

*ALIENS ARE ANIMALS TOO!*

ETHICS AND STIGMATIZATION WITHIN INVASIVE SPECIES

RHETORIC

by

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This thesis was prepared under the direction of the candidate's thesis advisor, Dr. William O'Brien, and has been approved by the members of her supervisory committee. It was submitted to the faculty of The Honors College and was accepted in partial fulfillment of the requirements for the degree of Bachelor of Arts in Liberal Arts and Sciences with a concentration in Environmental Studies.

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## ABSTRACT

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Management of nonnative invasive species (NIS) frequently involves removing animals or plants from an area in order to conserve native communities. Methods of removing invasive animals include killing individuals, justified as a means of protecting broader ecological values. This management approach, however, is often controversial and highlights differences between discourses of environmental and animal rights. The former values life at a holistic level while the latter emphasizes the value of individual lives. Language both reflects and shapes belief and action, and to assess these divergent views, I compare invasive species rhetoric of a prominent environmental organization with that of an influential animal welfare group. The goal is to identify the most prevalent themes in the different organizations' characterizations, highlighting areas of convergence and divergence regarding such themes, and, ultimately, to find out if their rhetoric points to any viable suggestions for compromise.

*To my mother, who taught me to cherish every living being.*

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## INTRODUCTION

*Invade:*

- *(of an armed force or its commander) enter (a country or region) so as to subjugate or occupy it.*
- *enter (a place, situation, or sphere of activity) in large numbers, esp. with intrusive effect (Oxford Dictionaries)*

In the summer of 2012 I interned at Jonathan Dickinson State Park, located in Hobe Sound, Florida. Being someone who feels strongly about the protection of our environment and the environmental movement, I was fairly certain I would be working among kindred spirits, and, for the most part, I was. The prevailing ethic of the park's rangers and maintenance workers was one of appreciation and respect for the life that resided within Jonathan Dickinson's borders. Negativity or violence toward the wildlife was not something that manifested among these people—except in the case of invasive species on the premises. Seen as a threat to the health and authenticity of the park, the attitude toward these nonnative creatures mirrored that of so many others in the environmental field, consisting of disdain and ill will.

Especially disturbing to me was the intolerance I observed toward the feral hogs that roam the park. Hogs, or pigs, are considered to be among the most intelligent animals, with a mental capacity greater than that of dogs. Yet what I heard in people's casual discussions regarding feral hogs mainly entailed talk of the pigs' ravaging the park's environment, devouring native creature's resources, and reproducing out of control. Though I never doubted that they did damage to the ecology of the park, at the same time, the animal advocate in me couldn't help but internally defend these creatures,

and wonder if there is a better way to address the issue of invasive species from an environmental perspective.

Inadvertently, experiencing such attitudes toward nonnative species helped bring me to recognize a puzzling and unexpected discord between animal rights and environmentalism. It would not seem that these two spheres would conflict – both hold a reverence for life and call for people to change their actions to better accommodate nonhuman beings – yet an environmental ethic generally values life on a holistic foundation (i.e., ecosystem, community, species), while an animal rights ethic values life at the level of individual animals. Most of the time this difference does not create a problem, as most objectives of conservation initiatives align with those of animal rights. Such overlapping aims include preserving habitats, promoting life on an ecosystem and a species level, reducing pollution to make the earth more hospitable, and ending commercialized factory farming.

Nonetheless, environmentalism and animal rights perspectives clash when individual animal lives are seemingly pitted against overall ecosystem health. One situation of such friction occurs when animal populations become too large for their respective ecosystem to successfully support them. These distended populations sometimes lead natural resource managers to promote hunting as a means of easing ecosystem pressure, which can garner backlash from the animal rights community. Another such situation, which is the focus of this paper, occurs when nonnative animals enter an ecosystem and become invasive, and resource managers are left with the decision of how to manage them. The most common path taken in these situations is one of lethal control. Environmentalism from an ecological standpoint generally sees this

approach as acceptable and even necessary, while animal rights adherents view such management policies as inadmissible because of the death and suffering they may cause to individual animals.

Overall, environmental and animal rights movements are not at odds concerning the *outcomes* they desire – both would like healthy, thriving ecosystems that support the most life. Rather, the clash between these groups lies specifically in the management policies chosen. If lethal control were the only means to abate ecologically problematic species of animals, the situation would be different; but since nonlethal, humane methods of decreasing and eliminating these populations exist, there is an argument regarding the kind of action that should be taken – specifically, whether the management should be lethal or nonlethal. The question also exists of whether the focus of management should be on maximally humane treatment of the invasive animals in question or expedient eradication to best prevent the animals' spread into ecosystems.

With this research I do not expect to, nor believe I am in the position to, develop a solid answer of how resource managers should approach the problem of invasive species proliferation. Instead, I wish to look at the way that invasive species are spoken about – i.e., the invasive species rhetoric – in the environmentalism and animal rights discourses. A logical inquiry at this point might be the question of why I have chosen to focus on rhetoric, rather than real-world management solutions. My answer to this is that the way people speak is intimately related to the way they feel and act, and thus an important facet to explore in understanding human actions and decisions.

With millions upon millions of members and followers, prominent social movement organizations that address concerns about environmental and animal rights

have a great influence on public attitudes and perceptions. Ultimately, decisions concerning how to act on issues within public parks and public lands – like those regarding invasive species management – must coincide with the views of the widespread public to avoid a response of discord, unrest, and opposition. In sum, language in popular organizations leads to public belief, and policy makers are both influenced by and invested in such beliefs.

In this thesis I hope to illuminate the patterns of language prevalent in both the animal rights and the environmental spheres in order to interpret the messages they are conveying to the wider public, how these messages coincide and clash with one another, and their implicit messages. Chapter I will begin with an overview of the literature regarding the various ways invasive species are stigmatized within the environmental sphere, as well as possible causes and consequences of such language. Chapter II explores ethical theories of environmentalism and animal rights in search of an ethic for valuing invasive species. Chapter III provides an overview of my analysis of the respective rhetoric of the environmental and animal rights organizations chosen, followed by descriptions of the most significant results that I found as well as some in-text examples of results (I include a complete list of my results in Appendices 1, 2, and 3). In Chapter IV I explore the meanings and possible explanations of these results, followed by a discussion in Chapter V of my overall conclusions based on this study, and suggestions for improvement in the invasive species rhetoric of both environmentalism and animal rights. I conclude that neither animal rights nor environmentalism are encompassing the full complexity of the invasive species issue, and that they could be significantly more effective in their activism if they moved away from the clash they are currently

perpetuating and instead gravitated toward a collaborative relationship that works for their common goals. Moreover, I suggest a restructuring of invasive species language to become a more positive and transformational force, as well as a shifting of focus from invasive organisms themselves to the human hand in their existence.

## **CHAPTER I**

### **BACKGROUND: INVASIVE SPECIES AND MISPERCEPTION**

Language is a powerful tool that shapes how we think of and perceive the world around us. Though the spoken or written word may sometimes seem like only a carrier of ideas, it is one of the most effective ways that we, as human beings, are able to mold our surroundings and the events that occur therein. The way we speak about things in our environment is more than just a summation of consonants and vowels; it both shapes and expresses our values and beliefs, and it can influence others to consider and even adopt such feelings.

The language regarding invasive species is a salient indicator of how they are perceived as well as how they are treated. The definition of invasive species that I am following is taken from the National Invasive Species Council, defining nonnative invasive species as, “species that are non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm, or harm to human health. Invasive species can be plants, animals, or pathogens” (National Invasive Species Council). Considered by many to be one of the most pressing ecological problems of our time, invasive species tend to be spoken of by environmentalists in negative and stigmatizing terms (Larson 2005; Lodge and Shradler-Frechette 2003; Simberloff 2003). According to Schlaepfer, Sax, and Olden (2010) this negative filter closes people off from considering the potential conservation value invasive species can have. Additionally, such stigmatization has strong, implicit ethical messages. The way in which invasive creatures are spoken about relates to how people perceive and value them, and therefore how they treat these organisms (Gobster 2005).

Before moving on, it is important to clarify my usage of certain terms. I will use the terms “invasive species/organisms” interchangeably with “nonnative invasive species/organisms.” This specification is needed because native species can also sometimes become invasive (Lodge and Shradler-Frechette 2003), but I am not discussing these organisms here. Additionally, it is important to note the difference between nonnative *invasive* species and nonnative species – the former are extremely successful in their new environment and sometimes cause environmental damage, while the latter are benign inhabitants of the ecosystems they end up in. While this paper will have its main focus on *invasive* nonnatives, because it is nearly impossible to scientifically predict which nonnative species will become invasive, it is common practice for *all* nonnative species to be treated and/or managed as if they were invasive (Rosenzweig 2001). Thus, many of the rhetoric and management policies discussed in this paper apply to benign nonnative species as well as ones proven to be invasive.

To continue, I have no intention of denying the fact that invasive species can cause ecological harm. It is clear that when they colonize new ecosystems they can spread disease, out-compete native wildlife for scarce resources, interfere with the growth, reproduction, and development of native species, and disperse harmful toxins to native organisms (Lodge and Shradler-Frechette 2003; MacDougall and Turkington 2005; Marris 2011; Simberloff 2003). But are all of the consequences of their presence as undisputedly negative as some environmental scholars would have us believe? On the contrary, evidence points to some positive ecological effects of invasive species that are, for the most part, overlooked (Goodenough 2010; Schlaepfer, Sax, and Olden 2010; MacDougall and Turkington 2005). Invasive organisms sometimes provide shelter and

food for native species, aid in restoration of damaged natural areas by quickly recolonizing them, fill ecological niches of extinct native species, facilitate the growth of juvenile native plants, help endangered species thrive, and provide ecosystem services where they are lacking (Larson 2005; MacDougall and Turkington 2005; Marris 2011; Schlaepfer, Sax, and Olden 2010; Slobodkin 2001). Additionally, if an invasive species has been in an area for an extended period of time, it is likely that the ecosystem has adapted to its presence, so removing it could cause unintended negative effects to the environment they had inhabited (Cowan, Warburton, and Fisher 201; Goodenough 2010; Larson 2005; MacDougall and Turkington 2005). This is not to say that the positives of invasive organisms outweigh the negatives in every (or any) case, but simply that there *are* positives in many situations, and that to portray introduced organisms as completely harmful in all cases is unsubstantiated.

If invasive species aren't as transparently negative as they are so frequently portrayed, one might wonder how this skewed picture was constructed in the first place. I suggest three main reasons for the prevalent antipathy to nonnative organisms: a historic aversion to foreigners, the fallacy of a past "pristine" nature, and reification of the negative conception of invasive species.

### *Historic Aversion to Foreigners*

Dislike of the nonnative has been seen in myriad cases all over the world: mostly in the form of resentment against immigrants. A number of scholars have argued that the radically negative invasive species rhetoric that has been prevalent over time supports and is the result of a xenophobic mindset (Marris 2011; O'Brien 2006). O'Brien (2006,

66-67), troubled by the parallel of invasive species rhetoric and historic intolerance of foreigners, explains, “The main concern among critics is...that the long and deep history of racism and xenophobia, particularly in the US, provides a conveniently supportive framework for expression that helps perpetuate denigrating views of foreigners.” This kind of emotional ostracism in our language is powerful. Both immigrants and invasive species are spoken of as “unnatural” intruders in otherwise pristine places. Of this concern, O’Brien (2006, 66) states, “In south Florida, I hear concerns regarding ‘invasions’ of Haitians, Hispanics, Brazilian pepper, and Australian pines alike.” Similarly, the worry that invasive species will breed with native species and thus destroy the “purity” of the species is analogous to contemporary worries of immigrants reproducing with white Americans and thus destroying the false conception of “original” whiteness of America (Marris 2011; Simberloff 2003).

An example discussed by Simberloff (2003) of the association between negative invasive species rhetoric and xenophobia was seen in Nazi Germany. Hitler strongly promoted the extirpation of all invasive plants because, to him and the Nazi party, it was analogous to the war against the “foreign” and “invading” Jewish people. Simberloff (2003) emphasizes that the German genocide of invasive plants being connected to the Germans’ hatred of foreign people is not indicative of all campaigns against exotics being rooted in xenophobia. Still, the fact that this connection exists at all makes one wonder if similar desires to rid places of foreign plants and animals isn’t at all linked to people’s aversion to foreign people.

The link of invasive species contempt and xenophobia, in addition to being problematic from a human rights perspective, also harbors the issue of scarce resources

being syphoned into projects based on an ideological dislike of things being “out of place” (Marris 2011). Emma Marris, an environmental writer and reporter, nicely summarizes this concern: “spending time and money battling exotics simply because they are not ‘supposed’ to be where they are drains time and money away from more constructive conservation projects” (Marris 2011, 98).

