoid dissonant thoughts of animal suffering is to avoid confronting the idea altogether. Thus one may avoid thoughts of animal suffering by attempting to discount information regarding animal suffering, and instead focusing on information that supports a cruelty-free worldview, such as the *Happy Cows* ideal.

Agnew (1998) also discusses this tendency in his article *The Causes of Animal Abuse: A Social-Psychological Analysis*.

People may avoid or discount information regarding the consequences of their actions. And they may more readily accept information suggesting that their

actions do not have harmful consequences. This is especially easy to do since such information is often provided by trusted individuals and organizations like the... Federal government (p. 186).

Singer (1975/2002) also points out that people are quick to assume the federal government would intervene if animal abuse was really as widespread and pervasive as animal rights activists claim it is. These kinds of shrug-offs are a key aspect of a social psychological phenomenon known as the diffusion of responsibility. This refers to our tendency to be less likely to take action to help someone(s) in need when others are also present to their plight (Waller, 2007). A famous example of this occurrence is the case of Kitty Genovese, who in 1964 was raped, assaulted, and murdered on a street in Queens, New York. Despite the fact that she was attacked for over half an hour, during which time a reported 38 people were witness from their homes, no one called the police and she was eventually murdered (Cialdini, 2001/2009). Although the onlookers were ostensibly decent law-abiding citizens, the assumption was made by all of them that someone *else* would take the responsibility of phoning the police. In discussion of this case and others like it, psychologists postulated reasons for why a surplus of bystanders might lead to a lack of responsibility within individuals to lend aid. Ultimately the cause is very simple: the more bystanders there are, the less personal responsibility they are each going to feel (Cialdini, 2001/2009). Applying this theory to the lack of action taken towards animal suffering has important implications. Unlike the above example, animal suffering and abuse typically doesn't occur outside our bedroom windows. As was previously noted, the secrecy of corporate animal farming is impressive, and when information regarding farming practices is revealed the number of bystanders is quite



astounding. Agnew (1998) discusses how “many believe that their role in abuse is small, perhaps inconsequential. This belief is fostered by the fact that they are just one of many who contribute to abuse” (Agnew, 1998, p. 190). This lack of assumed personal responsibility is also aided by the previously discussed assumption and expectation that the federal government will prevent animal cruelty. Lusk, Norwood, and Prickett (2007) confirmed the existence of this opinion in their nationwide telephone survey on consumer preferences for farm animal welfare. Although there are laws, acts, and regulations that seek to improve animal welfare, chances are the federal government’s definition of “humane” may not align with that of the general public. For example, the egg industry legally kills 200 million male chicks each year because their meat is deemed inconsumable, and they obviously can’t lay eggs. Common execution methods include allowing them to asphyxiate in bags, or throwing them live in grinders to be crushed into fertilizer (Bernstein, 2004). Even if eating meat and eggs were necessary for our survival, these types of practices would still be deemed unnecessary, and the government does not interfere as we might like to believe. The assumption that higher-ups will police these practices in the full interest of the animals is unrealistic.

### ***In-Group Biases***

There are a variety of other aspects regarding prejudice and discrimination that can be applied to speciesism. One of the most common aspects of all inter-group relations is the *in-group bias*. This refers to favoritism of members of ones’ own group as compared to an out-group, based on group membership alone (Waller, 2007). Gordon Allport (1954) describes the foundations of this tendency by explaining “the human mind

must think with the aid of categories...once formed, categories are the basis for normal prejudice. We cannot possibly avoid this process. Orderly living depends upon it.”

(Allport, 1954, p. 20) Though group bias has many beneficial effects on the relationship within the group, research has shown that it can also lead to ill treatment of the out-group.

