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Emotion in Science: The Need for Compassion in Wildlife Conservation

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**EMOTION IN SCIENCE: THE NEED FOR COMPASSION IN
WILDLIFE CONSERVATION**



A critically endangered Hirola antelope (Beatragus hunteri). Less than 500 individuals remain in the wild, and none in captivity. Photo by Ken Coe.

An Undergraduate Honors Thesis authored by Max Alexandria Boock

*Western Washington University
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"A thing is right if it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends to do otherwise."

~ Aldo Leopold, 1949 ~

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Introduction

Conservation and animal rights advocacy both serve to protect the lives of animals, and yet their practices are based on wildly opposing ethics. The National Humane Education Society defines wildlife conservation as the “practice of protecting animal species and their habitats”¹ with the goal “to preserve the nature, and the endangered species for the future generations”². Conservation science’s values come from preserving large spaces and entire species, while Critical Animal Studies (CAS), which encompasses animal advocacy, is a “movement [...] for total liberation [of all species] [...] in hopes for a just, equitable, inclusive, and peaceful world”³. CAS is based on transformative, holistic, and equitable change in the treatment of animals and humans together, including empathy within their mission. The definition of wildlife conservation poses an issue to animal rights advocates. Conservation focuses on achieving conservation of species rather than individuals, and will often sacrifice individuals for an end goal. In a 2012 essay published in *Nature* titled “Ethics of Wildlife Management and Conservation: What Should We Try to Protect?” conservation’s ethic is stated as the “wellbeing of individual animals matters less where species, ecosystems, or wild nature is emphasized”⁴. While both CAS and wildlife conservation seek to achieve the end result of preservation and protection of wildlife, there exists conflict in their inherent values.

I would like to explore the possibility of rectifying these motivational differences for CAS and conservation with respect to the protection of animals. Dale Bowman from Earthrace Conservation summarized this dilemma as such: “A conservationist is primarily concerned with the protection of a specific species, be it animal or plant. An animal rights activist is concerned with the protection of all animals regardless of their

¹ “Wildlife Conservation.” *National Humane Education Society*, National Humane Education Society, 2020, www.nhes.org/wildlife-conservation/.

² US Legal, Inc. “Wildlife Conservation Law and Legal Definition.” *Wildlife Conservation Law and Legal Definition* | *USLegal, Inc.*, U.S. Legal, 2019, definitions.uslegal.com/w/wildlife-conservation/.

³ “About.” *Institute for Critical Animal Studies (ICAS)*, 2020, www.criticalanimalstudies.org/about/.

⁴ Gamborg, C., Palmer, C. & Sandoe, P. (2012) Ethics of Wildlife Management and Conservation: What Should We Try to Protect? *Nature Education Knowledge* 3(10):8.

status”⁵. Who is to say that one cannot be both a conservationist and an animal rights advocate? Perhaps the only way “to prevent a mass extinction [is to] change—on a global scale—how we interact ethically with other species”⁶. A paper by William H. Matthews titled “Objective and Subjective Judgements in Environmental Impact Analysis” states that subjective judgements, based on values, feelings, beliefs, and prejudices, must be included in scientific evaluation otherwise the effectiveness will be diminished. Thus, integration of values into conservation science is necessary ⁷.

This paper is informed by my experiences as an undergraduate student at Western Washington University’s Huxley College. As a vegan and lifelong animal rights advocate, I was intrigued to find that many of my ecology professors and colleagues engaged in recreational hunting and fishing. While these professors and conservationists were gathering important research about species such as Chinook salmon, red foxes, and mountain goats, I wondered how it was possible to combine a passion for the wellbeing of these creatures with an interest in recreational hunting.

In the spring of 2019 I had the opportunity to take this question to the biologically diverse Garden Route region in South Africa as part of a Wildlands Studies program. South Africa has a radically different national park model than the United States. During the time of British colonization, much of the native megafauna was exterminated. White rhinos, Cape buffalo, and African lions which used to exist along the entirety of the southern coast were extirpated. Animals such as the bontebok and African elephants were reduced to numbers less than a dozen. The establishment of national parks and game reserves were intended to protect small remaining populations of once numerous animals, much like intentions in the United States during the early 1900s⁸. South African National

⁵ Bowman, S Dale. “ANIMAL ACTIVIST VS CONSERVATIONIST.” *Earthrace Conservation*, 5 May 2016, www.earthrace.net/animal-activist-vs-conservationist/.

⁶ Merino, Valeria. “Different Perspectives: A New Conservation Ethic-What Would It Take to Protect Biodiversity?” *Advancing Philanthropy*, Association of Fundraising Professionals (AFP), 2019, afpglobal.org/news/different-perspectives-new-conservation-ethic-what-would-it-take-protect-biodiversity

⁷ Matthews, William H. “Objective and Subjective Judgements in Environmental Impact Analysis.” *Environmental Conservation* 2, no. 2 (1975): 121–30.

⁸ Westover, Robert Hudson. “Conservation versus Preservation?” *Feature Stories*, U.S. Forest Service, 22 Mar. 2016, www.fs.usda.gov/features/conservation-versus-preservation

Parks (SANParks) were created with explicit boundaries; three meter high fencing and guarded entrances are present at all national parks and game reserves in order to keep the animals in, and the humans out, largely for the protection of endangered species threatened by poaching⁹. As a result, populations are required to inhabit a confined space. Without natural distribution, species populations can exceed the carrying capacity of areas¹⁰. In terms of conservation, this is a success, yet it also poses an overpopulation problem. The solution in South Africa is to sell off excess species. Game reserves and SANParks hold auctions, where individual animals are selected and priced for sale¹¹. Buyers are not screened prior to auctions and some individuals are inevitably sold to trophy hunting game reserves^{12 13}. These transactions expose a hypocrisy of species conservation while simultaneously selling off individuals for profit.

Upon my return, I was still troubled by the dichotomy of conservation science's ethics and my own. How, I asked myself, could ecologists, whose sole objective is to preserve and protect the myriad of species and organisms that share this Earth, disregard the individuality and consciousness of these extraordinary creatures? And could I, as an animal rights advocate, ever find a place within this community and discover like-minded conservationists?