### *Fallacy of Pristine Nature*

Another possible cause of invasive species stigmatization is the fallacy that any given place was once “pristine,” consisting of an unchanging community of species. This mythical concept prescribes that we should pursue management practices that attempt to mold ecosystems back to some “original” version of themselves (Brown and Sax 2004). Marris (2011) questions how much of the concern for invasive species is based in actual concern for ecosystem integrity, and how much of it is based in cultural fear of “historical inaccuracy” (101).

In truth, the line separating what is native and nonnative can be extremely blurred. Due to human land use changes (urbanization, deforestation, etc.) and globalization, today’s background rate of invasions is higher than the natural background rate. This does not, however, change the fact that extinctions and invasions are natural phenomena that have occurred as long as life itself, and some organisms considered “invasive” have been around for hundreds or even thousands of years (Lodge and Shrader-Frechette 2003; Vermeij 2005). There is no set time when an organism is officially considered “naturalized” – “invasive” feral hogs have been in Florida for over 400 years, and the nonnative dingo was introduced to Australia some 5,000 years ago but

is still sometimes argued to be invasive (The Dingo in Australia; West, Cooper, and Armstrong 2009). This dearth in guidelines for naturalization of nonnative organisms is problematic because managers may try to limit the populations of nonnative organisms that are in fact fully adapted to ecosystems, with community roles equivalent to native species.

### *Reification of Negative Conception of Invasive Species*

Based on the theories of Slobodkin (2001), another cause of the wholly negative picture of invasive species seems to be that it is a concept that has been *reified*. A reified concept is one that has been solidified over time with little or no true empirical basis. The reason that people rely on such ideas may be that they are constantly looking for consistent patterns in a world that cannot always provide them – reifications fill in this gap where consistency is lacking. Over time, reifications become “untestable axioms” (Slobodkin 2001, 1) because they are hypotheses that are neither refuted nor proven, and so end up in a sort of limbo, embedded in people’s knowledge bases. The categorization of invasive species as *always* bad for the environment is, according to Slobodkin (2001) and others, a reified concept that is often misleadingly touted as hard fact (MacDougall and Turkington 2005; Slobodkin 2001; Brown and Sax 2004).

Another unproven reification lies in the assumption that invasive species decrease biodiversity. Although some scholars steadfastly believe that invasives are a major cause of biodiversity loss, the validity of this is debated (Didham et al. 2005; Marris 2011; Rosenzweig 2011). According to Rosenzweig (2001, 218), “Introduced species...generally increase – and only in exceptional cases decrease – species richness in

natural ecosystems.” Marris (2011) cites a cluster of oceanic islands that saw significantly increased levels of biodiversity in the individual islands after invasive species were introduced. On one island, says Marris (2011, 103), it was reported that seven of its native species went extinct, but were replaced by sixty-eight nonnative species of plants, leading to an increase in biodiversity of that island. Marris (2011, 103) also explains, however, that the extinctions and introductions of these islands, though leading to increased biodiversity on the individual islands, resulted in a decrease of *global* biodiversity because some unique endemic species were lost and replaced by more common nonnative ones. Nonetheless, Marris (2011, 104), adhering to the notion that the correlation of invasive species to extinctions does not necessarily rule them as the cause (discussed further in the *Driver/Passenger Model* section below), states, “Globally, extinctions that are directly attributable to introduced species are quite rare.”

In reality, it is difficult to determine which species are harmed by which threats, and therefore what the actual causes of biodiversity loss are. Brown and Sax (2004, 531) emphasize how hard it is to “isolate the effects of invasive species from other human impacts.” Coupled with the fact that invasive species can have positive effects on ecosystem health, figuring out exactly how much biodiversity loss they incur is more like an equation with a hodgepodge of variables than a simple bilateral relationship between invasive organism and ecosystem, as some would have us believe. In addition, during attempts to eradicate invasive organisms many unintended animals are often killed, especially when methods such as poison or traps are used, thus threatening the very biodiversity that managers are trying to protect from invasive organisms (Cowan, Warburton, and Fisher 2011).

Aside from a wholly negative portrayal of invasive organisms being faulty, many undesirable consequences also stem from this stereotyping, including an increased subjectivity in scientists evaluating invasive organisms and the conflicting driver and passenger models of invasive species influence. In the next sections I will discuss these consequences.

### *Subjective Science*

On the topic of subjective science, Brown and Sax (2004, 531), along with others, argue that value judgments of what constitutes “good” and “bad” nature dictate how we treat different species more so than scientific evidence (Marris 2011; Minter and Collins 2012; Rosenzweig 2001; Slobodkin 2001). According to Lodge and Shradler-Frechette (2003, 32), “Sometimes value judgments are made and reported by scientists themselves, with no distinction made between the changes in the natural world that they have documented and the judgments they make about the acceptability of such changes.” In other words, certain changes that scientists report as negative for the environment, such as hybridization of invasive and native organisms, may not be objectively negative. A scientist may see this as a bad thing because it is technically decreasing biodiversity (two species become one), and therefore uphold it as a reason to eliminate invasive species. However, if the organism is still thriving in its environment and contributing to overall ecosystem functioning, is the environment or the species really any worse off? Marris (2011) would say it is not. “In a world with precious little money for conservation,” Marris (2011, 106) says, “purism about ‘genetic pollution’ can cause conservationists to throw resources at campaigns that may have marginal value.”

Additionally, Schlaepfer, Sax, and Olden (2010) claim that bias against nonnative species may cause researchers to over-report negative consequences associated with nonnative species and under-report positive ones. If this is the case, then the prevalent belief that invasive species are the antithesis to environmental health may be skewing scientific findings further away from the true influence invasive organisms have on environments they enter (Goodenough 2010; Schlaepfer, Sax, and Olden 2010; Gobster 2005).

#### *Driver/Passenger Model*

Stemming from this subjectivity in science is the uncertainty of whether invasive organisms are initiating the harmful changes seen in ecosystems they inhabit, or if they are in fact just passively existing in already damaged areas. MacDougall and Turkington (2005) discuss how invasive species are automatically blamed for whatever harm exists in the ecosystems they inhabit, yet rarely is this assumption empirically tested. Similarly, Didham et al. (2005) worry that the correlation of invasive species presence and ecosystem decline is often mistakenly taken to equate to causation, when in fact both of these phenomena could be the result of exogenous habitat degradation. When invasive organisms do not initiate the detrimental change in an ecosystem, they are following what MacDougall and Turkington (2005) deem a “passenger” model of invasive organisms. Conversely, the more popularly followed theory is the “driver” model, which says invasive species are the instigators of harmful changes.

To shed some light on this driver/passenger model dilemma, MacDougall and Turkington (2005, 48) did an experiment with invasive grasses in a fire-suppressed oak

savanna to see if the introduced species were causing habitat degradation or merely existing as passengers of it. Overall, the impact of the invasives in this particular system seemed to exacerbate problems that already existed, rather than create new ones. It is impossible to make a generalization for all situations, but this research exemplifies how species invasions most often cause a mixed bag of effects on ecology that range from harmful to beneficial. In cases like this, managing *only* invasive species is essentially skirting the underlying issues like habitat loss, urban encroachment, extinction of vital native species, harmful pollution, etc. When considering invasive species, managers are doing a disservice to ecology by not acknowledging possible positive effects of invasive species and attending only to perceived negative consequences.

## CHAPTER II AN ETHIC FOR INVASIVE SPECIES

Another effect of the overly negative rhetoric surrounding invasive species is that it causes both environmentalists and laypeople to only see these organisms through a lens of negativity, thereby stripping them of moral value and consideration within peoples' minds (Cowan, Warburton, and Fisher 2011, 45). Such devaluation is probably a factor in lethal methods of control (hunting, trapping, poisoning, etc.) being the most common means of managing invasive populations, and nonlethal alternatives (oral contraceptives, relocation, etc.) not being seriously considered (Cowan, Warburton, and Fisher 2011; West, Cooper, and Armstrong 2009). Killing as the management method of choice can create a host of problems such as ecosystem damage if the invasive species was adapted to the area and/or covertly producing positive ecological effects, the unwanted deaths of nontarget species, and the manifestation of opposition from animal rights groups (Cowan, Warburton, and Fisher 2011; Goodenough, 2010).

The management of invasive species often puts the seemingly similar theories of environmental ethics and animal rights at odds. Though these discourses share many of the same goals, such as promotion of biodiversity, respect for nature, and protection of endangered species, they are theoretically divided when it comes to the value of individual animal lives in relation to that of whole systems. Conflict between animal rights groups and environmental managers on invasive species issues can lead to legal fights that delay effective management of invasive creatures until their populations are too large to curb (Perry and Perry 2006).

Perry and Perry (2006) discuss a real life example of this conflict and delay in the case of introduced gray squirrels in Italy. The fear was that these nonnative squirrels would replace the native red squirrel – an occurrence that had been seen in other parts of Europe. The National Wildlife Institute (NWI) proposed a plan to kill the gray squirrels to prevent their spread. Animal rights groups opposed the plan, pushing for translocation and neutering efforts instead of eradication of the squirrels. The NWI determined that these nonlethal methods would be too costly. Because the NWI and the animal rights groups did not reach a compromise, legal battles ensued for three years. Once these conflicts were finally settled, the gray squirrel had spread too widely to for people to manage its population in any way, thus resulting in the disappearance of the native red squirrel.

When animal rights groups and environmentalists clash so severely, neither of their aims are accomplished and they lose focus, quibbling with one another rather than targeting the larger, more pervasive forces destroying the environment and wildlife. In working together environmentalists and animal activists could accomplish far more for both animals *and* the environment than by constantly clashing (Perry 2004; Minter and Collins 2012). For these reasons, many scholars call for animal rights groups and environmentalists to make stronger attempts at compromise. Perry and Perry (2006) argue that environmental managers need to more seriously consider humane treatment when managing invasive populations. Additionally, when animal rights organizations argue for nonlethal management considered economically unfeasible by their environmental counterparts, animal rights groups should offer to help with funding. All in

all, “both groups would benefit from acknowledging they already have common ground and cooperating on changing the status quo” (Perry and Perry 2006, 32).

When calling for compromise between environmentalism and animal rights on the issue of managing nonnative invasive species (NIS), it seems as though we are asking each group to compromise their *ethics*; but are these groups really so patently different that there is no way their theoretical orientations can fit together? In the next section I seek to explore whether the ethics of environmentalists and animal liberationists<sup>1</sup> have any common ground on a moral stance toward invasive species. To begin, I first consider the ethical positions that lead to a framework for valuing invasive species.

The relevant philosophical fields behind an invasive species ethic are those of animal rights and environmental ethics. Ethics can be defined in a few different ways. Schmitz and Willot (2012, xvi) define ethics quite simply as “the study of goodness and rightness—our reasons for acting in one way rather than another.” Leopold (1981, 125) puts a different spin on his definition, defining ethics in terms of the environment as “a mode of guidance for meeting ecological situations so new or intricate, or involving such deferred reactions, that the path of social expediency is not discernible to the average individual.” In its most basic form ethics is a framework of principles meant to guide people in behaving morally.

The ethical situation of invasive organisms is certainly complex. Invasive organisms are in a unique position that makes them difficult to categorize, ethically speaking. They are wild animals,<sup>2</sup> but are often translocated with human assistance and

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1. I use the terms “animal rights” and “animal liberationism” interchangeably.

managed by people; they are part of nature, but do not inhabit the biotic system they are adapted to; they are sentient organisms that strive for their own good and reproduce, but sometimes they inadvertently cause suffering and death to native organisms that they outcompete. Thus, invasive species exist awkwardly at the edges of both environmentalist and animal welfare concerns.

Considering this ambiguity in the categorization of invasive species, what is to be done when nonnative invasive species have been deemed harmful to the natural environment, and environmental managers must choose a course of action? What kind of ethic should they use as a counseling force in their decisions? According to Minter and Collins (2012), there is no clear ethical framework to guide ecologists and field researchers when they are faced with difficult moral dilemmas in which individual lives must be considered in relation to whole biotic systems, such as the case of invasive species management.

The clash that environmental organizers are dealing with is, at its heart, one between environmental ethics and animal rights theory, or holism and individualism (Sober 1986). It would seem these two discourses would have enough in common to find some kind of consensus on the value of individuals in integrated systems of life. Elliot Sober (1986, 133), a prominent philosopher, agrees with this, stating, “Both animal liberationists and environmentalists wish to broaden our ethical horizons—to make us realize that it is not just human welfare that counts.” Still, both Sober (1986) and Mark

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2. I recognize that some invasive species were domesticated pets that escaped or were intentionally released. Nonetheless, if they have survived well enough in the environment to become “invasive” I would call them “wild” even though they may have once been “domestic”.