The most fundamental research done on this subject is that of Henri Tajfel and colleagues (1970) at the University of Bristol, which James Waller (2007) references in his

discussion of genocide. Though it may not be directly applicable to human-animal

relations, Tajfel’s work is important to the concept of discrimination because it clearly demonstrates how incredibly simple, irrelevant, and even completely chance similarities can trigger the effects of in-group bias and ill treatment of the out-group. Waller (2007)

explains various aspects and outcomes of the research. Tajfel placed students in groups based on vague similarities (preference for one painting over another or a coin toss.)

What he found was that within minutes the students started to show preferential treatment

for those whom they were informed they shared a group. Despite the fact that these

people were complete strangers, weren’t competing for anything, and remained

anonymous to each other, group biases were found. Specifically, they rated members of

their own group more pleasant, and said they were better workers than the out-group. In

one experiment they even found that in-group members preferred to receive two instead of three dollars if it meant the out-group received one dollar instead of four. This shows

they were less interested in their own gain and more interested in making sure they

remained superior to the out-group (membership of which, again, was based on very

‘minimal’ similarities) (Waller, 2007).

So why would such research be relevant or important in explaining the human-animal divide? Jackson (2011) explains that Tajfel attributed much of the bias he observed and researched to be a result of low-self esteem on the part of the individual. By belonging to a group, believing that group is better than other groups, and acting in ways that project the idea that your group is better may do wonders for the self-esteem. This is known as the *social identity theory* (Waller, 2007). It is arguable that the same kind of benefits can be claimed from viewing animals as an out-group. For example, in his book *Meat: A Natural Symbol*, Nick Fiddes (1991) discusses a variety of the psychological benefits humans can gain from eating meat. He devotes an entire chapter to *The Power of Meat*, explaining how “belief in human dominion does not merely legitimize meat eating—the reverse is also true: meat reinforces that presumption. Killing, cooking, and eating other animals’ flesh provides perhaps the ultimate authentication of human superiority over the rest of nature, with the spilling of their blood a vibrant motif” (Fiddes, 1991, p. 65). These kinds of motivations are important to consider as less salient but perhaps still highly valued aspects surrounding animal exploitation.

### ***Oppression in Language***

Language deeply affects the way we view the world. The Saphire-Whorf (also known as Linguistic Relativity) hypothesis proposes, (and it has strong and weak interpretations,) that language can shape our mental categorization of information and our worldview in general (Swoyer, 2014). There has been a vigorous discussion of language in the literature surrounding prejudice. In an article titled *Identifying Oppression in Language: The Power of Words*, Katherine

Morcoccio (1995) discusses the various ways that language has influenced and perpetuated oppression. She explains that “specific instances of language use can be said to provide a valuable point of entry to the ideological representations that structure speakers’ and writers’ understanding of their world” (Morcoccio, 1995, p. 149), much as the theory of linguistic relativity states. Waller (2007) also discusses how language can contribute to oppression, explaining how it is used to dehumanize the victims in war and genocide. He gives examples of how “mass killing and genocide are replete with examples of linguistic dehumanization of victims. In the Holocaust, for instance, the Nazis redefined Jews as... ‘Parasites’, ‘vermin’, ‘syphilis,’ ‘cancer’, (and) ‘excrement’” (Waller, 2007, p. 208). Another example he provided regards how “physicians and public health authorities frequently would list corpses not as *corpses* but as *Figuren* (figures or pieces, mere things, or even rags” (Waller, 2007, p. 208). He explains that this type of linguistic oppression and humiliation helps to construct a cognitive barrier between victim and victimizer (Waller, 2007). What these authors and the theory of linguistic relativity convey is that language not only describes our existence, it shapes it. Those who benefit from and seek to uphold the current exploitative practices toward animals are aware of this idea, and their attempts to keep people from thinking too much about where their food comes from is evident in the language that we use to describe animal products (Fiddes, 1991; Joy, 2010; Herzog, 2010).