⁹ Pendavingh, Richard. "Africa's Charismatic Megafauna." Richard Pendavingh: Design and Photography, February 12, 2013. <https://riddip.com/africas-charismatic-megafauna>.

¹⁰ Leopold, A.S., S.A. Cain, C.M. Cottam, I.N. Gabrielson, and T.L. Kimball. "National Park Service: Administrative Policies -- Wildlife Management in the National Parks." National Parks Service. U.S. Department of the Interior, March 4, 1963. https://www.nps.gov/parkhistory/online_books/admin_policies/policy4-leopold.htm.

¹¹ "Media Release: SANParks to Offer Prime Animals at Wildfees." SANParks, May 29, 2017. <https://www.sanparks.org/about/news/?id=57182>.

¹² "Botswana Sells 60 Elephants for Trophy Hunts at First Auction since It Ended Ban." A Humane World. The Humane Society of the United States, February 7, 2020. <https://blog.humanesociety.org/2020/02/botswana-sells-60-elephants-for-trophy-hunts-at-first-auction-since-it-ended-ban.html>.

¹³ "Killing of 280 South African Animals to Raise More than US\$1 Million for American Hunting Group's Anti-Wildlife Agenda." Humane Society International, January 31, 2017. <https://www.hsi.org/news-media/sci-auctions-fund-trophy-hunt-lobby-013117/>.

This essay will serve to deconstruct the notion that conservation science should be solely objective in order to be factually accurate and politically useful. I propose that if we are to create a new global conservation ethic, integration of empathy and compassion into conservation science will help us achieve a greater understanding of the natural world and introduce more effective and sustainable solutions than what we have relied on in the past. This exploration into empathetic science is crucial to the field of conservation and wildlife biology if we are to change the world's current climate trajectory.

Historical Context

History has not been kind to nonhuman animals. During the Greco-Roman age, animals were transported across the world to be used as entertainment and exotic meats. In a particularly horrific instance, Roman emperor Trajan hosted a 120 day celebration wherein 11,000 animals were killed¹⁴. In the beginning of Judeo-Christianity, the Bible states that animals are subservient to humans and are items to be dominated or ruled¹⁵. In the 15th century, philosopher, mathematician, and scientist, René Descartes stated that animals were simply machines and had no sentient thought or capacity for pain¹⁶. Later, in 1868, a publication by Johann Bernard Theodor Altum included the phrase *Animal non agit, agitut*, that “animals do not act, they are acted upon,” as quoted in *Sociobiology* by Edward O. Wilson¹⁷. Vivisection, meaning the dissection of live creatures, was commonplace in early England, with researchers operating on living animals, most

¹⁴ “Roman Games: Playing with Animals.” *Heilbrunn: Timeline of Art History*, The Met, www.metmuseum.org/toah/hd/play/hd_play.htm.

¹⁵ “Genesis 1:25-31 - NCV - So God Made the Wild Animals, the Tame Animals,...” *Bible Study Tools*, www.biblestudytools.com/ncv/genesis/passage/?q=genesis+1:25-31.

¹⁶ Hatfield, Gary. “René Descartes.” *Stanford Encyclopedia of Philosophy*, Stanford University, 16 Jan. 2014, plato.stanford.edu/entries/descartes/.

¹⁷ Wilson, Edward O. *Sociobiology: The New Synthesis*. Belknap Press, 2000.

commonly dogs, and sometimes even nailing them down to the operating table¹⁸.

Experimentation is still inflicted upon dogs, monkeys, rabbits, rats, mice, and others for biomedical or cosmetic research, though with more regulatory rules and the principle that humane science is the best science¹⁹.

In the past century, concern for the wellbeing of animals, domesticated and wild, has increased in popularity, though animal advocacy has been around since as early as 327 BCE with Theophrastus who believed in the “biophysiological affinity of all living beings”²⁰ and Hesiod practicing “religious vegetarianism” in 800 BCE²¹. Many religious activists and historical figures such as Pythagoras, The Dalai Lama, and Gandhi have all commented against the use of animals in some manner. Buddhism’s Siddhartha taught vegetarianism as an avenue for enlightenment and a core belief of Jainism is that it is wrong to harm or kill another living being²². The world saw the formation of organizations in the 1800s and 1900s that were based upon the principle of vegetarianism and sentience of all living beings. The Vegetarian Society of the United Kingdom was established in 1847²³ and Henry Salt founded the UK Humanitarian League in 1891²⁴. Much later, The Vegan Society was conceived in 1944²⁵, and the North American

¹⁸ Fitzharris, Lindsey. “Dissecting the Living: Vivisection in Early Modern England.” *Wonders & Marvels*, 22 Feb. 2012, www.wondersandmarvels.com/2012/02/dissecting-the-living-vivisection-in-early-modern-england.html).

¹⁹ Franco, Nuno Henrique. “Animal Experiments in Biomedical Research: A Historical Perspective.” *Animals : an Open Access Journal from MDPI*, MDPI, 19 Mar. 2013, www.ncbi.nlm.nih.gov/pmc/articles/PMC4495509/.

²⁰ Mauro, Letterio. “The Philosophical Origins of Vegetarianism. Greek Philosophers and Animal World.” *Relations* 5, no. 1 (2017). <https://doi.org/10.7358/rela-2017-001-maur>.

²¹ Walters, Kerry S., and Lisa Portmess. *Religious Vegetarianism: from Hesiod to the Dalai Lama*. State University of New York Press, 2001.

²² Lam, Victoria, Leigh Tobiasen, Tanvi Nayar, and Saket Agarwal. “Vegetarianism and Religion,” n.d. <http://www.pages.drexel.edu/~soa29/Religious%20Issues.htm>.

²³ Davis, John. “History of the Vegetarian Society - Early History.” *Vegetarian Society*, Aug. 2011, www.vegsoc.org/about-us/history-of-the-vegetarian-society-early-history/.

²⁴ “The Humanitarian League: What It Is, and What It Is Not.” *Henry S. Salt Society*, 10 June 2019, www.henrysalt.co.uk/humanitarian-league/what-it-is/.

²⁵ “The Vegan Society.” *The Vegan Society*, www.vegansociety.com/.