Sagoff (2005), a well-known environmental philosopher, believe the positions of animal welfare and environmentalism to be fundamentally and irreconcilably at odds. Sagoff's (2005) argument summarizes the essence of this divide:

Environmentalists cannot be animal liberationists. Animal liberationists cannot be environmentalists. The environmentalist would sacrifice the lives of individual creatures to preserve the authenticity, integrity and complexity of ecological systems. The liberationist—if the reduction of animal misery is taken seriously as a goal—must be willing, in principle, to sacrifice the authenticity, integrity and complexity of ecosystems to protect the rights, or guard the lives, of animals. (63)

Sagoff's (2005) words hold the assumption that once a person chooses to be an “animal liberationist” or an “environmentalist,” there is no overlap whatsoever. Though intuition leads us to balk at this statement as being too extreme to be true, it is no simple feat to strip such an argument down to see its validity. In what follows I wish to explore Sagoff's (2005) claims regarding the inherently discordant nature of environmental and animal welfare philosophies by examining relevant views on these theories in relation to nonnative invasive species.

To begin our discussion of the moral standing of nonnative animals, we must first look at whether animals in general deserve moral standing, and, if so, why this is the case. Prominent 17<sup>th</sup> century philosopher René Descartes believed animals to be “insensitive automata” without either subjective experience or the ability to feel pain or pleasure (Kuhse and Singer 2006). Similarly, Kant (1790, 565) postulated animals to be nothing more than “man's instruments,” devoid of sentience or any preference concerning their fate. Kant did, however, believe that people ought to not inflict unjustifiable cruelty on animals, for he saw our treatment of “dumb animals” as a reflection and trial of good treatment of people (Kant 1790, 564).

Today, contrary to Kant's (1790) views, it is fairly well accepted in the scientific community and elsewhere that, in the very least, all vertebrate animals are conscious and can experience a range of discomfort and pleasure (Kuhse and Singer 2006, 561). Despite our increased understanding of the experiences and capacities of nonhuman organisms, there is still question as to their level of rationality, self-awareness, and ability to reflect on others, themselves, and their fates (Kuhse and Singer 2006, 561). The uncertainty of animals having such capabilities is, for some, a deciding factor in their being given moral consideration. Kant was one such skeptic, believing that the capacity for rational thought was the essential characteristic for moral respect, thus affording it only to humans (Kuhse and Singer 2006, 562). Others, such as Sir William Paton, a pharmacologist and ethical theorist, had a similar view, believing "the capacity to accumulate experiences, and 'to build on the past and to look to the future'" should be the deciding factor of ethical regard (Kuhse and Singer 2006, 562). Though we cannot at this point empirically refute the validity of animals *not* having the previously stated cognitive abilities, as Peter Singer (1974, 56) points out, such reasoning for not bestowing moral status to animals falls short when considering human infants and people with severe mental retardation or brain damage. Some animals may in fact have higher cerebral capacities than certain handicapped humans, leaving Kant and Paton (among others) without any foundation for their claims about the moral irrelevance of nonhuman animals.

According to Singer (1974), some philosophers, even after having their claims of the moral superiority of humans deconstructed, still cling to their assertion that nonhumans shouldn't be given ethical regard by resorting to arguments of inherent human dignity and worth (Singer 1974, 56). Of this hollow default, Singer (1974, 57)

shrewdly comments, “Fine phrases are the last resource of those who have run out of arguments.” Singer calls this higher valuation of human animals over nonhumans based on arbitrary differences *speciesism*, which he says is comparable to racism or sexism in essence (Singer 1974).

Singer (1974) himself argues for a utilitarian ethic (the greatest good for the greatest number) that gives equal consideration to *all* animals. Singer’s morally relevant characteristic is an organism’s *ability to suffer*, regardless of its respective intelligence, morphology, or physical ability. Singer (1974) acknowledges that different organisms have different abilities, and so reasons that equal consideration does not necessarily mean equal treatment. It would not make sense, for instance, to give an animal without the faculty of language the right to free speech. At the same time, it would also be illogical to say that an animal without language is of *lesser* moral value than animals with language, and therefore can be harmed without moral redress.

In Singer’s (1974) eyes, all animals are not equal per se, but all have an equal interest in not suffering. Jeremy Bentham (1820) also held the capacity to suffer as the characteristic that determined moral consideration of nonhuman organisms. Thus, like Singer (1974), Bentham (182) rejected rationality and reason as morally relevant indicators, eloquently expressing this in his famous line, “The question is not, Can they reason? nor Can they *talk*? but, Can they *suffer*?” Bentham (1820) differed from Singer (1974), however, in explicitly stating what Singer only implies: that it is acceptable for a person to kill an animal for human benefit as long as he or she minimizes its suffering. Bentham (1820, 566) justified this claim with his proviso that a human-inflicted death is likely much faster and less painful than death in the wild. The fact that Bentham believed

it ethical to kill an animal, but not allow it to suffer, implies that he did not believe animals to have preference in whether they live or die, so long as they don't experience pain or discomfort.

Albert Schweitzer (1946) took a different, more comprehensive, approach to valuing life: he believed that anything living, simply by virtue of it being alive, was sacred and deserving of sympathy and respect. Notably, Schweitzer's ethic encompasses both animal and non-animal beings, including plants as well as organisms as small as bacteria and viruses. In practice, Schweitzer (1946, 1) believed not only that people should refrain from harming life, but also that everyone ought to "help all life which he is able to succour, and [go] out of his way to avoid injuring anything living." Whereas Singer (1974) and Bentham (1820) upheld a passive approach of not inflicting harm on organisms as acceptable, Schweitzer (1946, 1) conceived of nothing less than active and constant help to other creatures as ethical.

Still, Schweitzer (1946, 3) acknowledged that much cruelty and pain goes on in our world and therefore conceded that sometimes it may be unavoidable to harm other life forms. Of this unfortunate fact, he said, "Whenever I injure life of any kind I must be quite clear as to whether this is necessary or not." More contemporary philosophers have followed Schweitzer's lead in valuing *all* life, regardless of the characteristics and capabilities that it may or may not have. Holmes Rolston (1991, 67), for instance, supports a "vital ethic [that] respects all life, not just animal pains and pleasures, much less just human preferences." To clarify, Rolston's (1991) "vital ethic" would include plants and microbes but exclude inanimate natural objects. Essentially, Rolston (1991)

and Schweitzer (1946), though adhering to slightly different conceptualizations, have the same idea about moral valuation: all life is precious.

As we discuss various ethics for life, we see how animal ethics, as it includes more and more life forms, naturally folds into environmental ethics. Perhaps the one defining difference between an “animal ethic” and an “environmental ethic” is regard for larger systems of life. Aldo Leopold (1981) introduced the first ethical theory that included inanimate natural objects (soils, waters, etc.) and collective systems. Leopold (1981, 125) dubbed his holistic environmental philosophy “the land ethic.” A good summary of Leopold’s (1981, 128) belief in moral treatment of the natural world lies in his statement: “A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.” It is clear in Leopold’s (1981) ethic that he values whole biotic systems above all else, including individual organisms. Leopold’s (1981) ethic considers only persistence and success of ecosystems relevant factors of valuation, excluding any regard for suffering or sentience in his moral schema.

A philosophy that stands at a vital intersection of animal rights theory and environmental ethics is that of Holmes Rolston (1991). We discussed earlier Rolston’s (2002, 67) adherence to a “vital ethic” – valuing all lives that *need* certain things to live and thrive. In the same article Rolston (1991, 70) later states, “the stability, integrity, and beauty of biotic communities are what are most fundamentally to be conserved.” Such a statement could be interpreted as Rolston (1991) placing a higher value on larger entities than individual organisms. Rolston (1991) insightfully realizes, however, that the valuation of larger biotic systems is fundamentally different than the valuation of

individual lives. He explains, “Though [an ecosystem] has value *in* itself, the system does not have value *for* itself. Though it is a value producer, it is not a value owner” (Rolston 2002, 70). My interpretation of this statement is that biotic systems *produce* value in their ability to “protect and project...member components” (Rolston 1991, 70) and create new *kinds* of organisms through speciation; these systems do not *own* value because they are not conscious beings with a “will-to-live” (Schweitzer 1946, 1) and/or the ability to experience pain and pleasure (Bentham 1820; Singer, 2002). Unlike individual lives, which are said by Rolston (1991, 70) to have “intrinsic value” (inherent worth, outside of external factors), Rolston (1991, 70) dubs “value-producing” entities as having “*systemic value*” (emphasis added).

Rolston’s (1991) ethic of systemic and intrinsic values is extremely important in the quest for a balanced moral stance toward invasive organisms. Such a comprehensive ethic invalidates Sagoff’s (1984) notion that valuation of the environment *and* individuals can never coincide. Keeping with Rolston’s (1991) philosophy, we can value individuals for their inherent worth, and ecosystems and communities of life for their ability to facilitate and increase such individuals. Sagoff (1984), in my view, errs in positing that you can neither separate the individual from the whole, nor the whole from the individual. This belief is inaccurate because the whole works for individuals, and individuals work for the whole. Therefore, it does not make sense to perceive holistic systems as having value and individual organisms as worthless, or vice versa. There would be no whole without the component parts, and no individuals without the whole: they are inextricably tied to and dependent on one another.

Moreover, Bentham's (1820) and Singer's (1974) ethics of utilitarianism and reduction of suffering can work in the context of systemic value because healthy biotic systems reduce suffering and increase overall well-being of individual organisms. So it would seem, using Rolston's (1991) systemic and intrinsic value systems, along with the utilitarian theories of Singer (1974) and Bentham (1820), that there *is* common ground for environmentalists and animal liberationists to agree on treatment of invasive organisms. In a practical sense, this would mean that invasive organisms ought to be managed if they are harming biotic systems (i.e., hurting the whole, or value producer, and thus hurting the individuals that would have benefitted from the value produced). This management, however, must be careful to consider the lives of the invasive organisms and entail management policies that cause the least amount of suffering and discomfort to the targeted organisms. To carry out these ethics in practice would require cautious investigation into whether or not invasive organisms are truly causing harm to environments, for if they were benign or positive forces in an ecosystem, it would be both unethical and unnecessary to manage them.

Overall, how invasive species are perceived in the scientific realm and managed in real world situations all goes back to rhetoric – how they are talked about by experts in the field of environmentalism, and specifically, invasion biology. In this paper I seek to examine the ways in which invasive species are spoken about in the current environmental field compared to that of the animal rights field.

### CHAPTER III ANALYSIS OF CURRENT INVASIVE SPECIES RHETORIC

For this qualitative case study I analyze and compare the ways that invasive species are talked about and characterized in contemporary environmental and animal rights movements. In order to complete this rhetorical survey I chose two nonprofit organizations from these fields. I made my selections based on two main criteria: prominence within their respective field and number of members or followers. The organizations that best fit these requirements were the Natural Resources Defense Council (NRDC), which focuses on environmental issues, and the Humane Society of the United States (HSUS), which concentrates on the promotion of animal welfare. The NRDC and the HSUS were both the highest ranked nonprofit organizations in their field on Top Nonprofit's "Top 100 Nonprofits on the Web" – a list created by comparing thousands of web-based nonprofit organizations and ranking them based on their followers on social media (Facebook and Twitter), and their rankings on other websites that compare charities (i.e., Alexa Rank, Google PageRank, and Charity Navigator Rating) (Top Nonprofits). In addition, these organizations each ranked high on the Forbes list of "The 200 Largest U.S Charities," which rates charities according to amount of private support, total revenue, fundraising efficiency, charitable commitment, and donor dependency. Additionally, each organization has competitively high membership compared to others in their fields.

The goals of this analysis are to identify the most prevalent themes in the two organizations' language, highlight the convergence and divergence of such themes, and, ultimately, find out if this language points to any viable suggestions for compromise. I

hypothesize that the language used to discuss invasive organisms will have different moral tones in the environmental and the animal organizations. Specifically, I expect the environmental rhetoric to uphold a Leopoldian ethic of valuing whole systems and having little concern for individuals. Further, I predict that the animal organization will embody a utilitarian ethic similar to that of Singer (1974), unilaterally seeking to minimize the suffering of individual animals. Furthermore, I foresee neither organization explicitly adhering to both components of Rolston's (1991) ethic (i.e., systemic value of biotic systems and intrinsic value of individual organisms).

The materials used for this analysis consisted of various published content found on the websites of the HSUS and NRDC. I chose sources that were available for the general public to view, as my interest lies in what kind of implicit messages these organizations are disseminating to the population at large. In the following section I discuss some of the history, background, and goals of the NRDC and HSUS, as well as address how they successfully fulfill the two necessary criteria listed above.

### *The Natural Resources Defense Council*

The NRDC was founded in 1970 by a group of New York City lawyers and law students; today it is one of the most prominent and well-known non-governmental, not-for-profit environmental organizations, with over 1.3 million members and around 350 employees. The NRDC was effective in its advocacy even from its beginning: throughout the 1970s it helped to pass the Clean Air Act, aided in the search for alternatives to offshore oil drilling, and contributed to the fight to ban ozone-destroying CFCs, among other things. Since then, the NRDC has won major battles in land preservation, advocated

to improve the Endangered Species Act, and worked to stop oil exploration near public, preserved lands (Natural Resources Defense Council).