The literature surrounding speciesism advocates that language can be highly influential on the way humans view animals and their suffering. In an article titled *Language, Power, and the Social Construction of Animals*, Arran Stibbe (2001)

discusses how the language of speciesism can have the same negative connotations as the language of prejudice. He conducted a critical discourse analysis (CDA) of a variety of different public sources, including “meat industry magazines such as ‘Poultry and Meat Marketing and Technology...’ as well as articles written by the meat industry for external reading, such as justifying farming methods... professional articles written by veterinarians specializing in food animals... and other interested parties...” and “mainstream discourse, coming from a consultation of general dictionaries and grammar books” (Stibbe, 2001, p. 148). Critical discourse, he explains, is normally used to examine the role of language in the perpetuation of social-institutional practices of dominance and inequality towards human groups. He argues it is equally applicable to the language surrounding animals (Stibbe, 2001). His analysis shows how small linguistic alterations can create a separation between the meat we buy and the animals it once came from. For example we eat “beef” instead of cow, “pork” and not pig, and wear leather that comes from “hides” and not skin (Herzog, 2009; Joy, 2010; Stibbe, 2001). Plous (2003) explains how words that seek to objectify animals allow for a more harmonious mental state when consuming them, “because inanimate objects are incapable of suffering, this depersonalization serves to dissociate consumption from the infliction of pain” (Plous, 2003, p. 16). Fiddes (1991) also remarks on this topic in his analyses of meat, which is by no means to be considered animal rights literature. He regards how “the names we give to the flesh of the main meat animals are another device whereby we reduce the unpleasant impact of having to acknowledge their identity... It is as if we cannot bear to utter the name of the beast

whose death we have ordained” (Fiddes, 1991, p. 97). Singer makes a very similar comment in *Animal Liberation*, stating “detachment is made easier by the use of technical jargon that disguises the real nature of what is going on” (Singer, 1990, p. 50). These kinds of linguistic evasions lend significant aid to the denial of animal-based food origins, by attempting to eliminate the idea that there was ever an animal in the first place. Thus this theory can easily be tied in with the previously discussed theory of mind denial, as both mechanisms seek to evade the idea that the animals we consume were once both alive and sentient.

Stibbe (2001) also discusses how scientific and religious discourse can often be used to justify animal exploitation. As Peter Singer’s (1975/2002) “A Short History of Speciesism” chapter describes, religious and scientific justifications have been made for animal exploitation as far back as Genesis (1:28) where God gave humans ‘dominion’ over animals. Stibbe (2001) explains that nowadays justifications come about mainly via scientific discourses, as opposed to religious ones. Melanie Joy discusses this as well, coining this system of justification as the “The Three N’s: Normal, Natural, and Necessary.” An example of these types of arguments is what she and others deem “The Protein Myth.” Personal experience is enough to gather that this is one of the most common stereotypes surrounding a vegetarian/vegan diet: humans need animal protein to be healthy. Yet a variety of well accredited medical sources are now suggesting that Americans need to cut *back* or completely eliminate their consumption of animal proteins. The aforementioned *China Study* strongly encourages a complete elimination of all animal products. The Physicians Committee for Responsible

Medicine discusses the protein myth, and suggests that “to consume a diet that contains enough...protein, simply replace animal products with grains, vegetables, legumes (peas, beans, and lentils), and fruits. As long as one is eating a variety of plant foods in sufficient quantity to maintain one’s weight, the body gets plenty of protein” (“The Protein Myth,” n.d.).

Comparisons of these kinds of myths to others used during the slave trade show that justification is an important aspect of exploitation and discrimination. Marjorie Spiegel (1988) discusses some of the justifications made during the slave trade, explaining how “black people in the U.S were told that their slavery was an “economic necessity” to be continued for the good of the country...Necessary for whom? Surely not the people who are living under this form of slavery...” (Speigel, 1988, p. 19). Justifications act as a major defense mechanism because they accentuate the confirmation bias. Because most people are instilled with the belief that they should eat animals and that it’s acceptable to do so, dissonant arguments are likely to be unwelcome, especially if they suggest consideration of an unpleasant or undesired behavioral modification. Therefore people may be quick to accept incorrect suggestions about health and necessity as fact, and use such “facts” to ease dissonant cognitions.