Vegetarian Society in 1974²⁶. Despite the trend of increasing awareness of animal rights issues, the published papers of Peter Singer²⁷ and Tom Regan²⁸ in the 1970s-80s brought the sentience of animals to the public's eye.

Even with animal advocacy's extensive history, the interdisciplinary field of Critical Animal Studies was not officially founded until 2001 and is still in the process of gaining notoriety. The Institute of Critical Animal Studies started as the Center on Animal Liberation Affairs, created by Anthony J Nocella II and Steve Best. Shortly after, CAS was incorporated into the Department of Sociology at Brock University at the behest of local grassroots organization Niagara Action for Animals. CAS has 10 core principles, with a primary interest in liberation of animal species from human-based oppression²⁹. CAS involves a critical multidisciplinary investigation into why certain institutions and social constructs exist today, as opposed to the rigid discipline of competitive academics. In seminal work "Species Trouble: Judith Butler, Mourning, and the Precarious Lives of Animals," James Stanescu writes, "indeed, the philosophical and scientific questions we use all involve some formulation of 'What makes us human?' rather than 'What makes us another animal?,'" highlighting the hypocritical mindset that humans are exceptional compared to nonhuman animals³⁰. An underlying ideology of CAS is to embrace the animalness of ourselves and others, while conservation takes a saviorism attitude towards amending human actions against nature and wildlife. Critical Animal Studies has allowed animal rights to advance from an ethical issue into the academic sphere.

²⁶ "Purposes and Programs." *North American Vegetarian Society*, navs-online.org/purposes-programs/.

²⁷ Singer, Peter. *Animal Liberation: the Definitive Classic of the Animal Movement*. Open Road Media, 2015.

²⁸ Regan, Tom. *The Case for Animal Rights*. Berkeley, CA: University of California Press, 2004.

²⁹ Nocella, Anthony J., John Sorenson, Kim Socha, and Atsuko Matsuoka. "INTRODUCTION: The Emergence of Critical Animal Studies: The Rise of Intersectional Animal Liberation." *Counterpoints* 448 (2014): Xix-xxvi. Accessed May 22, 2020. www.jstor.org/stable/42982374.

³⁰ Stanescu, James. "Species Trouble: Judith Butler, Mourning, and the Precarious Lives of Animals." *Hypatia* 27, no. 3 (2012): 567-82. <https://doi.org/10.1111/j.1527-2001.2012.01280.x>.

Similar to CAS, conservation is a relatively new idea, with Theodore Roosevelt, Gifford Pinchot, and John Muir developing the discipline in the early 1900s³¹. Even between the three of them, vast differences existed in their philosophies and thus began the debate of conservation versus preservation. John Muir believed in preservation, the protection of land and wildlife, “permitting little to no industrial profit”³² while Pinchot’s idea of conservation was focused on the sustainable use of natural resources³³. Pinchot succeeded in establishing National Forests, where resource extraction is allowed, and Muir contributed to the establishment of National Parks, areas preserved for their wild and scenic value³⁴. While the United States’ National Parks are wildly popular and successful, the country has accepted Pinchot’s vision of utilitarian resource use. Today, Pinchot’s words “the greatest good for the greatest number” are still used to justify public use of public lands³⁵, which is why hunting and fishing are allowed in National Wildlife Refuges, despite the goal of “conserving America’s rich fish and wildlife heritage”³⁶. Today, wildlife management and conservation are academic disciplines but wildlife preservation is not. It is apparent that in our economically-motivated governance systems, wilderness, including wildlife and animals, may be viewed more as a resource to humans rather than beings that have their own inherent value.

³¹ Westover, Robert Hudson. “Conservation versus Preservation?” *Feature Stories*, U.S. Forest Service, 22 Mar. 2016, www.fs.usda.gov/features/conservation-versus-preservation.

³² Westover, Robert Hudson. “Conservation versus Preservation?” *Feature Stories*, U.S. Forest Service, 22 Mar. 2016, www.fs.usda.gov/features/conservation-versus-preservation.

³³ Smith, Austin. “What’s the Difference Between ‘Conservation’ and ‘Preservation?’” Piedmont Environmental Alliance, May 10, 2018. <https://www.peanc.org/whats-difference-between-conservation-and-preservation>.

³⁴ Westover, Robert Hudson. “Conservation versus Preservation?” *Feature Stories*, U.S. Forest Service, 22 Mar. 2016, www.fs.usda.gov/features/conservation-versus-preservation.

³⁵ Goad, Jessica, Christy Goldfuss, and Tom Kenworthy. “Using Public Lands for the Public Good.” Center for American Progress, June 25, 2012. <https://www.americanprogress.org/issues/green/reports/2012/06/25/11690/using-public-lands-for-the-public-good/>.

³⁶ “National Wildlife Refuge System.” U.S. Fish and Wildlife Service, May 19, 2020. <https://www.fws.gov/refuges/>.

The “Godly Objectivity” Complex

Objectivity and empirical science have been touted as the most respectable means to conduct research. But in conservation, is objectivity serving us? Is it serving others? Kyle S. Van Houtan’s paper “Conservation as Virtue: a Scientific and Social Process for Conservation Ethics” reviews the current climate of conservation science as an objective enterprise, and postulates that ethics shouldn’t be disregarded so easily. Prominent scientists have long debated the place of ethics in conservation. Edward O. Wilson “defends the ethical premises of conservation biology,” while other scientists like Stephen Jay Gould believe that science and ethics should be entirely separate³⁷. Van Houtan concludes his paper by stating that “science itself cannot form socially sustainable ethics” and proposes the following argument:

“Is nature conservation a virtue or is it just good science? If it is plainly a scientific matter, then strict empiricism reigns and the environmentalists’ battle is one of scientific research, political savvy, and power (Gill 2001). Nature—which includes human communities—likely loses a battle of this kind. On the other hand, if conservation is a virtue then scientific arguments alone are insufficient and the battle visibly involves ethics and social traditions, as well as science”³⁸.