The mission statement of the NRDC holds three prominent themes: human stewardship of the Earth, ecological sustainability, and environmental justice (Natural Resources Defense Council). Though the organization's chiefly stated purpose is to protect the Earth's resources, it adheres to an anthropocentric (human-centered) rather than a biocentric (life-centered) point of view. This is evident when analyzing the NRDC's mission statement, part of which says, "The Natural Resources Defense Council's purpose is to safeguard the Earth: *its people*, its plants and animals and the natural systems on which all life depends" (Natural Resources Defense Council; emphasis added) – one can see from this statement that humans are the first in line of Earth's constituents to be protected by the NRDC, with non-human life forms coming next, followed by the non-living components of the environment.

Nonetheless, it is clear that the NRDC wishes to balance aims of human and eco-welfare in the next portion of the mission statement: "We work to restore the integrity of the elements that sustain life...NRDC affirms the integral place of human beings in the environment" (Natural Resources Defense Council). Interestingly, in the latter part of this statement, by speaking of humans as having an "integral place" in the environment, it seems to be expressing that part of its goals lie in bridging the nature/culture divide and making humans mere community members, rather than dominators, of Earth.

The NRDC's major campaigns today deal with addressing global climate change, moving people toward clean energy alternatives, preserving natural areas, rehabilitating marine ecosystems, and curbing pollution of noxious chemicals (Natural Resources

Defense Council). Though the issue of invasive species is not explicitly stated in these aims, it is nevertheless a prominent part of two of their major campaigns: land preservation and the restoration of marine ecosystems.

### *The Humane Society of the United States*

The HSUS, founded in 1954, is chiefly concerned with advocating for animals from every walk of life and preventing their mistreatment. The HSUS grew out of an amalgamation of different philosophies on animals: that of Nobel-prize winner Albert Schweitzer (discussed in Chapter III), who promoted a reverence for non-human life, Joseph Krutch, who encouraged an appreciation of wild places and the nonhuman animals living therein, and Peter Singer (also discussed in Chapter III), who wrote the famous book *Animal Liberation* and promoted equal consideration for all animals. Though these philosophies are the foundation on which the HSUS was built, it is notable that the organization does not explicitly address these beliefs in the content they publish, but instead focuses on action such as stopping inhumane treatment of animals and preventing human conflicts with animals that could lead to their being harmed (Humane Society of the United States).

Based on its mission statement, the core tenets of the HSUS consist of a utilitarian stance (i.e., the greatest good for the greatest number) toward animals and a movement for social change and educating the public on important animal issues. The HSUS makes a very good attempt at encompassing all kinds of animals in their advocacy, including companion animals, wildlife, farm animals, and animals used in research experimentation (Humane Society of the United States). Though for most of this paper I have referred to

“animal rights” as a field encompassing all respect, reverence, and valuation of nonhuman animals, in practice, organizations based on animal *rights* and animal *welfare* differ. Animal rights organizations, such as Mercy for Animals, endorse the complete abolition of any and all usage of animals by people. Animal welfare groups, on the other hand, call for the humane and respectful use of animals – the HSUS belongs to this practical orientation of animal organizations.

The HSUS focuses on issues such as farm animal protection, abating wildlife abuse, ending the fur trade, and stamping out puppy mills, pursuing their campaigns through “legislation, litigation, investigation, education, science, advocacy and field work” (Humane Society of the United States). The Humane Society is probably best known for its work in supporting local shelters for stray cats and dogs, but it also runs its own rescue operations and animal sanctuaries around the U.S.

Diverging from most other animal organizations, the HSUS focuses on the welfare and ethical treatment of wild animals as well as domestic and companion ones. Because of this concern for wildlife, the HSUS addresses issues of invasive nonnative species and how they are managed, making them an ideal candidate for my case study on invasive species rhetoric from an animal ethics perspective (Humane Society of the United States).

### *Method*

My method of data collection involved reading each chosen source carefully and picking out the words, phrases, or sentences that I found to be emotive. In the tables I used to organize this data, I used the exact quotations of words, phrases, and sentences

from each source (I did not use quotations for each piece of data in the tables to avoid redundancy). My definition for *emotive* rhetoric in this context was any content I thought to express more than just facts and data – words that seemed to have the intent of swaying the reader in a certain direction by eliciting emotion. I further categorized the emotive language I found into “positively charged” and “negatively charged.” The working definitions for these classifications were as follows:

Positively Charged – accepting, appreciating, and/or showing positive regard for organisms considered invasive. Not necessarily accepting, appreciating, or being positive about possible undesirable consequences of their presence (although sometimes denying the severity and/or existence of such consequences altogether), but nonetheless valuing them as beings with inherent worth.

Negatively Charged – highlighting or focusing on the undesirable aspects or consequences of organisms considered invasive. Not necessarily explicitly devaluing invasive creatures (although this can be the case), but, at the same time, not communicating any perceived valuation of them.

Further, I looked at each word, phrase, or sentence I deemed emotive and explained what I found to be the inherent meaning or implicit message of. Finally, I analyzed all of these items with their implicit messages in order to identify what I deemed the major and minor themes from both the NRDC and the HSUS data sets. I designated the themes I found as major or minor based on the number of words, phrases,

or sentences that I felt belonged under each theme. I considered any theme with five instances or less to be minor, and any with more than five to be major.

I wish to make clear that I am in no way claiming that the list I have compiled of emotionally charged rhetoric on the invasive language of these organizations is either comprehensive or objective. My point in this analysis is not to establish an undisputable numerical average of emotional language in these organizations' publications, but rather to show the different kinds of patterns present in their discussions of invasive species. Also, although I do not assert that the rhetoric present in the NRDC and HSUS is universal to all organizations of their respective fields, I have confidence that each organizations' prominence, widespread membership, and mainstream eminence makes it fairly safe to assume that the manner in which they speak about invasive species is standard and acceptable to other organizational movements with similar aims.

### *Results*

I found five prevalent themes in the rhetoric of the NRDC, and six prevalent themes in that of the HSUS. To provide context for my analysis, I have included examples of my results from a single source from each organization. A complete listing of all of the data I collected can be found in Appendices 1, 2, and 3. For the sake of brevity and conciseness, I have only included one data set from each organization within the text. Below is a table of the positively and negatively charged words and phrases in one source of the NRDC (see Table 1.1) and one from the HSUS (see Table 3.1), as well as a table of the implicit messages of the selected emotive phrases and words from the same source of the NRDC (see Table 1.2) and the HSUS (see Table 3.2). Additionally, I

have included tables summarizing the most basic form of my results for the NRDC (see Table 2) and the HSUS (see Table 4), which consist of the number of instances of positive or negative rhetoric in each source, as well as totals for all sources combined – I have included these to show how each organization was skewed to either positive (the HSUS) or negative (the NRDC) conceptualizations of invasive organisms. Following this is a listing of each organization’s themes in decreasing order of prevalence, as well as explanations and exemplifications of each theme.

Table 1.1. A. Invasive Species Threaten Native Ecosystems

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
<b>1.</b>	Some of these things just don’t belong here	Tough
<b>2.</b>	Living pollution	Are tough, reproduce rapidly, and have few natural predators
<b>3.</b>	Disrupt nature’s balance	
<b>4.</b>	Ruthless invaders	
<b>5.</b>	Population exploded	
<b>6.</b>	Probably hitched a ride to the Midwest in ballast water	
<b>7.</b>	Big, aggressive invaders	
<b>8.</b>	Gobbling up the food supply	
<b>9.</b>	A multi-million dollar nightmare	
<b>10.</b>	Destroy...the region’s fishing industry	
<b>11.</b>	One of the newest threats to the fragile Great Lakes ecosystem	

Source: Natural Resources Defense Council

Table 1.2. A. Invasive Species Threaten Native Ecosystems

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Some of these things just don't belong here	Xenophobic exclusion of "some"
2.	Living pollution	The organism's value is reduced down to that of noxious chemicals
3.	Disrupt nature's balance	Pristine being disturbed by unnatural invaders
4.	Ruthless invaders	Implies intentionality of the nonnative organisms: gives them autonomy, and therefore allows them to be blamed directly
5.	Population exploded	Likens the invasive population to a bomb; a danger that was just waiting to come out
6.	Probably hitched a ride to the Midwest in ballast water	Implies a.) the organisms intended to leave their home for a foreign place b.) laziness of the organisms; they didn't come using their own fortitude, but rather piggy backing off of human technology
7.	(Referring to Asian carp) big, aggressive invaders	Rather than classifying them as "invasive fish" or "invasive organisms" they are simply labeling them "invaders", expressing to the reader that they are nothing more than that and should not be valued as anything else.
8.	Gobbling up the food supply	Implies gluttony, eating so quickly that no other creatures have a chance
9.	A multi-million dollar nightmare	Reducing the invasive animals down to the money and hardship they cause
10.	Destroy...the region's fishing industry	Implying that these animals alone can destroy the entire fishing industry. Puts the invasive animals as the sole cause of the industry's decline; ignores any possible human contributions to it.
11.	One of the newest threats to the fragile Great Lakes ecosystem	Paints the Great Lakes ecosystem as delicate, and the invasives as a looming predator
12.	Tough (adjective)	Hardy, adaptable
13.	Are tough, reproduce rapidly, and have few natural predators	Expresses the success of the organism

Source: Natural Resources Defense Council

*NRDC Prevalent Themes*

1. Vilification of invasive species – language that singularly designates invasive species as villains that purposefully destroy the environment, drain people’s economic resources, and intrude on people’s lives; also often entails pitting the environment as the “protagonist” opposite invasive species, the “antagonists”.

Examples:

- “Invasive species...invade an environment and cause the eventual die-off of native species”
- “Ruthless invaders”
- “Big, aggressive invaders [that]...Disrupt nature’s balance”
- ““There are no other physical barriers before these monsters reach Lake Michigan””

2. Assigning autonomy and motives to invasive creatures - words or phrases that imply, either purposefully or unconsciously, the intentionality of the invasive organisms. Rather than attributing their introductions to natural tendencies or human causes, the implicit message here is that the animals have chosen to invade an area with the conscious purpose of dominating the native inhabitants or foiling humans’ plans to keep them out.

Examples:

- “Probably hitched a ride to the Midwest in ballast water”
- “Invaders will stop at nothing short of bricks and mortar, and time is running short to get that protection in place”
- “smothering vegetation”

- “...damage they have wreaked on freshwater fish, endangered marsh birds, and mammals”

3. Personification of invasives in a negative light – language that assigns undesirable human qualities to invasive species.

Examples:

- “High strung and uptight”
- “...intended to prevent the big, hungry fish from colonizing Lake Michigan”
- “Gobbling up the food supply”

4. Devaluation of invasives - phrasing that depicts the invasive organism as not having value or worth.

Examples:

- “Living pollution”
- “Asian carp are like cockroaches, when you see one, you know its accompanied by many more you don't see”
- “A multi-million dollar nightmare”

5. Fallacy of pristine nature – statements that imply the false notion that there is some kind of static pristine or original nature that invasive species destroy; also ignores that species have been invading environments (to a lesser degree than today) for all of time (Brown and Sax 2004)

Examples:

- “[invasive species] often displac[e] native species and disrupt[] ecosystems that have evolved over millions of years”

- “If Asian carp are allowed to establish themselves in the Great Lakes, it could have a devastating impact on Great Lakes fisheries and irrevocably change the ecosystem of the lakes and rivers throughout the watershed”
- “[invasive species] disrupt nature’s balance”

Table 2. Numerical Summary of NRDC Results: instances of positive and negatively charged words and phrases in each NRDC source

		<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>	<b>Word Count in Source</b>
<b>A.</b>	<b>Invasive Species in Great Lakes</b>	11	2	587
<b>B.</b>	<b>Stranger Danger: The Invasive Species Quiz</b>	6	1	986
<b>C.</b>	<b>Invasive Species in San Francisco Bay</b>	6	2	782
<b>D.</b>	<b>Re-envisioning the Chicago River</b>	4	0	3,886
<b>E.</b>	<b>Invasive Bighead Carp Caught Near Lake Michigan</b>	9	0	911
	<b>Total</b>	36	5	7,152

Table 3.1. A. Mute Swans: Voiceless Victims

	<b>Negatively Charged Words/phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
<b>1.</b>		Beautiful
<b>2.</b>		Victims of unnecessary killing
<b>3.</b>		Swans have come under attack
<b>4.</b>		Accused of eating too much vegetation
<b>5.</b>		The state's population of just 40 swans has been deemed an invasive nuisance.
<b>6.</b>		In reality, swans are merely convenient scapegoats for human-caused environmental problems.
<b>7.</b>		Slaughter
<b>8.</b>		Naturalized

Source: Humane Society of the United States

Table 3.2. A. Mute Swans: Voiceless Victims

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Beautiful	Appreciating organism's aesthetic beauty
2.	Victims of unnecessary killing	Responding to the approach of labeling invasive creatures as enemies by instead implicating the invasives as victims
3.	Swans have come under attack	Militaristic language
4.	Accused of eating too much vegetation	Implies a possibly wrongful accusation
5.	The state's population of just 40 swans has been deemed an invasive nuisance	The other side – the Department of Natural Resources – is being ridiculous; singling out a small population of swans for no apparent reason
6.	In reality, swans are merely convenient scapegoats for human-caused environmental problems	Puts the blame on humans instead of invasive creatures. A call for humans to address <i>their</i> impact rather than focusing on the impact of nonnative organisms
7.	Slaughter	Unnecessary and violent killing. It is significant that they are not referring to this killing as “hunting” – hunting implies sport and recreation; the HSUS clearly does not see this practice as anything that should be recreational
8.	Naturalized	These organisms have been around so long that they are in fact part of the <i>natural</i> environment. Using this adjective completely rejects the targeting of these creatures for being invasive, as it denies their invasiveness altogether.