It is clear that language play a very important part in the overall oppression of humans and animals alike by developing, contributing to, and supporting cognitions surrounding the discrimination of others. As Stibbe (2001) explains, “language is systematically related to underlying ideologies that contribute to maintaining and reproducing oppression” (p. 158). These findings are crucial to the

animal rights movement because they convey that a lot of misconceptions about animal cruelty are subconsciously fueled by subtle yet influential societal factors.

### ***Mortality Salience***

Another psychological mechanism that prejudice and speciesist ideologies may share relates to the concept of Terror Management Theory, which refers to the human tendency to avoid confronting thoughts about their death (Jackson, 2011). People argue that this is a factor associated with religiously fueled violence because faith and religion often serve as a buffer against existential anxiety. As Jackson (2011) describes, “when people are reminded of their mortality, they tend to engage in efforts to defend their worldviews, including expressing prejudice against those are deemed to threaten them, such as members of other religions” (p.151). In a study done by Greenberg, Schimel, Martens, Solomon, and Pyszczynski (2001), white participants were given two essays on racial pride (either white or black) and then asked to evaluate how racist the essay was, how much they’d like to meet the author, and how favorably they viewed the author. Participants in Study 2 were given the same essay and questionnaire, but only after they had filled out a separate questionnaire asking them to describe how they felt about their own deaths, and what they thought it would be like in the moments leading up to, during, and after their deaths. Their results found that people who had been made to think about their own deaths prior to reading the essays found the white essayists to be significantly *less* racist than did those who had not had mortality salience priming (Greenberg et al., 2001). Goldenberg et al. (2001) wondered if these kinds of findings would be applicable to people’s attitudes towards animals. They proposed that being reminded of our inherent



“creatureliness,” or animalistic nature, could also rouse negative thoughts regarding our demise. Thus mortality salience might serve as a partial explanation for why we try to preserve the idea that humans are much more worthy of life than animals. Building on prior research on terror management theory, they conducted a study that questioned whether a mortality salience (MS) induction would subsequently cause participants to favor an essay on human uniqueness over an essay on human-animal similarities. For this study, mortality salience induction included being asked to think about and describe in detail one’s own death, what happens to one after death, and exposure to unpleasant photos of humans vomiting, bloody fingers, and mucus (Goldenberg et al., 2001). They claimed these measures to be the “most common and well-validated mortality salience induction” (Goldenberg et al., 2001, p. 429). Each participant was assigned to read either the human uniqueness essay or the human-animal similarity essay following the MS induction. After reading the essay they were asked how much they liked the essay and how they felt about the author. After calculating the mean scores for each essay (on a scale of 1 to 9 with 9 being the most positive), it was found that the human uniqueness essay was rated as significantly more positive ( $m=6.42$ ) than the essay on human-animal similarity ( $m=4.8$ ). To control for the possibility that the uniqueness essay may have just been preferential regardless of mortality salience, they included a control group who were not subjected to the MS induction but were instead asked to discuss dental pain. Though the means for each essay were still in the predicted direction for the control group, no significant difference in preference was found. Therefore the researchers concluded that existential anxiety might lead to a desire to deny human-animal similarity (Goldenberg et al., 2001). These findings stand out from a lot of the previously discussed mechanisms

because they suggest that the roots of animal exploitation may go psychologically deeper than an avoidance of cognitive dissonance, or at least avoidance of the particular cognitive dissonance that has been discussed throughout this thesis. Much like the in-group theories discussed, this theory focuses less on moral qualms and instead sheds light on the motivational capabilities of human insecurity. Most of us have a strong psychological desire to belong, and to always feel safe. Where we seek that comfort is potentially quite widespread, and may be found in part by maintaining a firm dichotomy between human and animal existence.