If science is continued without the integration of ethics and virtue, then nature will likely suffer as a result. As put in a paper by Reed F. Noss, “a conservation biologist can be an objective scientist and an advocate for the diversity of life and other normative

³⁷ Van Houtan, Kyle S. “Conservation as Virtue: a Scientific and Social Process for Conservation Ethics.” *Conservation Biology* 20, no. 5 (2006): 1367–72. <https://doi.org/10.1111/j.1523-1739.2006.00447.x>.

³⁸ Van Houtan, Kyle S. “Conservation as Virtue: a Scientific and Social Process for Conservation Ethics.” *Conservation Biology* 20, no. 5 (2006): 1367–72. <https://doi.org/10.1111/j.1523-1739.2006.00447.x>.

values at the same time, with no contradiction. We have a responsibility to be both”³⁹. Indeed, humans have so much empathy for the world around us, yet still global climate change and urbanization are negatively impacting ecosystems and communities around the globe. Within the field of conservation biology, objectivity ultimately does not meet the needs of all stakeholders, particularly animals and organisms whose lives are at stake.

Objectivity has, in the past, been used to serve the needs of the elite - business owners, companies, conglomerates - that would ignore the lives of marginalized humans and animals for profit. For example, NGOs (non-governmental organizations) often support environmentally-destructive capitalistic enterprises because they rely almost exclusively on corporate financial donations^{40 41}.

The People for the Ethical Treatment of Animals (PETA) national organization is infamous for their aggressive conversion strategies and discriminatory actions, as well as for their advocacy for animal rights. In an article published on PETA's website, conservation is mentioned as a red flag word. They use the National Wildlife Federation as an example for an organization that advocates for wildlife conservation and simultaneously supports hunting and fishing in state chapters⁴². Recreational hunting and fishing appear to be intertwined with wildlife conservation, especially in large-scale non-profit organizations that depend on financial support. The World Wildlife Fund (WWF), an organization that markets cute plush endangered species toys for fundraising, endorses trophy hunting as part of its “conservation model.” The World Wildlife Fund rephrased its position on trophy hunting in 2016 to specify that it does not support any

³⁹ Noss, Reed F. “Values Are a Good Thing in Conservation Biology.” *Conservation Biology* 21, no. 1 (2007): 18–20. <https://doi.org/10.1111/j.1523-1739.2006.00637.x>.

⁴⁰ LeBaron, Genevieve. “Green NGOs Cannot Take Big Business Cash and Save Planet.” *The Conversation*, September 30, 2013. <https://theconversation.com/green-ngos-cannot-take-big-business-cash-and-save-planet-18770>.

⁴¹ Hance, Jeremy. “How Big Donors and Corporations Shape Conservation Goals.” *Mongabay Environmental News*, May 3, 2016. <https://news.mongabay.com/2016/05/big-donors-corporations-shape-conservation-goals/>.

⁴² “Animal Rights Vs. Conservation.” *People for the Ethical Treatment of Animals (PETA)*, November 22, 2013. <https://www.peta.org/living/food/animal-rights-vs-conservation/>.

hunting that “threatens species or habitat sustainability” as stated on their website’s positions page⁴³. Previously, the WWF received backlash for supporting trophy hunting after the death of internet famous Cecil the Lion in 2015 sparked outrage at trophy hunting⁴⁴. Still, in 2017 an article published by CounterPunch pointed out that WWF continues to associate with large game hunting organizations, referencing WWF South Africa former trustee Peter Flack’s association with game hunting^{45 46}.

Governmental agencies within the U.S. also have a relationship with hunting and fishing. Approximately 55% of the funding for The Department of Fish & Wildlife comes from hunting taxes and tags⁴⁷. Many argue that trophy hunting has successfully supported conservation efforts⁴⁸, but overall the recreation is less beneficial to local communities and endangered species than ecotourism⁴⁹. Most of the animals sought after by trophy hunters are endangered or threatened and with “eighteen thousand trophy hunters visiting Africa annually,” the death count is significantly high for already vulnerable species and populations. In South Africa, 600 lions are killed legally every year while their wild

⁴³ “WWF and Trophy Hunting.” WWF. World Wildlife Fund, n.d.
https://wwf.panda.org/our_work/wildlife/species_news/wwf_and_trophy_hunting/.

⁴⁴ Actman, Jani. “Cecil the Lion Died Amid Controversy-Here’s What’s Happened Since.” Wildlife Watch. National Geographic, October 15, 2018.
<https://www.nationalgeographic.com/news/2016/06/cecil-african-lion-anniversary-death-trophy-hunting-zimbabwe/>.

⁴⁵ Corry, Stephen. “The World Wildlife Fund, Trophy Hunters and Donald Trump Jr.” CounterPunch.org, March 13, 2017.
<https://www.counterpunch.org/2017/03/10/the-world-wildlife-fund-trophy-hunters-and-donald-trump-jr/>.

⁴⁶ “CIC Welcomes the World Wildlife Fund’s (WWF) New Policy Paper on Trophy Hunting.” International Council for Game and Wildlife Conservation, July 11, 2016.
<http://www.cic-wildlife.org/2016/07/12/cic-welcomes-the-world-wildlife-funds-wwf-new-policy-paper-on-trophy-hunting-11-july-2016/>.

⁴⁷ Nelson, Rob. “Is Hunting Conservation? Let’s Examine It Closely.” Untamed Science, August 2015.
<https://untamedscience.com/blog/hunting-and-conservation/>.

⁴⁸ “The Conservation Equation in Africa.” Safari Club Foundation, n.d.
<https://safariclubfoundation.org/the-conservation-equation-in-africa/>.

⁴⁹ Ahmed, Beenish. “The Economic Case Against Trophy Hunting.” ThinkProgress, August 3, 2015.
<https://thinkprogress.org/the-economic-case-against-trophy-hunting-db6b00e11023/>.

population still declines. The money spent by trophy hunters is a fraction of the economic value of ecotourism, and much of the money from game permits never reaches the hands of locals anyway⁵⁰.