Source: Humane Society of the United States

*HSUS Prevalent Themes*

1. Appreciation/Valuation of invasive organisms – phrasing that emphasizes the intrinsic value and worth that the animal is perceived to have, and/or appreciating their existence.

Examples:

- “Excellent at taking advantage of the opportunities we supply”

- “Mute swans are a beautiful, engaging and captivating part of the Chesapeake Bay”
  - Gregarious
  - Clever little birds
2. Victimization of invasives – portrayals of invasive species that imply their being persecuted unjustly.

Examples:

- Now swans, in addition to being scapegoats for the damage that pollution causes the Chesapeake Bay, are being made scapegoats for the inability of managers to preserve viable populations of these beleaguered species and their habitats (F)
  - For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year (F)
  - Reviled...for their natural competition with native songbirds
  - Victims of unnecessary killing
3. Denigration of invasive opposition campaigns – language that attempts to undermine the arguments of those trying to eliminate or harm invasive organisms.

Examples:

- DNR’s undivulged and barbaric swan killing

- Given budget constraints due to the current financial crisis, the state cannot afford to waste precious time and resources stalking and killing animals just because they don't think they belong here
  - it is simply preposterous for Md. DNR to allege that a few hundred Mute Swans have any measurable negative impact on aquatic vegetation in the Bay
  - The state's population of just 40 swans has been deemed an invasive nuisance
4. Denial of invasiveness through naturalization theory – statements that essentially deny the invasiveness of the targeted species by deeming them adapted, or naturalized, into the environment they inhabit.

Examples:

- They have been in this country at least since the 1800's and may have been here in small numbers before Caucasians arrived from Europe
  - The fact is that while aquatic vegetation in the Bay is clearly not capable of thriving in a turbid, polluted environment, it is fully adapted to being consumed by and thriving with all of the aforementioned waterfowl in addition to Mute Swans
  - Brought [to the U.S] more than a century ago to help control insects
5. Personification of invasive creatures in a positive light – language that assigns desirable human qualities to invasive species.

Examples:

- The little brown bird we see hopping boldly on city streets

- We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots
6. Highlight ecological or human benefit from invasive species – advocating for invasives by talking about the positive aspects, to either the environment or to people, of their inhabitation of an area.

Examples:

- [In spring] visiting flocks probe the grass for grubs and clean up insects among the new growth. They are actually performing a service
- One of the only birds willing to live in inner cities. Would we be better off if these places were empty and lifeless?

Table 4. Numerical Summary of HSUS Results: instances of positive and negatively charged words and phrases in each HSUS source

		<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>	<b>Word Count in Source</b>
<b>A.</b>	<b>Mute Swans: Voiceless Victims</b>	0	8	339
<b>B.</b>	<b>House Sparrow</b>	2	13	1,645
<b>C.</b>	<b>Starlings</b>	2	4	1,512
<b>D.</b>	<b>Python Trade</b>	2	1	568
<b>E.</b>	<b>Statement on Nonnative Wildlife</b>	0	2	68
<b>F.</b>	<b>Letter regarding mute swan advisory meeting</b>	0	21	3,039
	<b>Total</b>	6	49	7,171

## CHAPTER IV DISCUSSION OF RHETORIC

Overall, the rhetoric of these two organizations, as expected, seems to be a manifestation of the friction between the fields of environmentalism and animal rights. The NRDC major themes did not address animal welfare concerns, but many of the major themes I found in the HSUS data seemed to be a direct rebuttal of certain environmentalist claims on invasive species. In the following sections I evaluate my findings from each organization.

### *Evaluation of NRDC Themes*

The first three of the NRDC's themes of *vilification*, *assignment of autonomy*, and *negative personification* all work together toward the same goal: assigning invasive species person status so they can be made responsible for the negative consequences of their presence. Their being portrayed as autonomous agents is not a means of expressing their value, but rather, a way of communicating that they are fundamentally different – more cunning and devious – than innocent and “victimized” native species. Giving invasive organisms autonomy allows us to target them as blameworthy in environmental campaigns advocating removal of nonnative species. To depict invasive creatures as innocent animals just trying to survive would make campaigns garnering support for their lethal management ineffectual. In general, people do not want to kill innocent animals – “ruthless invaders,” however, is a different story (Natural Resources Defense Council).

Interestingly, the theme of *devaluation* communicates something almost counter to the above themes of *assignment of autonomy* and *personification*. These themes clash

with one another and communicate invasive species as both above and below native ones. They are formidable opponents to humans trying to preserve ecosystems, yet they are, at the same time, underneath the status of living beings. In this way we get a picture of invasive organisms as existing in a kind of limbo between humans and nonhumans; from this perspective evaluating their moral standing is an extremely ambiguous and confusing task.

The last theme of the NRDC, *fallacy of pristine nature*, embodies a misconception about biotic systems. The implication within this theme is that ecosystems are static entities that, once having achieved optimal functioning, cease to evolve. This is a false idea, but it communicates the point that invasive organisms don't belong, that they don't fit in the "pristine" version of ecosystems, and therefore that they need to be removed. If we were to (more accurately) conceive of such "invaded" communities as constantly evolving, fluctuating, speciating, and changing in energy balance, it would be harder to see invasive organisms as irrevocably "foreign."

#### *Evaluation of HSUS Themes*

The HSUS makes sure to emphasize a *valuation* of invasive organisms. This seems to be a direct rebuttal of the *devaluation* and *negative personification* that the NRDC expresses against invasives. This theme also entails a reframing of the invasion process: rather than portraying invasive organisms as "ruthless invaders" (Natural Resources Defense Council) taking more than their share, the HSUS refers to them as "Excellent at taking advantage of the opportunities we supply" (Humane Society of the United States). Similarly, portraying invasives as *victims* is directly opposite to the

NRDC tactic of portraying them as *villains*. Instead of focusing on their harming the environment, the focus is on their *being* harmed (and wrongly so, according to the HSUS) by human agents.

The theme of *denigration of invasive opposition campaigns* was not something I expected to see in the HSUS rhetoric. Again, this is a reappropriation of blame from the organisms to people: instead of focusing on invasive harm, the focus is on the inhumaneness of people's invasive species management and a supposed lack of justification for such methods.

### *Shortcomings of Rhetoric*

I found there to be shortcomings in the language of both the NRDC and the HSUS. Essentially, in the NRDC separating nonnative organisms from native ones, they are designating them as the “other.” Historically, this kind of tactic has been justification for the inhumane treatment of groups of people as well as animals (Singer 1974). While making invasive species the “other” may make it easier for people to sympathize with eradicating them, in doing this they are stripped of moral value and no longer recognized as sentient beings. Following this, people often fallaciously believe *all* nonnative creatures to be invasive. If people follow the messages of the NRDC's rhetoric, they may not see any value in such “invasive” creatures and thus think it their environmental duty to eradicate them – if such nonnatives are actually beneficial to the ecosystem they reside in, this could be very harmful to the environment at hand, not to mention an unnecessary destruction of life (Goodenough 2010; Schlaepfer, Sax, and Olden 2010; MacDougall and Turkington 2005).

Furthermore, the tone of HSUS rhetoric when speaking about *less* personable invasive organisms, such as pythons in the Everglades, is far less positive and bolstering than when speaking about more charismatic species such as mute swans and house sparrows. This goes against the central tenet of the HSUS to support and respect *all* animals, even ones considered scary or undesirable by people. In addition, the HSUS denigrates the claims of their environmental opposites quite harshly. This depreciation is a manifestation of the friction between the two schools of thought (animal rights and environmentalism), and is problematic in that it polarizes the movements even more severely. The HSUS focuses on the immorality and despicableness of the environmental movement's actions against invasive organisms, which precludes their providing a balanced view that takes into account and respects environmental campaigns. It seems likely that this lack of mutual understanding plays a large role in environmentalism and animal rights being unable to compromise on invasive species management.

Moreover, the rhetoric of neither organization took into account the full range of positive and negative impacts that invasive organisms incur. Rather, each one focused on either the positive or negative consequences of invasive presence based on each organization's agenda. The HSUS at least acknowledged a regard for environmental health, whereas the NRDC did not show any hint of considering animal welfare in its campaigns.

Colautti and MacIsaac (2004) have pointed out an important caveat of invasive species rhetoric that neither the NRDC nor the HSUS has recognized: the term *invasive species* is a misnomer – invasive organisms do not comprise their entire species, but rather *populations* of their species. Referring to an invasive set of organisms as a

“species” ignores the fact that “the same ‘species’ that are nonindigenous, naturalized, or invasive in one area are native somewhere else” (Colautti and MacIsaac 2004, 136). If we follow Colautti and MacIsaac’s (2004) lead and move to a rhetoric that replaces the term invasive *species* for invasive *populations*, we might be able to curtail the tendency to generalize all members of an invasive species (even ones in their native ranges) as being harmful. Such a transition in invasive species language could also help reduce the inclination to dichotomize invasive organisms and native organisms into categories of “bad” and “good” – if we emphasize that a group of environmentally deleterious nonnatives represent only a *population* of their species, and that they are in fact native elsewhere, perhaps we can move toward a deconstruction of the conception of invasive creatures as the “other,” and thereby begin to reassign them the same moral value that native organisms enjoy.

#### *Ethical Orientations Represented in Rhetoric*

I feel that I was correct in my expectation that the NRDC would adhere to a Leopoldian ethic of appreciating biotic systems, while placing little value on individual organisms. I was wrong, however, in my prediction that the HSUS would disregard environmental issues in its focus on individual organisms. The HSUS *did* consider the ecological impact of invasive organisms, but their focus was mostly on invasive organisms’ *positive* environmental influence, perhaps underrepresenting the harm that they sometimes cause.

The HSUS had a strong focus on the *suffering* of invasive organisms being managed by environmental campaigns, and thus aligned, as predicted, with a Singer-

esque utilitarian ethic. By appreciating (though perhaps not providing a full picture of) the plight of the environment as well as that of individual animals, the HSUS comes close to a Rolstian ethic of systemic and intrinsic value. The HSUS, however, deviates from Rolston's (1991) philosophy, as well as Schweitzer's (1946) reverence for life, in not fully advocating for/valuing *all* individual components of the biotic system, but instead focusing on sentient, charismatic animal beings. In doing this they are excluding non-animal organisms in their moral schema (such as plants and bacteria) and placing lesser value on socially undesirable life forms.

## CONCLUSION

Language is a prominent expression and perpetuation of the ideologies of its time. The conflicting ways that invasive species are spoken about in the environmental and the animal rights spheres are reflections of not only their disagreement on this issue, but also their division on the valuation of individual organisms. It is regrettable that environmentalism and animal rights are divided in this way, as they share so many of the same goals: protection of animals and the environment, extending people's moral circle to nonhuman entities, and changing our relationship to the nonhuman world (Callicott 1988; Perry and Perry 2006). Callicott (1988, 163) illustrates this point nicely: he says, "From a practical point of view, it would be far wiser to make common cause against a common enemy – the destructive forces at work ravaging the nonhuman world – than [for animal liberationism and environmentalism] to continue squabbling among [themselves]."

Overall, the language of the NRDC supports scholars' claims that there is a stigmatization and devaluation of invasive organisms in the current environmental rhetoric (Brown and Sax 2004; Gobster 2005; Larson 2005; MacDougall and Turkington 2005; Marris 2011; Schlaepfer, Sax, and Olden 2010; Slobodkin 2001). In regard to this, Brown and Sax (2004, 531) call for "more scientific objectivity and less emotional xenophobia" so that nonnative species may be viewed and treated in as ethical and ecologically sound manner as possible. Similarly, Slobodkin (2001, 9) argues that although we should do what we can to limit the harm done by invasive species, we should act based on factual information and not blind human bias against nonnative species. Ultimately, Slobodkin (2001, 9) suggests that we "abandon...the notion of bad

species” – a simple, yet powerful concept that could help bring us closer to a more comprehensive respect for life.

A possible roadblock to all of these suggested improvements in invasive species conceptualization is that objectivity may be more of an ideal than something people can realistically hope to achieve. People’s individual beliefs and backgrounds, which lead to the subjectivity in question, are extremely difficult to extricate from their actions and speech. Nevertheless, it is still productive for people to *realize* and *acknowledge* their bias, and in this way move toward deconstructing it. A good place to start in realizing bias against nonnative organisms is to reframe how we speak about them. For example, instead of using violent, vilifying language to polarize people into action, a more productive route would be to employ positive rhetoric focused on being proactive for animals and the environment. Gobster (2005) calls for an emphasis on optimism, transformation, and restoration in place of the current focus on negativity, fear, and violence.