## Conclusion

This review has discussed a variety of the psychological mechanisms that may be associated with the human tendency to hold ambivalent attitudes towards animals. It has attempted to convey through the analysis of psychological literature that cognitive tendencies are largely responsible for both motivating and maintaining improper assumptions and lack of affect toward animal suffering. The research leading up to the development of this review concludes that this topic as a focus of research is in its infancy, but growing quickly.

Perhaps the most important finding of this thesis is that there is actually research to be found at all. This project was begun with no knowledge of any existing psychological literature on this topic, and furthermore no knowledge that it was even being discussed. What started as a very broad investigation into the origins of ambivalent attitudes towards animals slowly but surely morphed into the discovery of a world in which a variety of scholars with psychological backgrounds have been discussing and researching these phenomena. Recent articles on *National Public Radio* and *Psychology Today* shed light on a growing interest and notice of the tendency the mind has to shut away thoughts about animal cruelty, with the most notable researching appearing to be that which explores the denial of mind to animals used for food (Hodson, 2013; Lombrozo, 2013). Therefore this thesis has become a part of an emerging discussion about the misconceptions and lack of affect surrounding animal cruelty.

One potential bias of this review is that the research was conducted with pre-existing negative opinions regarding speciesist attitudes, as well as a personal commitment to vegetarianism. Although the goal was always to not allow this work to be

directed by subjective motivations, it is possible that such motivations did influence the research. Several assumptions are made based on data stemming from research on human-human interactions, and thus the conclusions about human-animal interactions made from those data should not be taken as fact, but as opinion only. Furthermore, as was previously stated this area of research is still in its infancy. Most of the empirical examples have fairly small subject pools, used limited resources, and to the knowledge of this author have yet to be replicated by other researchers.

Much of this work has been conducted on the assumption that humans are at least partially aware of the extent to which normal animal farming practices cause suffering. Though it is mentioned that many may also be completely unaware that animal cruelty is happening, it is unclear how uninformed and abundant these people are. The main focus of this paper is to question how humans defy their moral conscious in the face of disturbing information, thus it fails to deeply consider that many may not come across such information in the first place. This is an important point to keep in mind as the animal welfare movement goes forward in society. Until we are sure that most people are receiving information about animal suffering, it is impossible to conclude that these mechanisms are active in the majority of Americans.

One of the implications of this review is that this area of research has a lot of room to grow. Further support for the idea that many of the mechanisms used to cope with, justify, or deny human suffering and oppression could also be present in the problem of animal suffering would significantly strengthen the animal rights debate. As was stated by Plous (2003), solidifying this connection would allow a variety of the existing psychological literature on human-human interactions to become a strong

empirical basis for guiding direction for future research. With these similarities in mind, researchers could further examine how social factors such as language, media, and popular culture interplay with cognitive biases and dissociative thought patterns to create these attitudes, which may not reflect our true beliefs or values. Ultimately if researchers are able to agree that numb indifference toward farm animal cruelty is a bias in the human thought process, and point out the similarities it shares with other bias thinking we cringe at from our past, people might be legitimately motivated to make some corrections to the system and to their consumer behavior and attitudes.

Future research could also arise from the studies on cognitive dissonance and mind denial. Specifically said studies could first be replicated and reinforced with similar paradigms that used alternative circumstances, to show that these findings are applicable in an array of scenarios. Cross-cultural analyses would further solidify theories regarding mind-denial, whilst follow-up studies regarding the outcome of cognitive dissonance could examine for short or long-term behavioral modification. With a stronger empirical foundation, this work could then be used to research specific aspects of society that aid these mechanisms and make them possible. Researchers could use the resulting information to postulate suggestions for breaking these barriers down; such as changing the way we label food and encouraging more education about the cognitive and emotional abilities of animals.