The idea of objectivity in conservation not only harms the lives of nonhuman animals, but of humans too, with human rights issues also apparent in current wildlife conservation's organizations. In an opinion piece on Survival International's website, the author writes that they no longer support conservation movements because of the human rights violations. Large non-profit organizations claim that "political and economic interests of indigenous people render them incapable of carrying out the conservation movement's mission"⁵¹. Rather, indigenous and local people have a higher stake in conservation because they are the first to be directly affected by the consequences. In an article titled "Are You a Conservationist or Are You Human?: An Examination of Subjectivity in Conservation," Harvard student Anna Santoleri writes that "we must allow the conservationist to be subjective and local"⁵², though as it is now, most indigenous and local people do not have authority over their own land. According to the Rainforest Partnership, "Indigenous-tenured lands often have significantly lower rates of deforestation, making the investment in these communities one of the most cost-effective solutions to conserve rainforests, protect endangered species, and mitigate climate change"⁵³. Indigenous conservation provides an alternative to objective enterprise of modern conservation science.

⁵⁰ Campbell, Roderick. "The \$200 Million Question: How Much Does Trophy Hunting Really Contribute to African Communities?" *Economists at Large*, 2013.

⁵¹ "I'm a Vegan and an Animal-Lover – but I No Longer Support Conservation." Survival International, October 4, 2018. <https://survivalinternational.org/articles/3525-stop-the-con-the-dark-side-of-conservation>.

⁵² Santoleri, Anna. "Are You a Conservationist or Are You Human?: An Examination of Subjectivity in Conservation." *Harvard College Review of Environment and Society*, May 8, 2014. <http://www.hcs.harvard.edu/~res/2014/05/are-you-a-conservationist-or-are-you-human-an-examination-of-subjectivity-in-conservation/>.

⁵³ RP Team. "The Role of Indigenous Communities in Conservation." RAINFOREST PARTNERSHIP, April 16, 2019. <https://rainforestpartnership.org/the-role-of-indigenous-communities-in-conservation/>.

The Empathy Factor

For quite some time humanity has attempted to rectify mistakes by following patterns of utilitarianism and capitalism. These fail to address the roots of problems. Instead, humanity should utilize the knowledge of Indigenous Traditional Ecological Knowledge (TEK) and Ecofeminism, ideologies that integrate values of intersectionality, interdependency, connection, and moral consideration. A foundation of these ideologies is ethics of care, which connects morality with decision-making processes. Ecofeminism and Indigenous Ethics differ from hard science and conservation because of their inclusion of morality⁵⁴. Environmental activist and scholar, Kyle Powys Whyte, writes that “ethical paradigms centered around caring are able to acknowledge the significance of caring for all kinds of others, as well as the complex value of ecological interdependencies and the limitations of worldviews that deny reliance on nature”⁵⁵. TEK, while sharing conservation science’s attributes of empirical evidence and pattern recognition, “does not strive for a universal set of explanations but is particularistic in orientation and often contextual” while Western Modern Science (WMS) is “text-based, reductionist, [and] hierarchical”⁵⁶. Conservation science originated within the restrictive academics of WSM, and as such lacks the perspective necessary to successfully combat human-influenced degradation of ecosystems and wildlife, though it does have several “compelling values [of] commitment to truth, rationality, full consideration of evidence, self-correction, openness, and critical discourse”⁵⁷. Despite TEK’s proven wealth of

⁵⁴ Dunn, Craig P., and Brian K. Burton. “Ethics of Care.” *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 1 Oct. 2013, www.britannica.com/topic/ethics-of-care.

⁵⁵ Whyte, Kyle Powys, and Chris Cuomo. “Ethics of Caring in Environmental Ethics.” *Oxford Handbooks Online*, July 2016. <https://doi.org/10.1093/oxfordhb/9780199941339.013.22>.

⁵⁶ Nicholas, George. “It’s Taken Thousands of Years, but Western Science Is Finally Catching up to Traditional Knowledge.” *The Conversation*, February 14, 2018. <https://theconversation.com/its-taken-thousands-of-years-but-western-science-is-finally-catching-up-to-traditional-knowledge-90291>.

⁵⁷ Noss, Reed F. “Values Are a Good Thing in Conservation Biology.” *Conservation Biology* 21, no. 1 (2007): 18–20. <https://doi.org/10.1111/j.1523-1739.2006.00637.x>.

knowledge though “science is promoted as objective, quantifiable, and the foundation for “real” knowledge creation or evaluation while TK may be seen as anecdotal, imprecise and unfamiliar in form”⁵⁸. Reed F. Noss writes that “[...] the assumptions of empiricists should be modified by a recognition that there are many ways to relate theory to reality and that science is conducted by a social community of scientists that, in turn, interacts within a broader social context”⁵⁹. If we were to incorporate care ethics into wildlife conservation and approach the situation with consciousness of the mutualistic partnership of humans and the earth, it would revolutionize the field⁶⁰.

On University of Technology Sydney’s website is information about their Centre for Compassionate Conservation, a little known interdisciplinary field based on guiding principles of “first, do no harm, individuals matter, inclusivity, and peaceful coexistence.” Compassionate conservation seeks to shift current wildlife conservation’s approach to a more sustainable, inclusive, and forward-looking framework⁶¹. Arian Wallach, an ecologist at UT Sydney, when interviewed for an article titled “Do Conservation Strategies Need to Be More Compassionate?,” said “Conservation essentially developed in an era in which animals were automatons [...] There was a revolution in the recognition of sentience across the animal world [...] conservation is

⁵⁸ Nicholas, George. “It’s Taken Thousands of Years, but Western Science Is Finally Catching up to Traditional Knowledge.” *The Conversation*, February 14, 2018. <https://theconversation.com/its-taken-thousands-of-years-but-western-science-is-finally-catching-up-to-traditional-knowledge-90291>.

⁵⁹ Noss, Reed F. “Values Are a Good Thing in Conservation Biology.” *Conservation Biology* 21, no. 1 (2007): 18–20. <https://doi.org/10.1111/j.1523-1739.2006.00637.x>.

⁶⁰ Kimmerer, R.W. Searching for synergy: integrating traditional and scientific ecological knowledge in environmental science education. *J Environ Stud Sci* 2, 317–323 (2012). <https://doi.org/10.1007/s13412-012-0091-y>.