Additionally, Emma Marris (2011), an environmental writer and reporter, insightfully calls for this reframing to also include us shifting our gaze off of the invasive organisms themselves and onto the *human* hand in species invasion. Of this misplaced focus, she says, “Ultimately, the enemy is not exotics; the enemy is us” (Marris 2011, 98). Similarly, Larson (2005, 499) suggests a reframing of invasive organisms as “human symbionts” because their misplacement is often the result of human activities, and in truth, the heart of their “crime” lies simply in taking advantages of situations we create. In blaming invasive creatures for the environmental harm that can stem from their presence, we are able to shift ourselves out of the notorious spotlight of environmental

destruction and push invasives there in our place. Nice as it may be to lift some guilt off of human shoulders, it is unrealistic, and is causing a lack of moral regard for innocent “invasive” organisms that have no morally relevant differences than native creatures.

Another problem with the invasive species paradigm is that it further divides human activity from nature in assuming that, although species leaving their original range has always been an ecological inevitability, any species translocation facilitated by *people* is considered “unnatural,” and therefore an “invasion” (Lodge and Shrader-Frechette 2003; Vermeij 2005). Are we really so different from the natural systems we evolved from that we can make this distinction? Aren’t all human activities technically a product of nature? I am not advocating a shift into nihilism where we value nothing as “nature” because everything is “nature,” but rather a recognition of our place as part of nature, and an acceptance of human-altered environments as being valuable in their facilitation of life, which, according to Rolston (1991), is inherently valuable.

Some scholars, contrary to the popular construction of invasive organisms as a scourge on the environment, hold that species invasions may actually be a necessary occurrence for the long-term viability and biodiversity of natural places (Marris 2011, Vermeij 2005). A commonly ignored fact is that environments with foreign inhabitants do eventually adapt to and come to depend on once-nonnative organisms. Regarding these issues, Marris (2011) insightfully points out:

“The despised invaders of today may well be the keystone species of the future’s ecosystems, if we give them the space to adapt and don’t rush in and tear them out. These emerging, exotic-dominated ecosystems still look like trash to most ecologists. But a brave few have embraced them and given them a more positive name: *novel ecosystems*.” (109)

In this statement not only does Marris highlight the conservation value that nonnative species can have in future speciation of ecosystems, but she also calls for the same shift in invasive species rhetoric that I have suggested – a move toward embodying more positivity and acceptance in our discussions of invasive organisms.

The proliferation of nonnative organisms around the globe, as well as the human activities that have induced it, are complex and nuanced phenomena that have neither entirely positive nor entirely negative consequences for people and the environment. As of today, this complexity is not being represented in the rhetoric, leading to detrimental misconceptions and generalizations regarding nonnative creatures. Speaking as a believer in the environmental movement, as well as the importance of ecological protection: do we really want to resort to language that portrays organisms misplaced from their native range as enemies? Do we want to disrespect life, even if it is “out of place”? I would hope not. Both environmentalism and animal rights challenge normative conceptions of who and what is morally relevant in this world, and thus lead us in the direction of a valuation of nonhuman life. My hope is that one day these two movements can bridge their differences and work together toward the ultimate goal that all of these efforts allude to: a respect for all life on Earth.

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APPENDIX 1: NRDC DATA NOT INCLUDED IN PAPER

**B. Stranger Danger**

	<b>Negatively Charged Words/phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	Invasive species...invade an environment and cause the eventual die-off of native species	[Kudzu vines] blanket Southern yards, trees, and even houses
2.	Nonnative species that don't cause harm are classified simply as "alien"	
3.	[Asian carp are] High strung and uptight	
4.	[Kudzu vines are] smothering vegetation	
5.	[Kudzu vines] blanket Southern yards, trees, and even houses	
6.	Pesky critters	

Source: Natural Resources Defense Council

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Invasive species...invade an environment and cause the eventual die-off of native species	The extinction of native organisms is inevitable following the introduction of new organisms. Also puts invasive species as the sole cause of any extinctions
2.	Nonnative species that don't cause harm are classified simply as "alien"	Even though such nonnative species don't cause harm, they are still given the pejorative term "alien", insinuating their undesirability simply for being "foreign"
3.	[Asian carp are] high strung and uptight	Personification of the organisms; portraying them as unlikable characters that simply don't fit in
4.	[Kudzu vines are] smothering vegetation	Double meaning: smother can mean either to "cover someone or something entirely" or to "kill (someone) by covering their nose and mouth so that they suffocate" (Oxford Dictionaries). In this context I think the meaning could be interpreted as either one of the definitions. If one assumes the latter definition, intentional and violent killing is implied
5.	[Kudzu vines] blanket Southern yards, trees, and even houses	Stifling, overbearing (could refer to safety or warmth, but I don't think that meaning is expressed in this context)
6.	Pesky critters	Nonnative creatures are an annoyance, pests

Source: Natural Resources Defense Council

**C. The Green Gate: NRDC’s Environmental Guide to the San Francisco Bay Area.**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	Aggressive	A beautiful invader
2.	[Invasive species] dominate many of the original plant and animal communities	Thriving
3.	[Invasive species] often displace native species and disrupt ecosystems that have evolved over millions of years	
4.	Invasives can...complicate restoration efforts	
5.	Damage they have wreaked on freshwater fish, endangered marsh birds, and mammals.	
6.	A beautiful invader	

Source: Natural Resources Defense Council

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Aggressive	Overzealous and hostile
2.	[Invasive species] dominate many of the original plant and animal communities	Implies intentionality and a consciously competitive nature of the invasives; also that the “original” organisms have been in this ecosystem since the beginning of time – implies stasis of ecosystem
3.	[Invasive species] often displace native species and disrupt ecosystems that have evolved over millions of years	Implies that before these invasive creatures entered the ecosystem, it was pristine
4.	Invasives can...complicate restoration efforts	Implies that an ecosystem restoration can never include nonnative organisms, even if the nonnatives have become naturalized and developed mutualistic relationships with native organisms
5.	Damage they have wreaked on freshwater fish, endangered marsh birds, and mammals.	“wreaked” has an air of intention, desiring to inflict harm on someone or something due to ill will toward them
6.	A beautiful invader	A paradox: the invasive creature is beautiful, but it is a façade, hiding its true intentions of ecosystem wreckage behind an aesthetically pleasing body
7.	Thriving	Implies an appreciation of the animal’s success

Source: Natural Resources Defense Council

**D. Re-Envisioning the Chicago River: Adopting Comprehensive Regional Solutions to the Invasive Species Crisis**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	Invasive Asian carp have made their way past electric barriers	
2.	Intended to prevent the big, hungry fish from colonizing Lake Michigan	
3.	If Asian carp are allowed to establish themselves in the Great Lakes, it could have a devastating impact on Great Lakes fisheries and irrevocably change the ecosystem of the lakes and rivers throughout the watershed	
4.	Asian carp are voracious filter feeders	
5.	(on more invasive species entering the Great Lakes): a problem that stresses our ecosystems and costs the American economy billions of dollars every year	

Source: Natural Resources Defense Council

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Invasive Asian carp have made their way past electric barriers	Has a militaristic air. Electric barriers have been used in wars to keep enemy troops out. Therefore, this likens the fish to enemy invaders and gives them intentionality
2.	Intended to prevent the big, hungry fish from colonizing Lake Michigan	“big” and “hungry” indicate the voracity of the animals; big animals usually invoke fear in humans, and using “hungry” as an adjective for them implies that they are perpetually in this state, and therefore always on a determined hunt for scarce resources. Also colonization implies deliberate, possibly militaristic invasion; reminiscent of early American colonization of the U.S continent

		and other countries where they were unwanted. Implies deliberately and forcefully entering a region and taking over
3.	If Asian carp are allowed to establish themselves in the Great Lakes, it could have a devastating impact on Great Lakes fisheries and irrevocably change the ecosystem of the lakes and rivers throughout the watershed	Implies a pristine state of the ecosystem before the carp enter
4.	Asian carp are voracious filter feeders	They will stop at nothing to satisfy their huge appetites
5.	(on more invasive species entering the Great Lakes): a problem that stresses our ecosystems and costs the American economy billions of dollars every year	Implies that ecosystems do not normally have stressors. Assumes a static state of nature until invaders show up

Source: Natural Resources Defense Council

**E. Carp Captured: Invasive Bighead Carp Caught Near Lake Michigan**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	The nightmare scenario of Asian carp entering the Great Lakes through Chicago waterways	
2.	Carp have evaded an electrical barrier intended to prevent their movement out of canals	
3.	The invasive fish pose a dire threat to the Lakes because of their size and voracious appetites	
4.	Environmental groups... have been advocating for quick action to impede the carp's headlong swim towards Lake Michigan	
5.	Federal officials and business interests have questioned the validity of cutting edge science that pointed to the invasive species' presence	
6.	"Asian carp are like cockroaches, when you see one, you know its accompanied by many more you don't see," said Henry Henderson, Director of the Natural Resources Defense Council's Midwest Program	
7.	"There are no other physical barriers before these monsters reach Lake Michigan," said Andy Buchsbaum, Director of the Great Lakes Office of the National Wildlife Federation	
8.	"Invaders will stop at nothing short of bricks and mortar, and time is running short to get that protection in place." - Joel Brammeier, president of the Alliance for the Great Lakes	
9.	"Great Lakes restoration and economic recovery hinge on preventing invasive species like the Asian carp from getting into the Lakes	

Source: Natural Resources Defense Council

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	The nightmare scenario of Asian carp entering the Great Lakes through Chicago waterways	Prospect of horror, fear, and terrorization
2.	Carp have evaded an electrical barrier intended to prevent their movement out of canals	An electrical barrier itself implies war, that the organisms are an enemy to keep from breaching the "protagonist" territory. Also, the verb "evade" implies intentionality
3.	The invasive fish pose a dire threat to the Lakes because of their size and voracious	"Dire" is a very strongly negative word. Voracious appetite implies them taking

	appetites	more than their share
4.	Environmental groups...have been advocating for quick action to impede the carp's headlong swim towards Lake Michigan	Implies conscious motivation of the fish; as if the fish know that they are racing to get there before people set up blockades
5.	Federal officials and business interests have questioned the validity of cutting edge science that pointed to the invasive species' presence	The fact that the only word used is "presence" – not "harm" or "damage" – implies that the mere presence of an invasive creature is enough to warrant action
6.	"Asian carp are like cockroaches, when you see one, you know its accompanied by many more you don't see," said Henry Henderson, Director of the Natural Resources Defense Council's Midwest Program	This comparison likens the carp to cockroaches, which are widely considered disgusting, as well as a nuisance and a pest. Also implies their being sneaky and disingenuous, pretending to be lesser in number than they truly are
7.	"There are no other physical barriers before these monsters reach Lake Michigan," said Andy Buchsbaum, Director of the Great Lakes Office of the National Wildlife Federation	Definition of monster from Oxford Dictionaries: "an imaginary creature that is typically large, ugly, and frightening." This label further designates the carp as the "other", separate from the natural and the human environment
8.	"Invaders will stop at nothing short of bricks and mortar, and time is running short to get that protection in place." - Joel Brammeier, president of the Alliance for the Great Lakes	Again implies conscious motivation of the carp to get into and "invade" the lake. Calling them simply "invaders" also reduces them to beings with only one motivation: to get into foreign environments and take over/colonize

Source: Natural Resources Defense Council

APPENDIX 2: HSUS DATA NOT INCLUDED IN PAPER

**B. House Sparrows**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	House sparrows can get under our skin	Gregarious
2.	They get into our houses and stores, crowd other birds at feeders or birdbaths	Hardy
3.		Reviled... for their natural competition with native songbirds
4.		Brought [to the U.S] more than a century ago to help control insects
5.		The little brown bird we see hopping <i>boldly</i> on city streets
6.		Excellent at taking advantage of the opportunities we supply
7.		One of the only birds willing to live in inner cities. Would we be better off if these places were empty and lifeless?
8.		Let's accept these naturalized citizens and deal with the conditions we control to minimize problems
9.		Thrive on the food and shelter we provide
10.		We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots
11.		They fiercely defend their nests
12.		Vilified for edging out...popular native species
13.		Clever little birds