Although the history of the animal rights movement dates back to 18<sup>th</sup> century Britain (Singer, 1975/2002), and attitudes toward animals undoubtedly have roots in those times, the industrialization and urbanization of the 19<sup>th</sup> century led to entirely new forms of animal cruelty and exploitation. Historically, the movement has failed to spark a

following as strong as those seen for civil, women's, and now gay rights. Although animal rights activists are often subjected to a harsh stereotype of being extremist and unrealistic, the philosophical underpinnings stemming from the notable work of Singer (1975/2002), Reagan (1983/2004) and others is evidence that this movement holds real claims in the overall discussion of human integrity, which has been taking place since we first recognized a need to respect human rights. Although it shares a similar basic premise to the other social movements, it proposes that at least some basic human rights *should* and *must* be extended to the other sentient inhabitants of this planet. Many activists may share this passion, but it is unlikely that we will see animals granted such rights in our lifetimes. That being said, significant legal efforts are being made to grant at least the most highly intelligent animals (great apes, whales, dolphins, grey parrots) the right to not be held in confinement (Siebert, 2014), which is certainly a fundamental step toward the elimination of suffering. With conditions as treacherous as they currently are, the main issue at hand is improving animal welfare. This will require a serious reconsideration of our moral obligations, dietary needs, and of the way we conceptualize farm animals. If this idea is to be propelled out of a stereotyped philosophical debate and into surging and unstoppable social action, it needs the support of all fields of knowledge.

Speaking from the discipline of psychology, the significance of this thesis is to advocate and conclude that human cognition plays a *significant* role in the perpetuation of inhumane treatment of animals, and that ending animal cruelty is going to require us to reshape the way we think about other species. Proof that these psychological mechanisms exist and are causing harm will allow people to develop awareness for them. Such

awareness could in itself be one of the most crucial aspects to implementing social change.

Understanding the nature of modern society's relationship with the animal kingdom is going to be crucial as our planet becomes more and more crowded. We have to stop thinking it's okay to allow our unnecessary desires and preferences to take precedence over the welfare of other sentient animals and their habitats. Just because animals can't speak and don't have the exact same brains or bodies as we do doesn't mean they don't have interests of their own that are worthy of respect. Our current treatment of them is wrong, just as racism, sexism, prejudice and genocide are wrong. Though it was incredibly difficult and politically fraught, we were able to recognize those aforementioned issues as very serious human flaws (at least most of us have), and are doing what we can to eliminate them from civilized society. Animal cruelty has yet to receive that kind of recognition. Although we may never cease to accommodate our needs with certain animal products, the severity of their suffering for that purpose has become indefensible. Furthermore this issue is *especially* crucial because it's deeply interwoven with perhaps the most prominent issue of our time: environmental degradation. In 2006 the United Nations Food and Agriculture Organization concluded that the world's livestock is responsible for 18% of the earth's greenhouse gas emissions. That is 5% more than all forms of transportation *combined* (Walsch, 2008). In the U.S. alone, the Department of Agriculture estimates that factory animal farms generate three times as much waste as the country's entire human population (more than 500 million tons) (Imhoff, 2010). Based on this information and the descriptions of modern factory farming practices throughout this thesis, it is evident that there is a multitude of horrific

problems associated with industrial animal farming. For these reasons, this issue needs to be tackled with urgency. Understanding the psychological foundations of all that is wrong with industrial animal farming is crucial to breaking down the system, and to creating a harmonious and balanced relationship with the animal kingdom and the natural world.



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### **Authors Biography**

Sophie Veilleux was born in Phoenix, Arizona on January 16<sup>th</sup>, 1992. She was raised in Montville, Maine and graduated from Mount View High School in 2010. Sophie is majoring in psychology, with an abnormal/social focus. She is a member of Phi Beta Kappa and Psy Chi. She has also served as vice president and president of the club Student Advocates for Animal Rights Initiative (S.A.F.A.R.I.)

Upon graduation, Sophie plans to move to Portland, Maine to enjoy the working life for a year or two. She then plans to attend graduate school to follow her childhood dream of becoming a counselor or therapist.