⁶¹ “What Is Compassionate Conservation?” Centre for Compassionate Conservation. University of Technology Sydney, July 8, 2019. <https://www.uts.edu.au/research-and-teaching/our-research/centre-compassionate-conservation/about-us/what-compassionate-conservation>.

only now coming to grips with the fact that this happened”⁶². Compassionate conservation is also a value of the UK’s Vegan Land Trust, an organization started by experienced conservationists who want to move away from “outdated and failing practices” that seek to control rather than conserve nature⁶³. Michael Soule, often referred to as the father of conservation biology wrote “Conservation is engaged in the protection of the integrity and continuity of natural processes, not the welfare of individuals” in his influential 1985 paper “What is Conservation Biology”⁶⁴. Compassionate conservation provides a hopeful alternative for all people disillusioned with the manner in which governments and agencies manage wildlife and ecosystems. The Vegan Land Trust and University of Technology both mention the invasive and violent practices of wildlife management as a motivating factor for a shift in thinking to compassionate conservation.

Like any radical ideology, there are critiques of compassionate conservation’s strategy at wildlife conservation. A paper by Callen et al. states that “taken literally, ‘Compassionate Conservation’ will deny current conservation practices such as captive breeding, introduced species control, biocontrol, conservation fencing, translocation, contraception, disease control and genetic introgression”⁶⁵. With articles titled “Compassionate conservation is seriously flawed,” by Mark Kinver⁶⁶, and, in response, “Compassionate conservation isn’t seriously or fatally flawed,” by Marc Bekoff⁶⁷, it is

⁶² Keim, Brandon. “Do Conservation Strategies Need to Be More Compassionate?” Yale Environment 360. Yale School of Forestry & Environmental Studies, June 4, 2018. <https://e360.yale.edu/features/do-conservation-strategies-need-to-be-more-compassionate>.

⁶³ “Vegan Land Trust.” Vegan Land Trust, n.d. <https://veganlandtrust.org/>.

⁶⁴ Soulé, M. (1985). What Is Conservation Biology? *BioScience*, 35(11), 727-734. doi:10.2307/1310054

⁶⁵ Callen, Alex, Matt W. Hayward, Kaya Klop-Toker, Benjamin L. Allen, Guy Ballard, Chad T. Beranek, Femke Broekhuis, et al. “Envisioning the Future with ‘Compassionate Conservation’: An Ominous Projection for Native Wildlife and Biodiversity.” *Biological Conservation* 241 (2020). <https://doi.org/10.1016/j.biocon.2019.108365>.

⁶⁶ Kinver, Mark. “Compassionate Conservation Is ‘Seriously Flawed.’” BBC News. BBC, May 18, 2019. <https://www.bbc.com/news/science-environment-48315709>.

⁶⁷ Bekoff, Marc. “Compassionate Conservation Isn’t Seriously or Fatally Flawed” Psychology Today. Sussex Publishers, May 20, 2019. <https://www.psychologytoday.com/us/blog/animal-emotions/201905/compassionate-conservation-isnt-seriously-or-fatally-flawed>.

clear that there are contrasting opinions regarding compassionate conservation. Callen et al. and Kinver bring up an important critique of compassionate conservation: can cruelty and killing of animals always be avoided? Due to human interference, invasive species are prevalent in numerous places across the globe, and threaten the lives of native species. In Hawaii, the invasive Brown Tree Snake, mongoose, and feral cats have decimated native bird populations^{68 69}. In this case, it is unclear what compassionate conservation would advocate for. Is it wrong to kill invasive wildlife that is harming native populations? Bekoff provides commentary on this question in his rebuttal to Kinver's article:

“[...] compassionate conservation community is pluralistic and while no one has ever done any sort of study, it's likely that while the majority of those who espouse the principles of compassionate conservation are against killing, there are some who might be open to considering killing in very few specific instances. However, I don't know any in the community who would accept that "cruelty should be minimized." Indeed, cruelty should be abolished”⁷⁰.

In his conclusion Bekoff summarizes his article: “Compassionate conservation is alive and thriving. It's all for maintaining biodiversity, it's pluralistic, its base is not located in "privileged, western, and largely urban centers," and it is sensitive to differing

⁶⁸ “Invasive Species Control.” State of Hawaii, 2020.
<https://dashboard.hawaii.gov/stat/goals/5xhf-begg/4s33-f5iv/2kh9-u2cc>.

⁶⁹ “Invasive Species Profiles.” Hawaii Invasive Species Council, January 30, 2020.
<https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/>.

⁷⁰ Bekoff, Marc. “Compassionate Conservation Isn't Seriously or Fatally Flawed” Psychology Today. Sussex Publishers, May 20, 2019.
<https://www.psychologytoday.com/us/blog/animal-emotions/201905/compassionate-conservation-isnt-seriously-or-fatally-flawed>.

cultural values”⁷¹. While interpretation may vary from individual to individual, compassionate conservation at least allows the opportunity for more solutions than simply the eradication of individuals.

Integration

While compassionate conservation exists, the inclusion of empathy and ethics of care into mainstream conservation science has yet to occur. In the paper *Wildlife Conservation and Animal Rights: Are They Compatible?* Hutchins and Wemmer state that the “extreme views expressed by Singer (1975) and Regan (1983) [are] largely incompatible with the goal of wildlife conservation”⁷². Yet, the incorporation of animal rights ethics into wildlife conservation has been successful in many cases. One example is The Unexpected Wildlife Refuge, a 75 acre wildlife refuge in southern New Jersey that advocates for the values of veganism. On their website it states that the cofounders, after an encounter with a hunter on the refuge, considered:

“why a cow's life was any less important than that of the deer they were protecting and found the answer to be exceedingly simple: life and being able to pursue one's interests were equally important to the individual *regardless* of species. They realized that one cannot effectively advocate for the protection of wildlife without also refraining from exploiting animals, not only those who

⁷¹ Bekoff, Marc. “Compassionate Conservation Isn't Seriously or Fatally Flawed” *Psychology Today*. Sussex Publishers, May 20, 2019. <https://www.psychologytoday.com/us/blog/animal-emotions/201905/compassionate-conservation-isnt-seriously-or-fatally-flawed>.