Source: Humane Society of the United States

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Gregarious	Could be a personification of the organism as fun, sociable; or could refer to its tendency to flock in a group/community
2.	Hardy	Complimenting these birds for their ability to withstand difficult conditions (rather than admonishing them for disrupting humans or taking resources from other birds)
3.	Reviled...for their natural competition with native songbirds	Implies that these birds are hated for carrying out behavior that is <i>natural</i> ; also assumed <i>natural</i> is a good thing to be
4.	Brought [to the U.S] more than a century ago to help control insects	Implies their naturalization because they have been around so long; emphasizes that they were deliberately brought here by humans, and refers back to the original reason they were brought - which was to provide a service - thus pointing to their possibly still carrying out this service
5.	The little brown bird we see hopping boldly on city streets	<i>Little</i> is an endearing term here, removing any ill intentions from the bird's actions; also, <i>hopping boldly</i> seems to be praising this bird's independence and fearlessness in a human environment
6.	Excellent at taking advantage of the opportunities we supply	Pointing out that <i>we</i> supply the opportunities, and this bird (as well as all invasives) are simply maximizing their chance at survival by cleverly taking advantage of them
7.	One of the only birds willing to live in inner cities. Would we be better off if these places were empty and lifeless?	Implies that people have created undesirable environments, and that we should be glad that any bird will live in them, as they enhance otherwise lifeless areas
8.	Let's accept these naturalized citizens and deal with the conditions we control to minimize problems	Directly states that they are naturalized, not invasive. Also, encourages focus on addressing and reducing the problems the organisms cause rather than eliminating them.
9.	Thrive on the food and shelter we provide	Implies efficient use of the resources that we have inadvertently left for them
10.	We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots	Diligence is a human/Western trait that is valued, this personifies them in a positive light
11.	They fiercely defend their nests	Implies a strong care for their young, emphasizes the nurturing motives behind some of their actions

<b>12.</b>	Vilified for edging out...popular native species	Implies that they have a natural advantage over native species, and that humans are protecting the native species for superficial reasons (i.e., they find them more appealing)
<b>13.</b>	Clever little birds	Praising the birds' ingenuity
<b>14.</b>	House sparrows can get under our skin	The negative side to having these birds around – they annoy people
<b>15.</b>	They get into our houses and stores, crowd other birds at feeders or birdbaths	Emphasizes their intrusion into people and native birds' lives

Source: Humane Society of the United States

### C. What to Do About Starlings

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	Their noise and droppings are extremely unwelcome	Flexible nature
2.	In a few towns and cities, starlings form extremely large, noisy, and messy roosts	Thrive in cities and suburbs as well as on farms
3.		Undoubtedly [provide] a service by eating insects
4.		[In spring] visiting flocks probe the grass for grubs and clean up insects among the new growth. They are actually performing a service

Source: Humane Society of the United States

	<b>Emotive Words/phrases from Source</b>	<b>Implicit message</b>
1.	Flexible nature	Naturally adaptable, able to mold itself to fit different environments
2.	Thrive in cities and suburbs as well as on farms	Diverse, adaptable organisms
3.	Undoubtedly [provide] a service by eating insects	Focus on an ignored positive aspect of their presence
4.	[In spring] visiting flocks probe the grass for grubs and clean up insects among the new growth. They are actually performing a service	Emphasis on how they actually help the native environment
5.	Their noise and droppings are extremely unwelcome	Admitting negative aspects of their presence that people dislike
6.	In a few towns and cities, starlings form extremely large, noisy, and messy roosts	How their excessive success can be problematic in human environments

Source: Humane Society of the United States

**D.**

**The HSUS Urges End to Python Trade**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.	Dramatic expansion of populations	"Because of the reckless practices of the pet trade, and the foolish decisions by people who want to own exotic animals, Florida has a major problem on its hands [i.e., the proliferation of nonnative pythons in the Everglades]," said Wayne Pacelle, president and CEO of The Humane Society of the United States
2.	Enormous reproductive capabilities	

Source: Humane Society of the United States

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	"Because of the reckless practices of the pet trade, and the foolish decisions by people who want to own exotic animals, Florida has a major problem on its hands [i.e., the proliferation of nonnative pythons in the Everglades]," said Wayne Pacelle, president and CEO of The Humane Society of the United States	Puts blame on people for this invasive species problem
2.	Dramatic expansion of populations	Unchecked population growth, uncontrollable by people
3.	Enormous reproductive capabilities	Tones of alien-ness; their unrestrained reproduction is indicative of an other-worldly nature

Source: Humane Society of the United States

**E. Statement on Wild Animals: Non-Native Wildlife**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.		The HSUS supports humane forms of population management
2.		[The HSUS] opposes methods [of invasive species management] that cause trauma and suffering”

Source: Humane Society of the United States

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	The HSUS supports humane forms of population management	Agrees that population management of nonnative organisms is sometimes necessary, but the HSUS will only get behind it if they deem it to be <i>humane</i>
2.	[The HSUS] opposes methods [of invasive species management] that cause trauma and suffering”	If the management efforts cause pain or discomfort for the animals involved, the HSUS will not support it; also shows that the HSUS values the lives of even invasive animals

Source: Humane Society of the United States

**F. Letter regarding Mute Swan Advisory Meeting**

	<b>Negatively Charged Words/Phrases from Source</b>	<b>Positively Charged Words/Phrases from Source</b>
1.		Public understanding of the plight of mute swans
2.		DNR’s undivulged and barbaric swan killing
3.		People who simply appreciate the majesty and stoic dignity of mute swans, just for the beauty and life they represent
4.		The hundreds of thousands of Maryland citizens that see and appreciate the beauty of mute swans on the Bay

<b>5.</b>		DNR's recent admission that it has been aggressively killing Maryland's remaining swans
<b>6.</b>		DNR's callous and sustained persecution of mute swans is attracting worldwide attention.
<b>7.</b>		Unnecessary slaughter [of mute swans]
<b>8.</b>		This tragedy [i.e., the mute swan killings by the state DNR] should end, here and now
<b>9.</b>		Mute swans are a beautiful, engaging and captivating part of the Chesapeake Bay
<b>10.</b>		They have been in this country at least since the 1800's and may have been here in small numbers before Caucasians arrived from Europe
<b>11.</b>		They are a naturalized, integral and beautiful part of the modern Chesapeake Bay ecosystem—one that should be treasured and maintained for the enjoyment of citizens and the vibrant life they represent
<b>12.</b>		Alleged significant negative impacts Mute Swans may pose in isolated situations in the Bay, while ensuring that these majestic birds would remain in Maryland waters for future generations to enjoy and treasure
<b>13.</b>		This proposal, which came to be known as the Impact Based Management Approach, has the benefit of meeting the public's desire to allow these magnificent birds to grace

		and beautify the Chesapeake Bay while allowing Md. DNR to control any significant negative impacts attributed to swans
14.		It is simply preposterous for Md. DNR to allege that a few hundred Mute Swans have any measurable negative impact on aquatic vegetation in the Bay
15.		The Bay has always been host to huge populations of various species of waterfowl including geese, swans, and ducks, all of which eat SAV
16.		The fact is that while aquatic vegetation in the Bay is clearly not capable of thriving in a turbid, polluted environment, it is fully adapted to being consumed by and thriving with all of the aforementioned waterfowl in addition to Mute Swans
17.		[addressing the sometimes aggressive behavior toward humans and birds] Mute Swans simply live their lives and use their instincts to protect their mates and their nesting territories...but at the population of 500 or even a few thousand swans, the impact of such nest defense behavior is negligible
18.		Now swans, in addition to being scapegoats for the damage that pollution causes the Chesapeake Bay, are being made scapegoats for the inability of managers to preserve viable populations of these beleaguered species and their habitats
19.		Whether or not mute swans are native to North America hardly matters

20.		Given budget constraints due to the current financial crisis, the state cannot afford to waste precious time and resources stalking and killing animals just because they don't think they belong here
21.		For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year

Source: Humane Society of the United States

	<b>Emotive Words/Phrases from Source</b>	<b>Implicit Message</b>
1.	Public understanding of the plight of mute swans	Implies victimization and helplessness of swans
2.	DNR's undivulged and barbaric swan killing	Polarization of opinions on swan management: DNR (villain) vs. animal rights movement (protagonist)
3.	People who simply appreciate the majesty and stoic dignity of mute swans, just for the beauty and life they represent	Intrinsic valuation of mute swans – simply their presence is valuable. Also, the adjective “stoic” is a human adjective, and therefore a personification of swans
4.	The hundreds of thousands of Maryland citizens that see and appreciate the beauty of mute swans on the Bay	Support for mute swans rests more with laypeople; implies perhaps that the unemotional stance of DNR officials toward the swans, based on science and policy, is disingenuous
5.	DNR's recent admission that it has been aggressively killing Maryland's remaining swans	Often environmental groups characterize invasive species as “aggressive”, this seems to be a reversal of that;

		instead calling those who hunt invasive organisms “aggressive”
6.	DNR’s callous and sustained persecution of mute swans	Again colors the swans as victims, and vilifies the DNR managers
7.	Unnecessary slaughter [of mute swans]	Implies the brutality of the mute swan killings
8.	This tragedy [i.e., the mute swan killings by the state DNR] should end, here and now	Dramatization of the swans’ situation of being hunted and pursued; this air of lamentation in regard to the swan killings implies how the mere existence of these creatures is valued and appreciated by the HSUS
9.	Mute swans are a beautiful, engaging and captivating part of the Chesapeake Bay	Implies that the swans are <i>part</i> of the Chesapeake Bay rather than intruders in it
10.	They have been in this country at least since the 1800’s and may have been here in small numbers before Caucasians arrived from Europe	Implies their naturalization and also forces people to consider their <i>own</i> invasiveness
11.	They are a naturalized, integral and beautiful part of the modern Chesapeake Bay ecosystem—one that should be treasured and maintained for the enjoyment of citizens and the vibrant life they represent	Re-emphasizes the intrinsic and extrinsic value of the swans, and that they should be <i>facilitated</i> rather than <i>destroyed</i> ; also that they provide enjoyment to people
12.	Alleged significant negative impacts Mute Swans may pose in isolated situations in the Bay	Minimization of the justification that the DNR uses for killing the swans
13.	This proposal, which came to be known as the Impact Based Management Approach, has the benefit of	A compromise between the goals of both the

	meeting the public's desire to allow these magnificent birds to grace and beautify the Chesapeake Bay while allowing Md. DNR to control any significant negative impacts attributed to swans	animal rights action groups and the DNR
14.	It is simply preposterous for Md. DNR to allege that a few hundred Mute Swans have any measurable negative impact on aquatic vegetation in the Bay	Denigration of the DNR's stance on swans; basically saying their reasoning makes no sense
15.	The Bay has always been host to huge populations of various species of waterfowl including geese, swans, and ducks, all of which eat SAV	Saying there is no difference in effect between mute swans, the nonnative species, and other native waterfowl in the Bay
16.	The fact is that while aquatic vegetation in the Bay is clearly not capable of thriving in a turbid, polluted environment, it is fully adapted to being consumed by and thriving with all of the aforementioned waterfowl in addition to Mute Swans	Implying that the effect of mute swans on ecology is in fact more natural and tolerable to the environment than the human impact
17.	[addressing the sometimes aggressive behavior toward humans and birds] Mute Swans simply live their lives and use their instincts to protect their mates and their nesting territories...but at the population of 500 or even a few thousand swans, the impact of such nest defense behavior is negligible	Again emphasizing the naturalness of these birds, and attaching understandable motivation behind their undesirable behavior; also highlighting the small impact of this concern
18.	Now swans, in addition to being scapegoats for the damage that pollution causes the Chesapeake Bay, are being made scapegoats for the inability of managers to preserve viable populations of these beleaguered species and their habitats	Addressing the wrongful blaming of the swans for ecological damage while turning that blame around and assigning it to inept management of the Bay by people
19.	Whether or not mute swans are native to North America	Implying that the native or nonnative status of an

	hardly matters	organism does not affect their intrinsic value
<b>20.</b>	Given budget constraints due to the current financial crisis, the state cannot afford to waste precious time and resources stalking and killing animals just because they don't think they belong here	Response to the popularly repeated claims that invasive species are a huge drain on economies; this statement turns that around and says that the state is wasting its money killing these introduced animals on the basis of empty claims of environmental damage. Also, the last part of the sentence is another insult to DNR officials: saying they are only removing the organisms for xenophobic beliefs
<b>21.</b>	For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year	Vilification of DNR for vilifying mute swans. Almost implies a martyrdom of these birds – being killed for human mistakes. Reassigning blame for ecological damage to polluting industries

Source: Humane Society of the United States

### APPENDIX 3: CATEGORIZATION OF DATA INTO MAJOR AND MINOR THEMES

NRDC

*Major Themes*

#### **1. Vilification of invasives**

1. One of the newest threats to the fragile Great Lakes ecosystem (A)\*<sup>3</sup>
2. big, aggressive invaders (A)
3. Disrupt nature's balance (A)
4. Ruthless invaders (A)
5. Destroy...the region's fishing industry (A)
6. Invasive species...invade an environment and cause the eventual die-off of native species (B)
7. smothering vegetation (B)
8. Aggressive (C)
9. [invasive species] dominate many of the original plant and animal communities (C)
10. [of invasive species]: often displacing native species and disrupting ecosystems that have evolved over millions of years (C)
11. damage they have wreaked on freshwater fish, endangered marsh birds, and mammals (C)
12. If Asian carp are allowed to establish themselves in the Great Lakes, it could have a devastating impact on Great Lakes fisheries and irrevocably change the ecosystem of the lakes and rivers throughout the watershed (D)
13. the invasive fish pose a dire threat to the Lakes because of their size and voracious appetites (E)
14. "Invaders will stop at nothing short of bricks and mortar, and time is running short to get that protection in place" (E)
15. "There are no other physical barriers before these monsters reach Lake Michigan" (E)
16. Environmental groups...have been advocating for quick action to impede the carp's headlong swim towards Lake Michigan (E)