⁷² Hutchins, Michael, and Christen Wemmer. “Wildlife Conservation and Animal Rights: Are They Compatible?” *Advances in Animal Welfare Science* 1986/87, 1987, 111–37. https://doi.org/10.1007/978-94-009-3331-6_10.

are held in captivity to provide food and fiber for people,
but also in all areas of human activity.”⁷³

This realization led them to adopt a vegan lifestyle and to integrate those values into their conservation work on the property.

People who work with wildlife, whether identified as conservationists or not, care about the work they’re doing largely because of their love and passion for animals and wildlife. Successful wildlife refuges and rehabilitation centers run on the labor of volunteers and public donations. Constance Creek Wildlife Refuge counts itself as unique because they believe that “we are all animals,” writing that “we shouldn't categorize in ways that allow us to respect and care about some animals more than others”⁷⁴. The hierarchical nature of the Western world makes it difficult for us to reevaluate how we view each other, but it is not impossible. Famous conservationist and scientist Jane Goodall started her research with chimpanzees in 1960, revolutionizing conservation science because she gave names to the individuals instead of merely using them as study subjects. Over 50 years ago Dr. Goodall gave up eating meat when she realized that the meat on her plate “represents fear, pain, death”⁷⁵. Well-known conservationist and marine biologist Sylvia Earle also advocates for the removal of fish from people’s diets, stating that people should “think of them as wildlife, first and foremost”⁷⁶. In Zimbabwe, an all women vegan anti-poaching squad now has 36 members, created in an effort to

⁷³ Buyukmihci, Nedim C. “Veganism.” Unexpected Wildlife Refuge, n.d. http://unexpectedwildliferefuge.org/uwr_public/uwr_veganism.php.

⁷⁴ “Constance Creek Wildlife Refuge.” Facebook, n.d. <https://www.facebook.com/CCWRefuge/>.

⁷⁵ Goodall, Jane. “Why I Became a Vegetarian (And Why We Should All Eat Less Meat).” Jane Goodall's Good for All News, November 22, 2017. <https://news.janegoodall.org/2017/04/28/why-i-became-a-vegetarian-and-why-we-should-all-eat-less-meat/>.

⁷⁶ Bryce, Emma. “Sylvia Earle on Eating Fish: 'Think of Them as Wildlife, First and Foremost'.” The Guardian. Guardian News and Media, September 18, 2014. <https://www.theguardian.com/environment/world-on-a-plate/2014/sep/18/sylvia-earle-overfishing-seafood-ocean-hope-spots>.

fight the increasing elephant poaching in the Lower Zambezi valley⁷⁷. In South Africa the Black Mamba Anti-Poaching Unit was the first of its kind to train women in non-violent, anti-poaching techniques and has now reduced snaring and poaching by 76%⁷⁸.

These successful integrations of empathy and science while new to the Western world, are not new to everyone. Indigenous communities held similar beliefs and practiced forms of compassionate and community-based conservation way before white colonization and the establishment of Western Modern Science.

Ecological resilience is an important characteristic of any ecosystem which refers to the ability of an ecosystem to resist and adapt to stressors and pressures⁷⁹. Social resilience functions the same way, but for communities. As put in an essay titled “Community-Based Conservation and Traditional Ecological Knowledge: Implications for Social-Ecological Resilience”, “resilience of social-ecological systems is desirable for facilitating the sustainability of natural resources and ecosystem services and to ensure a stable environment for human life and well-being,” and most likely for nonhuman life as well⁸⁰. Tying ecological and social resilience together is the basis for the concept of community conservation. Community conservation is rooted in the sustainable stewardship of lands and ecological systems by locals, minimizing outside influence⁸¹. As stated by Fikret Berkes “the perspective of biodiversity conservation and the relevant social–ecological system as complex and multilevel is in sharp contrast with the simple

⁷⁷ Chiorando, Maria. “Zimbabwe's All Women Vegan Anti Poaching Squad Featured By BBC.” Plant Based News, January 12, 2018.
<https://www.plantbasednews.org/news/zimbabwes-all-women-vegan-anti-poaching-squad-featured-by-bbc>.

⁷⁸ Safodien, Mujahid. “These Badass Women Are Taking on Poachers-and Winning.” National Geographic Adventure. National Geographic, May 18, 2018.
<https://www.nationalgeographic.com/adventure/destinations/africa/south-africa/black-mambas-anti-poaching-wildlife-rhino-team/>.

⁷⁹ “Ecological Resilience.” Ecological Resilience. Reef Resilience Network, 2020.
<https://reefresilience.org/resilience/what-is-resilience/ecological-resilience/>.

⁸⁰ Ruiz-Mallén, Isabel, and Esteve Corbera. “Community-Based Conservation and Traditional Ecological Knowledge: Implications for Social-Ecological Resilience.” *Ecology and Society* 18, no. 4 (2013).
<https://doi.org/10.5751/es-05867-180412>.

⁸¹ “Who We Are.” Community Conservation, October 8, 2019.
<http://communityconservation.org/who-we-are/>.

view of biodiversity conservation that has led to blueprint solutions”⁸². In Namibia and Kenya, the establishment of conservancies has led to an increase in wildlife and thus economic benefit, as locals have financial incentives for preserving wildlife via ecotourism⁸³. The close proximity locals have to the surrounding ecosystems and wildlife allows the opportunity to create an intimate relationship and understanding, which after time develops into traditional ecological knowledge. TEK holds a wealth of possibilities for sustainable land management and conservation practices.

Community-based conservation and land management is inspired by the role indigenous communities take to preserve their lands and territories. According to a National Geographic article written by Gleb Raygorodetsky, “in Namibia, the recognition of community-based natural resource management under the Nature Conservation Amendment Act of 1996 has resulted in the establishment of 82 conservancies and 32 community forests”⁸⁴. Indigenous land management practices are successful because they don’t simply focus on conservation, but on an “integrated wellbeing” of the ecosystem. Indigenous communities develop long-term sustainable resource strategies and maintain biodiversity because it benefits them and their communities to do so⁸⁵. A report by the MacArthur Foundation writes that “Ecoregional analyses carried out by WWF have demonstrated high indices of ecosystem integrity in indigenous territories,” showing that indigenous people have long been taking care of ecosystems in a much

⁸² Berkes, Fikret. “Community-Based Conservation in a Globalized World.” *Proceedings of the National Academy of Sciences* 104, no. 39 (2007): 15188–93. <https://doi.org/10.1073/pnas.0702098104>.

⁸³ “The Many Benefits of Community-Based Conservation | Young African Leaders Initiative Network.” Young African Leaders Initiative . U.S. Department of State, April 10, 2018. <https://yali.state.gov/the-many-benefits-of-community-based-conservation/>.

⁸⁴ Raygorodetsky, Gleb. “Indigenous Peoples Defend Earth's Biodiversity - but They're in Danger .” National Geographic , November 16, 2018. <https://www.nationalgeographic.com/environment/2018/11/can-indigenous-land-stewardship-protect-biodiversity-/>.

⁸⁵ Clad, James. “Conservation and Indigenous Peoples.” *Cultural Survival*, December 1, 1984. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/conservation-and-indigenous-peoples>.

more effective manner than large scale governments or organizations⁸⁶. In order for a marriage to ensue between conservation and indigenous peoples, national governments must restore indigenous sovereignty. The Western world has intentionally rejected indigenous sovereignty and knowledge with the purpose of erasing communities and cultures. The Indian Removal Act of 1830 removed more than 46,000 indigenous people from 25 million acres of land in the southeast United States which was then converted to farmland⁸⁷. The removal of indigenous people from the lands they have managed for centuries has negative consequences for the ecosystems. For example, California oak woodlands have dramatically decreased after “European and later American settlers greatly reduced woodland cover” with several oak species “extensively harvested for fuelwood and charcoal production”⁸⁸. Current restraints on fires in oak woodlands have reduced the quality of the forests, though indigenous nations in the region have expressed that fire management helps create favorable habitat⁸⁹. In the Amazon, indigenous management on tenure-secure indigenous lands has reduced deforestation rates by 50% compared to similar land without security⁹⁰. Globally, indigenous territories overlap with 40% of the world's protected areas and, with their unique understanding of their local ecosystems, indigenous-led conservation will be instrumental for preserving biodiverse regions⁹¹. Indigenous communities granted rights to their lands have proved to be

⁸⁶ Alcorn, Janis. *Indigenous Peoples and Conservation*. MacArthur Foundation, 2010. https://www.macfound.org/media/files/CSD_Indigenous_Peoples_White_Paper.pdf.

⁸⁷ National Geographic Society. “Indian Removal Act.” National Geographic Society, April 29, 2014. <https://www.nationalgeographic.org/thisday/may28/indian-removal-act/>.

⁸⁸ Bernhardt, Elizabeth A, and Tedmund J Swiecki. “Ecological Importance of California Oak Woodlands.” *Restoring oak woodlands in California: theory and practice*. Phytosphere Research, 2001. <http://phytosphere.com/restoringoakwoodlands/oakrestoration.htm>.

⁸⁹ Long, Jonathan W., Ron W. Goode, Raymond J. Gutierrez, Jessica J. Lackey, and M. Kat Anderson. “Managing California Black Oak for Tribal Ecocultural Restoration.” *Journal of Forestry* 115, no. 5 (2017): 426–34. <https://doi.org/10.5849/jof.16-033>.

⁹⁰ Veit, Peter, and Katie Reytar. “By the Numbers: Indigenous and Community Land Rights.” World Resources Institute, September 26, 2018. <https://www.wri.org/blog/2017/03/numbers-indigenous-and-community-land-rights>.

⁹¹ Webb, Jena. “Indigenous-Led Conservation in the Amazon: A Win-Win-Win Solution.” *Amazon Frontlines*, June 4, 2019. <https://www.amazonfrontlines.org/chronicles/indigenous-conservation-amazon/>.

sustainable ecosystem stewards, but the system discrimination and oppression by national governments has caused justified suspicion and distrust of conservation collaboration. There is much that we as a society must improve if indigenous knowledge is to be at the forefront of conservation biology. The scientific community must recognize traditional ecological knowledge as valid science, understand that indigenous knowledge does not belong to non-indigenous people, create collaborative management arrangements led by indigenous people, respect indigenous lands and tenure, affirm and integrate harvesting rights, and support local indigenous leadership⁹².

Conclusion

In the words of Judith Butler, “there is no human who is not a human animal”⁹³. The plight of nonhuman animals has long been at the mercy of humankind, and yet we have not been merciful. Cruelty towards other species is commonplace within Western societies, even within a scientific field that was created to protect, not harm, the creatures of this earth. If we continue to convince ourselves that humans are indeed superior to other animals then we will not be able to change the direction of our current ecological decline of the world’s ecosystems and biodiversity. We must embrace the fact that humans are simply another species in the web of evolution and equate ourselves with our companions. The two ends of the spectrum of wildlife conservation are vastly different, with recreational and trophy hunting on one side and CAS and compassionate conservation on the other. In the words of Jeffrey Flocken of the International Fund for Animal Welfare, “We don’t have to kill an animal to save it”⁹⁴. For conservation to be

⁹² Bennett, Nathan, and Ameyali Ramos Castillo. “Recognising and Supporting Indigenous Leadership in Conservation.” IUCN: News. International Union for the Conservation of Nature, September 18, 2019.

⁹³ Stanescu, James. “Species Trouble: Judith Butler, Mourning, and the Precarious Lives of Animals.” *Hypatia* 27, no. 3 (2012): 567–82. <https://doi.org/10.1111/j.1527-2001.2012.01280.x>.

⁹⁴ Che, Jenny. “The Economic Argument For Killing Cecil The Lion Doesn't Hold Up.” HuffPost. Huffington Post, July 31, 2015.

effective and successful, it must integrate the values of compassionate conservation and indigenous ethics of care - compassion, empathy, interdependency - into conservation science.

https://www.huffpost.com/entry/killing-cecil-the-lion-economics-trophy-hunting_n_55bb890fe4b06363d5a1c673.

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- be kind to every kind -

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https://www.academia.edu/35906889/Ideological_Monkey_Wrenching_Nonhuman_Animal_Politics_beyond_Suffering.

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