#### **2. Assigning autonomy and motives to invasive creatures**

1. Ruthless invaders (A)
2. Probably hitched a ride to the Midwest in ballast water (A)
3. smothering vegetation (B)
4. [invasive species] dominate many of the original plant and animal communities (C)
5. damage they have wreaked on freshwater fish, endangered marsh birds, and mammals (C)

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\* Letter in parentheses next to each phrase indicates the source that it came from, each of which is referenced in Appendix 1 and Appendix 2

6. A beautiful invader (C)
  7. invasive Asian carp have made their way past electric barriers...(D)
  8. carp have evaded an electrical barrier intended to prevent their movement out of canals (E)
  9. Environmental groups...have been advocating for quick action to impede the carp's headlong swim towards Lake Michigan (E)
  10. "Invaders will stop at nothing short of bricks and mortar, and time is running short to get that protection in place" (E)
- 3. Personification in a negative light**
1. Probably hitched a ride to the Midwest in ballast water (A)
  2. Gobbling up the food supply (A)
  3. big, aggressive invaders (A)
  4. High strung and uptight (B)
  5. Aggressive (C)
  6. A beautiful invader (C)
  7. ...intended to prevent the big, hungry fish from colonizing Lake Michigan (D)
  8. Asian carp are voracious filter feeders (D)
  9. the invasive fish pose a dire threat to the Lakes because of their size and voracious appetites (E)
- 4. Devaluation**
1. Living pollution (A)
  2. big, aggressive invaders (A)
  3. A multi-million dollar nightmare (A)
  4. Pesky critters (B)
  5. ...intended to prevent the big, hungry fish from colonizing Lake Michigan (D)
  6. Asian carp are voracious filter feeders
  7. "Asian carp are like cockroaches, when you see one, you know its accompanied by many more you don't see" (E)
  8. "There are no other physical barriers before these monsters reach Lake Michigan" (E)
- 5. Fallacy of pristine nature**
1. Disrupt nature's balance (A)
  2. [invasive species] dominate many of the original plant and animal communities (C)
  3. [of invasive species]: often displacing native species and disrupting ecosystems that have evolved over millions of years (C)
  4. Invasives can...complicate restoration efforts (C)
  5. If Asian carp are allowed to establish themselves in the Great Lakes, it could have a devastating impact on Great Lakes fisheries and irrevocably change the ecosystem of the lakes and rivers throughout the watershed (D)
  6. (on more invasive species entering the Great Lakes): a problem that stresses our ecosystems and costs the American economy billions of dollars every year (D)

7. “Great Lakes restoration and economic recovery hinge on preventing invasive species like the Asian carp from getting into the Lakes” (E)

*Minor Themes*

**6. Xenophobia**

1. Some of these things just don’t belong here (A)
2. Invasive species...invade an environment and cause the eventual die-off of native species (B)
3. Nonnative species that don’t cause harm are classified simply as “alien” (B)
4. federal officials and business interests have questioned the validity of cutting edge science that pointed to the invasive species’ presence (E)

**7. Militaristic language**

1. Population exploded (A)
2. invasive Asian carp have made their way past electric barriers...(D)
3. ...intended to prevent the big, hungry fish from colonizing Lake Michigan (D)
4. carp have evaded an electrical barrier intended to prevent their movement out of canals (E)

**8. Highlighting strengths of invasive organism**

1. Tough (A)
2. Are tough, reproduce rapidly, and have few natural predators (A)
3. A beautiful invader (C)
4. Thriving (C)

**9. Scapegoating**

1. Destroy...the region’s fishing industry (A)
2. Invasive species...invade an environment and cause the eventual die-off of native species (B)
3. “Great Lakes restoration and economic recovery hinge on preventing invasive species like the Asian carp from getting into the Lakes” (E)

**10. Double Meaning**

1. Blanket Southern yards, trees, and even houses (B)

**11. Fearmongering**

1. The nightmare scenario of Asian carp entering the Great Lakes through Chicago waterways (E)

HSUS

*Major Themes*

**1. Appreciation/valuation of invasive organism**

1. Beautiful (A)
2. The little brown bird we see hopping boldly on city streets
3. Gregarious (B)

4. Hardy (B)
5. Excellent at taking advantage of the opportunities we supply (B)
6. One of the only birds willing to live in inner cities. Would we be better off if these places were empty and lifeless? (B)
7. Thrive on the food and shelter we provide (B)
8. We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots (B)
9. They fiercely defend their nests (B)
10. Clever little birds (B)
11. Flexible nature (C)
12. Thrive in cities and suburbs as well as on farms (C)
13. [The HSUS] opposes methods [of invasive species management] that cause trauma and suffering” (E)
14. people who simply appreciate the majesty and stoic dignity of mute swans, just for the beauty and life they represent (F)
15. the hundreds of thousands of Maryland citizens that see and appreciate the beauty of mute swans on the Bay (F)
16. This tragedy [i.e., the mute swan killings by the state DNR] should end, here and now (F)
17. Mute swans are a beautiful, engaging and captivating part of the Chesapeake Bay (F)
18. They are a naturalized, integral and beautiful part of the modern Chesapeake Bay ecosystem—one that should be treasured and maintained for the enjoyment of citizens and the vibrant life they represent (F)
19. [addressing the sometimes aggressive behavior toward humans and birds] Mute Swans simply live their lives and use their instincts to protect their mates and their nesting territories...but at the population of 500 or even a few thousand swans, the impact of such nest defense behavior is negligible (F)
20. Whether or not mute swans are native to North America hardly matters (F)
21. For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year (F)

## **2. Victimization of Invasives**

1. Victims of unnecessary killing (A)
2. Swans have come under attack (A)
3. Accused of eating too much vegetation (A)
4. Slaughter (referring to Michigan’s Department of Natural Resources asking citizens to get permits to kill the swans) (A)
5. Reviled...for their natural competition with native songbirds (B)
6. Vilified for edging out...popular native species (B)
7. public understanding of the plight of mute swans (F)
8. DNR’s undivulged and barbaric swan killing (F)
9. DNR’s callous and sustained persecution of mute swans (F)

10. Unnecessary slaughter [of mute swans] (F)
11. This tragedy [i.e., the mute swan killings by the state DNR] should end, here and now (F)
12. Now swans, in addition to being scapegoats for the damage that pollution causes the Chesapeake Bay, are being made scapegoats for the inability of managers to preserve viable populations of these beleaguered species and their habitats (F)
13. For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year (F)

### **3. Denigration of invasive opposition campaign**

1. The state's population of just 40 swans has been deemed an invasive nuisance (A)
2. Vilified for edging out...popular native species (B)
3. DNR's undivulged and barbaric swan killing
4. DNR's recent admission that it has been aggressively killing Maryland's remaining swans (F)
5. DNR's callous and sustained persecution of mute swans (F)
6. Unnecessary slaughter [of mute swans] (F)
7. ...alleged significant negative impacts Mute Swans may pose in isolated situations in the Bay (F)
8. it is simply preposterous for Md. DNR to allege that a few hundred Mute Swans have any measurable negative impact on aquatic vegetation in the Bay (F)
9. [addressing the sometimes aggressive behavior toward humans and birds] Mute Swans simply live their lives and use their instincts to protect their mates and their nesting territories...but at the population of 500 or even a few thousand swans, the impact of such nest defense behavior is negligible (F)
10. Now swans, in addition to being scapegoats for the damage that pollution causes the Chesapeake Bay, are being made scapegoats for the inability of managers to preserve viable populations of these beleaguered species and their habitats (F)
11. Given budget constraints due to the current financial crisis, the state cannot afford to waste precious time and resources stalking and killing animals just because they don't think they belong here (F)
12. For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year (F)

### **4. Denial of invasiveness through naturalization theory**

1. Naturalized (A)
2. Brought [to the U.S] more than a century ago to help control insects (B)

3. Let's accept these naturalized citizens and deal with the conditions we control to minimize problems (B)
  4. Mute swans are a beautiful, engaging and captivating part of the Chesapeake Bay (F)
  5. They have been in this country at least since the 1800's and may have been here in small numbers before Caucasians arrived from Europe (F)v
  6. They are a naturalized, integral and beautiful part of the modern Chesapeake Bay ecosystem—one that should be treasured and maintained for the enjoyment of citizens and the vibrant life they represent (F)
  7. The Bay has always been host to huge populations of various species of waterfowl including geese, swans, and ducks, all of which eat SAV (F)
  8. The fact is that while aquatic vegetation in the Bay is clearly not capable of thriving in a turbid, polluted environment, it is fully adapted to being consumed by and thriving with all of the aforementioned waterfowl in addition to Mute Swans (F)
- 5. Personification in a positive light**
1. Gregarious (B)
  2. Hardy (B)
  3. The little brown bird we see hopping boldly on city streets (B)
  4. We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots (B)
  5. Clever little birds (B)
  6. people who simply appreciate the majesty and stoic dignity of mute swans, just for the beauty and life they represent (F)
- 6. Ecological or human benefit from invasive species**
1. One of the only birds willing to live in inner cities. Would we be better off if these places were empty and lifeless? (B)
  2. We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots (B)
  3. Undoubtedly [provide] a service by eating insects (C)
  4. [In spring] visiting flocks probe the grass for grubs and clean up insects among the new growth. They are actually performing a service (C)
  5. the hundreds of thousands of Maryland citizens that see and appreciate the beauty of mute swans on the Bay (F)
  6. They are a naturalized, integral and beautiful part of the modern Chesapeake Bay ecosystem—one that should be treasured and maintained for the enjoyment of citizens and the vibrant life they represent (F)

*Minor Themes*

- 7. Reversal of blame for ecological problems from invasives to humans**
1. In reality, swans are merely convenient scapegoats for human-caused environmental problems (A)
  2. The fact is that while aquatic vegetation in the Bay is clearly not capable of thriving in a turbid, polluted environment, it is fully adapted to being consumed by and thriving with all of the aforementioned waterfowl in

- addition to Mute Swans (F)
3. Now swans, in addition to being scapegoats for the damage that pollution causes the Chesapeake Bay, are being made scapegoats for the inability of managers to preserve viable populations of these beleaguered species and their habitats (F)
  4. For years, Md. DNR has wrongly vilified these beautiful, majestic birds, and as a result, thousands of them have suffered and paid the ultimate price for the misdeeds of industries that dump tons of pollutants into the Bay every year (F)
- 8. Focus on humanely solving possible problems from invasive species – compromise between animal rights and environmental groups**
1. Let's accept these naturalized citizens and deal with the conditions we control to minimize problems (B)
  2. The HSUS supports humane forms of population management (E)
  3. [The HSUS] opposes methods [of invasive species management] that cause trauma and suffering" (E)
  4. This proposal, which came to be known as the **Impact Based Management Approach**, has the benefit of meeting the public's desire to allow these magnificent birds to grace and beautify the Chesapeake Bay while allowing Md. DNR to control any significant negative impacts attributed to swans (F)
- 9. Annoyance of invasive species to people**
1. House sparrows can get under our skin (B)
  2. They get into our houses and stores, crowd other birds at feeders or birdbaths... (B)
  3. Their noise and droppings are extremely unwelcome (C)
  4. In a few towns and cities, starlings form extremely large, noisy, and messy roosts (C)
- 10. Implicating humans as the cause of invasive presence**
1. Excellent at taking advantage of the opportunities we supply (B)
  2. Thrive on the food and shelter we provide (B)
  3. "Because of the reckless practices of the pet trade, and the foolish decisions by people who want to own exotic animals, Florida has a major problem on its hands [i.e., the proliferation of nonnative pythons in the Everglades]" (D)
- 11. Militaristic language**
1. Swans have come under attack (A)
- 12. Recognition of human invasiveness**
1. They have been in this country at least since the 1800's and may have been here in small numbers before Caucasians arrived from Europe (F)
- 13. Implying xenophobic values of state Department of Natural Resources**
1. Given budget constraints due to the current financial crisis, the state cannot afford to waste precious time and resources stalking and killing animals just because they don't think they belong here (F)
- 14. Assigning autonomy and motives to invasive creatures**

1. One of the only birds willing to live in inner cities. Would we be better off if these places were empty and lifeless? (B)
2. We commonly see [house sparrows] diligently collecting our leavings at outdoor cafes and picnic spots (B)

**15. Dangers of invasives**

1. Dramatic expansion of populations (D)
2. Enormous reproductive capabilities (D)